



## REGULAR CITY COUNCIL MEETING AGENDA

City Hall - Council Chambers  
4381 Broadway St., Suite 201, American Canyon  
**September 6, 2022**  
**6:30 PM**

**Mayor:** Leon Garcia  
**Vice Mayor:** Mariam Aboudamous  
**Councilmembers:** Mark Joseph, David Oro, Pierre Washington

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### AMENDED AGENDA

*This agenda has been amended to add Attachment 2 - Exhibit A to Item 14.*

*Consistent with Government Code Section 54953 and the American Canyon City Council Resolution Declaring the Existence of a Local Emergency due to the COVID-19 Pandemic, City Council and other public meetings will be conducted both in person at City Hall, 4381 Broadway, Suite 201, and also via Zoom Teleconferencing to promote local, state, and federal guidelines and social distancing recommendations for the containment of the coronavirus. City officials and members of the public are invited to attend the meeting either in person or via teleconference. This meeting will be broadcast live to residents on Napa Valley TV, on our website [here](#) and on YouTube [here](#).*

### PUBLIC PARTICIPATION

**Oral comments, during the meeting:** Oral comments can be made in person during the meeting. A Zoom Webinar has been established for public comments made via zoom. To give your public comment via zoom, use the Register to Speak feature of eComments, connect via the below Zoom link and use the “raise your hand” tool, or call into the zoom meeting at 408-638-0968 and press \*9 to “raise your hand” when the item is called. To avoid confusion, all hands raised outside of Public Comment periods will be lowered.

**Written comments, via eComments:** Please submit written comments through the eComments link, located on the Meetings & Agendas page of our website [here](#). Comments will be available to council members in real time. eComments will remain open throughout the meeting. All comments received will be posted online and become part of the meeting record.

**Zoom Meeting Link:** [Click here](#)

**Webinar ID:** 841 4701 1779 **Passcode:** 060300

The above-identified measures exceed all legal requirements for participation in public comment, including those imposed by the Ralph M. Brown Act. For more information, please call the Office of the City Clerk at (707) 647-4369 or email [cityclerk@cityofamericancanyon.org](mailto:cityclerk@cityofamericancanyon.org).

**AGENDA MATERIALS:** City Council agenda materials are published 72 hours prior to the meeting and are available to the public via the City’s website at [www.cityofamericancanyon.org](http://www.cityofamericancanyon.org).

**AMERICANS WITH DISABILITIES ACT:** The City Council will provide materials in appropriate alternative formats to comply with the Americans with Disabilities Act. Please send a written request to City Clerk at 4381 Broadway, Suite 201, American Canyon, CA 94503 or by email to [cityclerk@cityofamericancanyon.org](mailto:cityclerk@cityofamericancanyon.org). Include your name, address, phone number and brief description of the requested materials, as well as your preferred alternative format or auxiliary aid, at least three calendar days before the meeting.

## **PUBLIC ADDRESS – CLOSED SESSION 5:30 P.M.**

*The Mayor will call the meeting to order and conduct role call. Council will immediately convene into Closed Session after hearing any public comment on Closed Session items. At 6:30 p.m. the Council will reconvene into Open Session and then resume Closed Session at the end of the meeting to address outstanding items, if necessary.*

### **5:30 P.M. CLOSED SESSION**

1. **Conference with Legal Counsel - Existing Litigation (3 matters). Authorized pursuant to Government Code Section 54956.9(d)(1):**
  - a. *City of American Canyon v. City of Vallejo, et al.* (Napa Superior Court Case No. 22CV000772).
  - b. *Russell Charpentier and William Baker v. City of Vallejo, et. al* (Solano Superior Court Case No. not yet available).
  - c. *In the Matter of Inspection and Order to Abate at 106 Wilson Way (APN: 058-370-002)* (Napa Superior Court Case No. 22CV000850)
  
2. **Conference with Legal Counsel – Anticipated Litigation Pursuant to Government Code Section 54956.9 (d)(2). One Matter.**

### **6:30 P.M. OPEN SESSION - REGULAR MEETING**

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

REPORT ON CLOSED SESSION/CONFIRMATION OF REPORTABLE ACTION

### **PROCLAMATIONS AND PRESENTATIONS**

3. **Proclamation recognizing September 15 through October 15 as Latino Heritage Month**
  
4. **Fire District Board Proclamation - National CERT Week**

### **PUBLIC COMMENTS - ITEMS NOT ON THE AGENDA**

*This time is reserved for members of the public to address the City Council on items of interest that are not on the Agenda and are within the subject matter jurisdiction of the City Council. Comments are limited to 3 minutes. Comments for items on the Agenda will be taken when the item is called. The City Council is prohibited by law from taking any action on matters discussed that are not on the Agenda, and no adverse conclusions should be drawn if the City Council does not respond to public comment at this time. Speakers are asked to please speak clearly, and provide their name. Any handouts for distribution to the City Council must be emailed by 3:00 p.m. on meeting day. To comment via zoom during the meeting: click the “raise your hand” button if joining by computer, or press \*9 if joining by phone, when the item is called. To avoid confusion, hands raised outside of Public Comment periods will be lowered.*

### **AGENDA CHANGES**

The Mayor and Council may change the order of the Agenda or request discussion of a Consent Item. A member of the Public may request discussion of a Consent Item by making that request during Public Comment.

## CONSENT CALENDAR

5. **Minutes of August 16, 2022**

**Recommendation:** Approve the minutes of the City Council meeting of August 16, 2022.

6. **Report Upon Return from Closed Session for the meeting of August 16, 2022**

**Recommendation:** Approve the Report Upon Return from Closed Session for the meeting of August 16, 2022.

7. **Sanitary Sewer Management Plan (SSMP) Adoption**

**Recommendation:** Adopt a Resolution of the City Council of the City of American Canyon adopting the Sanitary Sewer Management Plan (SSMP)

8. **4th Quarter Investment Report for the City and Fire District**

**Recommendation:** Receive and file the City and Fire District's Treasurer's Report for the month ended June 30, 2022.

9. **Property Exchange with Napa Valley Unified School District**

**Recommendation:** Adopt a Resolution approving a Property Exchange and Acquisition Agreement to transfer approximately 5.6 acres of land where the community center/gymnasium is located to the Napa Valley Unified School District in exchange for receiving the 6.57-acre property where the former Napa Junction Elementary School is located (on Napa Junction Rd.) from the Napa Valley Unified School District.

10. **2021 Annual Napa Airport Corporate Center Development Agreement Review**

**Recommendation:** Adopt a Resolution finding that, during calendar year 2021, Napa Airport Corporate Center I, LLC ("Owner") has provided "Good Faith Efforts" to comply with its obligations in conjunction with the Napa Airport Corporate Center ("NACC") Development Agreement.

11. **GHD Staff Augmentation - Encroachment**

**Recommendation:** Adopt a Resolution authorizing the City Manager to execute Amendment #1 to Task Order #11 (2022-66) with GHD, Inc. for Encroachment Permit Processing and Construction Observation Services in an amount not to exceed \$75,000.

## PUBLIC HEARINGS

12. **Amendment of 2015 Urban Water Management Plan (UWMP) and Adoption of 2020 Urban Water Management Plan (UWMP)**

**Recommendation:** Conduct a Public Hearing and take the following actions:

1. Adopt a Resolution of the City Council of the City of American Canyon adopting the City's amendment to the 2015 Urban Water Management Plan - Appendix G Demonstration of Reduced Delta Reliance
2. Adopt a Resolution of the City Council of the City of American Canyon adopting the City's 2020 Urban Water Management Plan

**BUSINESS**

**13. Ad-Hoc Climate Action Committee Interim Report**

**Recommendation:** Receive and file Ad-Hoc Climate Action Committee Interim Report

**14. Skatepark Relocation**

**Recommendation:** Adopt a Resolution of the City Council of the City of American Canyon:

1. Amending the FY 2022/23 Capital Improvement Program to include the Skatepark Relocation Project (PR22-0100) and authorizing a project budget of \$380,000;
2. Authorizing a budget transfer from the Park Impact Fee Fund (310-85-450-48310) to the Capital Project Fund (350-85-450-46110) in the amount of \$380,000;
3. Selecting an existing park location for the Skatepark Relocation Project (PR22-0100);
4. Authorizing the City Manager to award a construction contract to the lowest responsible and responsive bidder in an amount not to exceed the project budget; and
5. Authorizing the Public Works Director to approve and execute contract change orders in an aggregate amount not to exceed the Project Budget in conjunction with the relocation of the Skatepark Relocation Project (PR22-0100).

**MANAGEMENT AND STAFF ORAL REPORTS**

**15. City Manager Holley, Mayor Garcia and Vice-Mayor Aboudamous will attend the CalCities Annual Conference in Long Beach, CA from 9/7 to 9/9.**

The city is now taking applications for Fall 2022 Citizen's Academy.

**MAYOR/COUNCIL COMMENTS, COMMITTEE REPORTS, AND FUTURE AGENDA ITEMS**

*The Mayor and Council may comment on matters of public concern and announce matters of public interest; no collective council action will be taken.*

**16. Anticipated Future Agenda Items of Note:**

<i>September 20, 2022</i>	<i>October 4, 2022 on ZOOM</i>	<i>October 4, 2022 Joint CC/OSAC ZOOM</i>	<i>October 18, 2022 Joint CC/PC</i>
Presentations - 4H and Chamber of Commerce Impact Fee Annual Report Work Order Management System	Filipino Heritage Month Fire Prevention Month Code Enforcement Appreciation Domestic Violence Awareness	OSAC FY 2022/23 Annual Work Plan	Housing Element Workshop

**ADJOURNMENT**

**CERTIFICATION**

I, Taresa Geilfuss, CMC, City Clerk for the City of American Canyon, do hereby declare that the foregoing agenda of the City Council was posted in compliance with the Brown Act prior to the meeting date.

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Taresa Geilfuss, CMC, City Clerk

# CITY OF AMERICAN CANYON PROCLAMATION



## Latino Heritage Month September 15-October 15, 2022

**WHEREAS**, in 1968 President Lyndon B. Johnson first recognized Hispanic Heritage week, which later expanded under President Reagan to one month, and each successive United States President has continued this tradition, including, President Barack Obama who declared September 15 through October 15 to be National Hispanic Heritage Month; and

**WHEREAS**, each year, the United States observes National Hispanic Heritage Month by celebrating the culture, heritage, and countless contributions of those whose ancestors were indigenous to North America as well as those who came from Spain, Mexico, the Caribbean, Central America, and South America; and

**WHEREAS**, the City of American Canyon has a long history of welcoming immigrants and is home to a growing multi-ethnic and multicultural Latino population. Per the US Census Bureau, in 2021 29.4% of the American Canyon population was Latino or Hispanic; and

**WHEREAS**, our diverse Latino population continues to make significant economic contributions and have other profound positive influences on our community through their strong commitment to family, faith, education, hard work, culture, and service; and

**WHEREAS**, the City of American Canyon thrives on the diversity and ingenuity of all our people within our community. We continue to be enriched by the transcultural contributions of our Latino friends and neighbors.

**NOW, THEREFORE, BE IT RESOLVED** that I, Mayor Leon Garcia, on behalf of the American Canyon City Council, do hereby proclaim September 15 – October 15, 2022, as Latino Heritage Month in the City of American Canyon.

Date: September 6, 2022

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Leon Garcia, Mayor

AMERICAN CANYON  
FIRE PROTECTION DISTRICT BOARD  
PROCLAMATION



**Community Emergency  
Response Team (Cert) Week  
September 19 – 23, 2022**

**WHEREAS**, the members of American Canyon CERT Program are educated about disaster preparedness for hazards that may impact their area and are trained in basic response skills; and

**WHEREAS**, the American Canyon CERT volunteers are trained to educate members of the American Canyon community through public outreach to promote the CERT program; and

**WHEREAS**, American Canyon CERT volunteers are trained to assist others in their community following a disaster when professional responders are not immediately available to help; and

**WHEREAS**, the American Canyon CERT volunteers assisted with support for wildfire response, animal rescue, search and rescue operations, traffic control and community outreach while concurrently providing volunteers to COVID-19 testing, vaccination and food assistance centers; and

**NOW, THEREFORE, BE IT PROCLAIMED** that I, Leon Garcia, Chair of the American Canyon Fire Protection District Board, do hereby proclaim the week of September 19<sup>th</sup> – 23<sup>th</sup>, 2022 as “Community Emergency Response Week” and ask the community to join us in honoring the men and women whose dedication to American Canyon help support citizens of this community.

Dated: September 6, 2022

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Leon Garcia, Chair

**CITY OF AMERICAN CANYON  
REGULAR CITY COUNCIL MEETING**

**ACTION MINUTES**  
*August 16, 2022*

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**PUBLIC ADDRESS – CLOSED SESSION 4:30 P.M.**

**4:30 P.M. CLOSED SESSION**

1. Conference with Legal Counsel – Anticipated Litigation Pursuant to Government Code Section 54956.9 (d)(2). Three Matters.

2. Conference with Legal Counsel - Existing Litigation (4 matters). Authorized pursuant to Government Code Section 54956.9(d)(1):

City of American Canyon v. City of Vallejo, et al. (Napa Superior Court Case No. 22CV000772). Napa County Flood Control and Water Conservation District, Solano County Water Agency, and City of Yuba City v. California Department of Water Resources (Sacramento County Superior Court Case No. 34-2022-0032338).

Russell Charpentier and William Baker v. City of Vallejo, et. al (Solano Superior Court Case No. not yet available).

In the Matter of Inspection and Order to Abate at 106 Wilson Way (APN: 058-370-002) (Napa Superior Court Case No. 22CV000850)

3. Conference with Labor Negotiators: Authorized Pursuant to Government Code Section 54957.6 Agency Designated Representatives: City Manager Jason Holley and Labor Counsel Sloan, Sekai, Yeung & Wong Employee Organization: Teamsters

4. Conference with Real Property Negotiator: Authorized pursuant to Government Code section 54956.8. Property: APN 058-320-015 (Right of Way at Napa Junction Road) Agency Negotiator: Jason Holley, City Manager Negotiating Parties: City of American Canyon and Napa Valley Unified School District Under Negotiation: Terms of Acquisition of Property

**6:30 P.M. OPEN SESSION - REGULAR MEETING**

**CALL TO ORDER**

The meeting was called to order at 6:34 p.m.

**PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was recited.

## **ROLL CALL**

**Present:** Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

**Absent:** None

**Excused:** None

## **REPORT ON CLOSED SESSION/CONFIRMATION OF REPORTABLE ACTION**

City Attorney William Ross provided an oral report upon return from closed session. Closed session commenced at 4:35 p.m. Closed session adjourned at 6:12 p.m. A written report will be provided.

## **PROCLAMATIONS AND PRESENTATIONS**

### **5. Presentation - Eagle Scouts Troop 7062 Wetlands Edge Project**

Council received a presentation from Parks & Recreation Director Alexandra Ikeda honoring Zachary Bernard for his Eagle Scout Troop 7062 project. Zachary was available to answer any questions.

## **PUBLIC COMMENTS - ITEMS NOT ON THE AGENDA**

Mayor Garcia called for public comments. Written comments: none. Oral comments: William Baker was called to speak; James Cisney was called to speak; Margaret Sharkey was called to speak; Homar Crespo was called to speak; Patricia Krueger was called to speak; Hugh Marquez was called to speak; Justin Hamilton Hole was called to speak; Bridjet Toles was called to speak. The public comments period was closed.

## **AGENDA CHANGES**

There were no agenda changes.

## **CONSENT CALENDAR**

**Action:** Motion to adopt the Consent Calendar made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

**Ayes:** Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

**Nays:** None

**Abstain:** None

**Absent:** None

**Excused:** None

## **6. Minutes of August 2, 2022**

**Action:** Approved the minutes of the City Council meeting of August 2, 2022.

## **7. AB361 In Person and Remote Teleconferenced Meetings - August 16, 2022 - September 15, 2022**

**Action:** Adopted Resolution 2202-68 reaffirming that, due to the continuing COVID-19 Pandemic, a local emergency exists, re-ratifying the Proclamation of a State of Emergency by Governor Newsom on March 4, 2020, and authorizing in-person and remote teleconferenced meetings of legislative and advisory bodies of the City of American Canyon for the period of August 16, 2022 - September 15, 2022 pursuant to the Ralph M. Brown Act.

## **8. City Conflict of Interest Code**

**Action:** Adopted Resolution 2022-69 taking the following actions in conjunction with the City's Conflict of Interest Code: approving the 2022 Conflict of Interest Code; authorizing future updates by Resolution; authorizing the City Clerk to complete and file the 2022 Local Biennial Notice.

## **9. Coastland Development Engineering Services**

**Action:** Adopted Resolution 2022-70 authorizing the City Manager to execute Agreement 2022-A117 with Coastland Civil Engineering, Inc. for Development engineering Services in an amount not to exceed \$330,000.

## **10. Napa Countywide Road Maintenance Act (Measure T) - 2022 Master Funding Agreement**

**Action:** Adopted Resolution 2022-71 authorizing the City Manager to execute the 2022 Master Funding Agreement 2022-A118 with Napa Valley Transportation Authority-Tax Agency relating to Measure T.

## **11. Napa Logistics Park Phase 2 Public Improvements**

**Action:** Adopted Resolution 20225-72 of the City Council of the City of American Canyon accepting the public streets and appurtenant utilities improvements associated with the Napa Logistics Park Phase 2 Project.

## **PUBLIC HEARINGS**

### **12. Proposed Residential Solid Waste Rate Increase for Enhanced Services (SB 1383)**

Council received a staff report from Public Works Director Erica Ahman Smithies with Derek Nelson of Recology available for questions. Mayor Garcia opened the public hearing and called for public comments. Larry Toles was called to speak; Patricia Krueger was called to speak; Justin Hamilton Hole was called to speak; Karen Fritz was called to speak; Marion Sullivan was called to speak; Larry Toles was called to speak. Public comments and the public hearing were closed.

**Action:** Motion to adopt Resolution 2022-74 approving a residential solid waste rate increase made by Councilmember Mark Joseph, seconded by Councilmember David Oro, and CARRIED by roll call vote.

**Ayes:** Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

**Nays:** None

**Abstain:** None

**Absent:** None

**Excused:** None

## **BUSINESS**

### **13. City of American Canyon Local Roadway Safety Plan**

Council received a staff report from Public Works Director Erica Ahman Smithies with Kathryn Kleinschmidt of GHD. Mayor Garcia called for public comments. Written comments: none. Oral comments: Hugh Marquez was called to speak. The public comments period was closed.

**Action:** Motion to adopt Resolution 2022-75 approving the City of American Canyon Local Roadway Safety Plan made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

**Ayes:** Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

**Nays:** None

**Abstain:** None

**Absent:** None

**Excused:** None

### **14. Adoption of Labor Agreements, Salary Schedules and related documents.**

Council received a staff report from Assistant City Manager Maria Ojeda. Mayor Garcia called for public comments. Written comments: none. Oral comments: None. The public comments period was closed.

**Action:** Motion to adopt Resolution 2022-75 of the City Council of the City of American Canyon approving the Memorandums of Understanding with the Teamsters Local 315 General and Mid-Management Units made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

**Ayes:** Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

**Nays:** None

**Abstain:** None

**Absent:** None

**Excused:** None

**Action:** Motion to adopt Resolution 2022-76 of the City Council of the City of American Canyon revising the Unrepresented Compensation Program for at will managers,

confidential and part time/seasonal employees made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

**Ayes:** Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

**Nays:** None

**Abstain:** None

**Absent:** None

**Excused:** None

**Action:** Motion to adopt Resolution 2022-77 of the City Council of the City of American Canyon approving the Fiscal Year 2022/2023 Salary Schedules made by Vice Mayor Mariam Aboudamous, seconded by Councilmember Mark Joseph, and CARRIED by roll call vote.

**Ayes:** Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

**Nays:** None

**Abstain:** None

**Absent:** None

**Excused:** None

**Action:** Motion to adopt Resolution 2022-78 of the City Council of the City of American Canyon revising the Recruitment and Retention Strategic Plan and the Performance Management Guidelines, Policies and Procedures for At Will Managers made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

**Ayes:** Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

**Nays:** None

**Abstain:** None

**Absent:** None

**Excused:** None

**Action:** Motion to adopt Resolution 2022-79 of the City Council of the City of American Canyon modifying the City of American Canyon's FY 2022-23 Classification Plan made by Vice Mayor Mariam Aboudamous, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

**Ayes:** Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

**Nays:** None

**Abstain:** None

**Absent:** None  
**Excused:** None

## **MANAGEMENT AND STAFF ORAL REPORTS**

There were no management and staff oral reports.

## **MAYOR/COUNCIL COMMENTS, COMMITTEE REPORTS, AND FUTURE AGENDA ITEMS**

The mayor and council members announced items of community interest.

### **15. Council Committee Report - Councilmember Mark Joseph**

### **16. Anticipated Future Agenda Items of Note:**

Council reviewed anticipated future agenda items.

## **ADJOURNMENT**

The meeting was adjourned at 8:21 p.m.

## **CERTIFICATION**

Respectfully Submitted,

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Taresa Geilfuss, CMC, City Clerk

CITY OF AMERICAN CANYON  
REGULAR CITY COUNCIL MEETING

ACTION MINUTES

August 16, 2022

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6:30 P.M. OPEN SESSION - REGULAR MEETING

**CALL TO ORDER**

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**PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was recited.

## ROLL CALL

Present: Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

Absent: None

Excused: None

## REPORT ON CLOSED SESSION/CONFIRMATION OF REPORTABLE ACTION

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## PROCLAMATIONS AND PRESENTATIONS

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## PUBLIC COMMENTS - ITEMS NOT ON THE AGENDA

Mayor Garcia called for public comments. Written comments: none. Oral comments: William Baker was called to speak; James Cisney was called to speak; Margaret Sharkey was called to speak; Homar Crespo was called to speak; Patricia Krueger was called to speak; Hugh Marquez was called to speak; Justin Hamilton Hole was called to speak; Bridjet Toles was called to speak. The public comments period was closed.

## AGENDA CHANGES

There were no agenda changes.

## CONSENT CALENDAR

Action: Motion to adopt the Consent Calendar made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

Ayes: Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

Nays: None

Abstain: None

Absent: None

Excused: None

6. Minutes of August 2, 2022

Action: Approved the minutes of the City Council meeting of August 2, 2022.

7. AB361 In Person and Remote Teleconferenced Meetings - August 16, 2022 - September 15, 2022

Action: Adopted Resolution 2202-68 reaffirming that, due to the continuing COVID-19 Pandemic, a local emergency exists, re-ratifying the Proclamation of a State of Emergency by Governor Newsom on March 4, 2020, and authorizing in-person and remote teleconferenced meetings of legislative and advisory bodies of the City of American Canyon for the period of August 16, 2022 - September 15, 2022 pursuant to the Ralph M. Brown Act.

8. City Conflict of Interest Code

Action: Adopted Resolution 2022-69 taking the following actions in conjunction with the City's Conflict of Interest Code: approving the 2022 Conflict of Interest Code; authorizing future updates by Resolution; authorizing the City Clerk to complete and file the 2022 Local Biennial Notice.

9. Coastland Development Engineering Services

Action: Adopted Resolution 2022-70 authorizing the City Manager to execute Agreement 2022-A117 with Coastland Civil Engineering, Inc. for Development engineering Services in an amount not to exceed \$330,000.

10. Napa Countywide Road Maintenance Act (Measure T) - 2022 Master Funding Agreement

Action: Adopted Resolution 2022-71 authorizing the City Manager to execute the 2022 Master Funding Agreement 2022-A118 with Napa Valley Transportation Authority-Tax Agency relating to Measure T.

11. Napa Logistics Park Phase 2 Public Improvements

Action: Adopted Resolution 20225-72 of the City Council of the City of American Canyon accepting the public streets and appurtenant utilities improvements associated with the Napa Logistics Park Phase 2 Project.

## PUBLIC HEARINGS

### [12. Proposed Residential Solid Waste Rate Increase for Enhanced Services \(SB 1383\)](#)

Council received a staff report from Public Works Director Erica Ahman Smithies with Derek Nelson of Recology available for questions. Mayor Garcia opened the public hearing and called for public comments. Larry Toles was called to speak; Patricia Krueger was called to speak; Justin Hamilton Hole was called to speak; Karen Fritz was called to speak; Marion Sullivan was called to speak; Larry Toles was called to speak. Public comments and the public hearing were closed.

Action: Motion to adopt Resolution 2022-74 approving a residential solid waste rate increase made by Councilmember Mark Joseph, seconded by Councilmember David Oro, and CARRIED by roll call vote.

Ayes: Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

Nays: None

Abstain: None

Absent: None

Excused: None

## BUSINESS

### 13. [City of American Canyon Local Roadway Safety Plan](#)

Council received a staff report from Public Works Director Erica Ahman Smithies with Kathryn Kleinschmidt of GHD. Mayor Garcia called for public comments. Written comments: none. Oral comments: Hugh Marquez was called to speak. The public comments period was closed.

Action: Motion to adopt Resolution 2022-75 approving the City of American Canyon Local Roadway Safety Plan made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

Ayes: Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

Nays: None

Abstain: None

Absent: None

Excused: None

### 14. [Adoption of Labor Agreements, Salary Schedules and related documents.](#)

Council received a staff report from Assistant City Manager Maria Ojeda. Mayor Garcia called for public comments. Written comments: none. Oral comments: None. The public comments period was closed.

Action: Motion to adopt Resolution 2022-75 of the City Council of the City of American Canyon approving the Memorandums of Understanding with the Teamsters Local 315 General and Mid-Management Units made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

Ayes: Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

Nays: None

Abstain: None

Absent: None

Excused: None

Action: Motion to adopt Resolution 2022-76 of the City Council of the City of American Canyon revising the Unrepresented Compensation Program for at will managers,

confidential and part time/seasonal employees made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

Ayes: Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

Nays: None

Abstain: None

Absent: None

Excused: None

Action: Motion to adopt Resolution 2022-77 of the City Council of the City of American Canyon approving the Fiscal Year 2022/2023 Salary Schedules made by Vice Mayor Mariam Aboudamous, seconded by Councilmember Mark Joseph, and CARRIED by roll call vote.

Ayes: Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

Nays: None

Abstain: None

Absent: None

Excused: None

Action: Motion to adopt Resolution 2022-78 of the City Council of the City of American Canyon revising the Recruitment and Retention Strategic Plan and the Performance Management Guidelines, Policies and Procedures for At Will Managers made by Councilmember David Oro, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

Ayes: Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

Nays: None

Abstain: None

Absent: None

Excused: None

Action: Motion to adopt Resolution 2022-79 of the City Council of the City of American Canyon modifying the City of American Canyon's FY 2022-23 Classification Plan made by Vice Mayor Mariam Aboudamous, seconded by Councilmember Pierre Washington, and CARRIED by roll call vote.

Ayes: Mayor Leon Garcia, Vice Mayor Mariam Aboudamous, Councilmember Mark Joseph, Councilmember David Oro, Councilmember Pierre Washington

Nays: None

Abstain: None

Absent: None  
Excused: None

## MANAGEMENT AND STAFF ORAL REPORTS

There were no management and staff oral reports.

## MAYOR/COUNCIL COMMENTS, COMMITTEE REPORTS, AND FUTURE AGENDA ITEMS

The mayor and council members announced items of community interest.

### 15. Council Committee Report - Councilmember Mark Joseph

### 16. Anticipated Future Agenda Items of Note:

Council reviewed anticipated future agenda items.

## ADJOURNMENT

The meeting was adjourned at 8:21 p.m.

## CERTIFICATION

Respectfully Submitted,

---

Taresa Geilfuss, CMC, City Clerk

William D. Ross  
David Schwarz  
Kypros G. Hostetter

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**William D. Ross**  
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Los Angeles, CA 90025

File No: 199/6

August 17, 2022

**VIA E-MAIL**

The Honorable Leon Garcia, Mayor  
and Members of the City Council  
City of American Canyon  
4381 Broadway, Suite 201  
American Canyon, CA 94503

Re: Report Upon Return from Closed Session; Virtual Regular Meeting of the  
American Canyon City Council; August 16, 2022

Dear Mayor Garcia and Members of the City Council:

This communication sets forth reportable action, if any, of the City Council (“Council”) of the City of American Canyon (“City”), consistent with provisions of the Ralph M. Brown Opening Meeting Act (Government Code Section 54950, *et seq.*) resulting from the Closed Session of the Virtual Regular Council Meeting of August 16, 2022, consistent with Government Code Section 54957.1.

After convening in Open Session at 4:35 p.m. and ascertaining that there were no public comments on the agendized Closed Session matters, your Council adjourned to Closed Session at 4:35 p.m.

There were four matters agendized for City Closed Session consideration.

1. Conference with Legal Counsel – Anticipated Litigation  
Pursuant to Government Code Section 54956.9(d)(2)  
Three Matters
2. Conference with Legal Counsel – Existing Litigation (4 Matters)  
Authorized Pursuant to Government Code Section 54956.9(d)(1):
  - a. *City of American Canyon v. City of Vallejo, et al.* (Napa County Superior Court Case No. 22CV000772)
  - b. *Napa County Flood Control and Water Conservation District, Solano County Water Agency, and City of Yuba City v.*

*California Department of Water Resources* (Sacramento County Superior Court Case No. 34-2022-0032338).

- c. *Russell Charpentier and William Baker v. City of Vallejo, et. al* (Solano Superior Court Case No. not yet available).
  - d. *In the Matter of Inspection and Order to Abate at 106 Wilson Way* (APN: 058-370-002) (Napa Superior Court Case No. 22CV000850)
3. Conference with Labor Negotiators: Authorized Pursuant to Government Code Section 54957.6  
Agency Designated Representatives: City Manager Jason Holley and Labor Counsel Sloan, Sakai, Yeung & Wong  
Employee Organization: Teamsters
  4. Conference with Real Property Negotiator: Authorized pursuant to Government Code Section 54956.8.  
Property: APNs 058-320-015 (Right of Way at Napa Junction Road)  
Agency Negotiator: Jason Holley, City Manager  
Negotiating Parties: City of American Canyon and Napa Valley Unified School District  
Under Negotiation: Terms of Acquisition of Property

With respect to two of the matters considered under City Closed Session Agenda Item No. 1., there was no reportable action under the common law attorney-client privilege and that provided by Government Code Section 54956.9(d)(2).

With respect to the third matter considered under City Closed Session Agenda Item No. 1., there was reportable action in the form of direction to the City Clerk to ensure compliance with the Election Code Notice Provisions for Measure J and to confirm filing of those dates with the Napa County Election Official. Except as indicated, there was no other reportable action under the common law attorney-client privilege and that provided by Government Code Section 54956.9(d)(2)

With respect to City Closed Session Agenda Item No. 2.a., there was no reportable action under the common law attorney-client privilege and that provided by Government Code Section 54956.9(d)(1).

With respect to City Closed Session Agenda Item No. 2.b., there was reportable action in the form of the filing of a Complaint by the Napa County Flood Control and Conservation District (local agency in which the City is a contracted participant) on the Area of Origin issue with the

The Honorable Leon Garcia, Mayor  
and Members of the City Council  
August 17, 2022  
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State Department of Water Resources. Except as indicated there was no other reportable action under the common law attorney-client privilege and that provided by Government Code Section 54956.9(d)(1).

With respect to City Closed Session Agenda Item No. 2.c., this item was information only concerning the pleadings filed in the matter as of August 16, 2022.

With respect to City Closed Session Agenda Item No. 2.d., there was reportable action in the form of a Court ordered the extension of the involved Inspection Warrant from the effective date of August 22, 2022. Except as indicated, there was no other reportable action under the common law attorney-client privilege and that provided by Government Code Section 54956.9(d)(1).

With respect to City Closed Session Agenda Item No. 3., there was no reportable action under the provisions of Government Code Section 54957.6, with the exception of the indication that the matter was an Open Session Item under Open Session Business Item No. 14 – adoption of labor agreements, salary schedules and related documents.

With respect to City Closed Session Agenda Item No. 4., there was no reportable action with the exception of indicating that a revised Exchange Agreement has been prepared and exchanged between the City and the Napa Valley Unified School District (“NVUSD”) with prospective hearing dates for consideration by the NVUSD Board of August 25, 2022 and September 8, 2022.

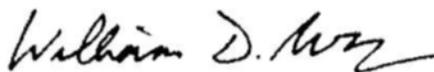
Additionally, information was discussed concerning the Applicant filed Application with the NVUSD for the Oat Hill Development Project, confirming the amount of payment of school fees as \$1,262,030.00. Except as indicated, there was no other reportable action under the common law attorney-client privilege and that provided by Government Code Section 54956.8.

The Closed Session concluded at 6:12 p.m., where it was indicated that a written report upon return consistent with Government Code Section 54957.1, would be prepared.

This communication should be reviewed under the Consent portion of the Agenda of your next Regular or Special City Council Meeting.

Should you have questions concerning this Report, it may be taken off the Consent calendar when agendized in the future, or our office may be contacted in the interim.

Very truly yours,



William D. Ross  
City Attorney

The Honorable Leon Garcia, Mayor  
and Members of the City Council  
August 17, 2022  
Page 4

WDR:jf

cc: Jason B. Holley, City Manager  
Maria Ojeda, Assistant City Manager  
Taresa Geilfuss, City Clerk



---

## TITLE

Sanitary Sewer Management Plan (SSMP) Adoption

## RECOMMENDATION

Adopt a Resolution of the City Council of the City of American Canyon adopting the Sanitary Sewer Management Plan (SSMP)

## CONTACT

Felix Hernandez, III, Maintenance and Utilities Director

Jay Atkinson, Operations Manager

## BACKGROUND & ANALYSIS

On May 2, 2006, the California State Water Resource Control Board (SWRCB) adopted Statewide General Waste Discharge Requirements (WDR) Order No. 2006-003, for wastewater collections systems. The Waste Discharge Requirement (WDR) requires all enrollees to develop a [Sanitary Sewer Management Plan \(SSMP\)](#) and make it available to the public, SWRCB, and the Regional Water Quality Control Board (RWQCB). The SSMP must be audited at least every two years and updated every five years from the original adoption date by the enrollee's governing board. The original SSMP must have been approved by the governing board of the enrollee at a public meeting and adopted. All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems with piping greater than one mile in length are required to comply with the WDRs.

On October 25, 2006, the City filed a Notice of Intent to comply with the terms of the order and originally certified the SSMP on July 20, 2009. The order included eleven mandatory elements that must be addressed in the SSMP.

The SSMP elements describe the activities the City will employ to manage, operate, and maintain the wastewater collection system effectively. Staff revised the plan in 2021 to meet compliance regulations and is recommending that City Council adopt the revised SSMP.

## COUNCIL PRIORITY PROGRAMS AND PROJECTS

Infrastructure: "Develop and maintain infrastructure resources to support sustainable growth."

**FISCAL IMPACT**

No fiscal impact.

**ENVIRONMENTAL REVIEW**

15378(b) - The action is not a "Project" subject to the California Environmental Quality Act ("CEQA") because it does not qualify as a "Project" under Public Resources Code Sections 21065 and 21080 and in Section 15378(b) of Title 14 of the California Code of Regulations.

**ATTACHMENTS:**

1. [Resolution - SSMP](#)
2. [Exhibit A - Sanitary Sewer Management Plan](#)

**RESOLUTION NO. 2022-**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AMERICAN CANYON  
ADOPTING THE SANITARY SEWER MANAGEMENT PLAN (SSMP)**

**WHEREAS**, On May 2, 2006, the California State Water Resource Control Board (SWRCB) adopted Statewide General Waste Discharge Requirements (WDR) Order No. 2006-003, for wastewater collections systems; and

**WHEREAS**, the Waste Discharge Requirement (WDR) requires all enrollees to develop a SSMP and make it available to the public, SWRCB, and the Regional Water Quality Control Board (RWQCB); and

**WHEREAS**, the SSMP must be audited at least every two years and updated every five years from the original adoption date by the enrollee's governing board; and

**WHEREAS**, on October 25, 2006, the City filed a Notice of Intent to comply with the terms of the order and originally certified the SSMP on July 20, 2009; and

**WHEREAS**, the SSMP elements describe the activities the City will employ to manage, operate, and maintain the wastewater collection system effectively; and

**WHEREAS**, on 2021 the Maintenance and Utilities Department staff revised the SSMP to meet compliance regulations.

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of American Canyon hereby adopts the Sanitary Sewer Management Plan (SSMP).

**PASSED, APPROVED and ADOPTED** at a regularly scheduled meeting of the City Council of the City of American Canyon held on the 6<sup>th</sup> day of September, 2022 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
Leon Garcia, Mayor

ATTEST:

APPROVE AS TO FORM:

\_\_\_\_\_  
Taresa Geilfuss, CMC, City Clerk

\_\_\_\_\_  
William D. Ross, City Attorney



SANITARY

SEWER

MANAGEMENT

PLAN



City of  
American Canyon

Maintenance and  
Utilities Department  
2021 Version 2.0



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**LIST OF ACRONYMS**

APWA	American Maintenance and Utilities Association
ASCE	American Society of Civil Engineers
BMP	Best Management Practice
CASA	California Association of Sanitation Agencies
CCTV	Closed-Circuit Television
CIP	Capital Improvement Program
CIPP	Cured in place pipe (slip lining)
CIWQS	California Integrated Water Quality System
CMMS	Computerized Maintenance Management System
CMOM	Capacity, Management, Operations, and Maintenance
CPC	California Plumbing Code

CWEA	California Water Environment Association
FOG	Fats, Oils, and Grease
FSE	Food Service Establishments
GIS	Geographic Information System
GRD	Grease Removal Device
I&I	Infiltration and Inflow
KPI	Key Performance Indicator
LRO	Legally Responsible Official
MGD	Million Gallons per Day
MOP	Manual of Practice
MS4	Municipal Separate Storm Sewer System
NACWA	National Association of Clean Water Agencies
NASSCO	National Association of Sewer Service Companies
NGO	Non-Government Organization
NOI	Notice of Intent
NOV	Notice of Violation
O&M	Operations & Maintenance
OERP	Overflow Emergency Response Plan
OES	Office of Emergency Services, State of California
PACP	Pipeline Assessment & Certification Program
PLSD	Private lateral Sewer Discharge
PM	Preventive Maintenance
POTW	Publicly Owned Treatment Works
QA/QC	Quality Assurance/Quality Control
R&R	Rehabilitation or Repair/Replacement

RWQCB	Regional Water Quality Control Board
SECAP	System Evaluation and Capacity Assurance Plan
SOP	Standard Operating Procedures
SSMP	Sanitary Sewer Management Plan
SSO	Sanitary Sewer Overflow
SSS	Sanitary Sewer System
SSSWDR	Statewide General WDR for Sanitary Sewer Systems
SWRCB	State Water Resources Control Board
USEPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WWC	Wastewater Collection
WRF	Water Reclamation Facility

## LIST OF TERMS

**Collection System** - Generic term for any system of pipes or sewer lines used to convey wastewater to a treatment facility.

**Enrollee** - A public entity that owns or operates a sanitary sewer system and has submitted a complete and approved application for coverage under the SSS WDR.

**Lateral (also called Service Lateral)** - A segment of pipe that connects a home or building to a sewer main, which may be located beneath a street or easement. The responsibility for maintaining a lateral can be solely that of the Enrollee or the private property owner; or it can be shared between the two parties. Local communities dictate lateral responsibility and the basis for a shared arrangement, if it applies. See Lower Lateral and Upper Lateral definitions.

**Lower Lateral** - That portion of a lateral from the property line or easement line to the sewer main. The lower lateral is owned and maintained by the City of American Canyon, if there is a cleanout installed on the lateral.

**Miles of Gravity Sewer** - Length of gravity sewer lines/pipes in an Enrollee's sanitary sewer system, expressed in miles.

**Miles of Publicly Owned Laterals** - Length of laterals in an Enrollee's sanitary sewer system that the Enrollee is responsible for maintaining, expressed in miles.

**Miles of Pressure Sewer (Miles of Force Main)** - Length of pressurized sewer lines/pipes in an Enrollee's sanitary sewer system, expressed in miles or portions thereof.

**Miles of Private Laterals** - Length of private laterals tributary to an Enrollee's sanitary sewer system that private property owners are responsible for maintaining, expressed in miles or portions thereof.

**Percent Reaching Surface Water** - Volume of sewage discharged from a sanitary sewer system or private lateral or collection system estimated to have reached surface water divided by the total volume of sewage discharged.

**Percent Recovered** - Volume of sewage discharged that was captured and disposed of properly, divided by the total volume of sewage discharged.

**Private Lateral** - Privately owned sewer service lateral. The City of American Canyon is not responsible for this portion of the lateral.

**Private Lateral Sewage Discharge (PLSD)** - Sewage discharges caused by blockages or other problems within privately owned laterals, collection systems or other private sewer assets that are tributary to the reporting Enrollee's sanitary sewer system. Reports of these events may be submitted by Enrollees on a voluntary basis, but are not the Enrollee's responsibility unless caused by issues in the main line or because of other Enrollee activity.

**Sanitary Sewer Overflow (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

- I. Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
- II. Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
- III. Wastewater backups into buildings and on private property caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

**Sanitary Sewer System** - Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a WWTP head works and which is comprised of more than one mile of pipes and sewer lines, used to collect and convey wastewater to a publicly owned treatment facility.

**SSO Category 1-** All discharges of sewage resulting from a failure in an Enrollee's sanitary sewer system that results in a discharge to a drainage channel and/or surface water.

**SSO Category 2-**All discharges of sewage resulting from a failure in an Enrollee's sanitary sewer system of a volume equal to or greater than 1,000 gallons that did not reach surface water.

**SSO Category 3-** All discharges of sewage resulting from a failure in an Enrollee's sanitary sewer system of a volume less than 1,000 gallons that did not reach surface water.

**SSO Database** - Online reporting system developed, hosted, and maintained by the SWRCB for compliance with the Monitoring and Reporting Program contained in SSS WDR.

**Storm Drain** - For the purposes of complying with the SSS WDR, any pipe that is part of a Municipal Separate Storm Sewer System (MS4) used for collecting or conveying storm water.

**Total# of SSOs per 100 miles of Sewer per Year-** Broad metric used to compare the relative performance of Enrollees and their sanitary sewer systems. This metric expresses the number of SSOs for which the reporting Enrollee is responsible, for every 100 miles of pipe or sewer lines in an Enrollee's sanitary sewer system. Due to the large variation in facility specific characteristics, this metric should only be viewed as a rough comparison of the operation and maintenance performance of Enrollees and their sanitary sewer systems. This metric is calculated as described below:

$$\text{Total\# of SSOs per year / 100 miles of pipe} = \frac{(\text{Total \# of SSOs} \times 100)}{(\text{Miles of Pressure Sewer} + \text{Miles of Gravity Sewer})}$$

**Total Volume of SSOs Reaching Surface Water per 100 miles of Sewer-** Broad metric used to compare the relative performance of Enrollees and their sanitary sewer systems. This metric expresses the volume of SSOs, for which the reporting Enrollee is responsible, that reached surface water for every 100 miles of pipe or sewer lines in an Enrollee's sanitary sewer system. Because sewage discharges that reach surface water pose a greater threat to public health and the environment, this metric reflects some accounting of the threat posed by SSOs. Due to the large variation in facility specific characteristics, this metric should only be viewed as a rough comparison of the operation and maintenance performance of Enrollees and their sanitary sewer systems. This metric is calculated as described below:

$$\text{Total Annual Volume of SSOs Reaching Surface Waters / 100 miles of pipe} = \frac{(\text{Total volume of SSOs reaching Surface Waters} \times 100)}{(\text{Miles of Pressure Sewer} + \text{Miles of Gravity Sewer})}$$

*(Miles of Pressure Sewer + Miles of Gravity Sewer)*

**Total Volume Reaching Surface Water**-Amount of sewage discharged from a sanitary sewer system, private lateral, or collection system estimated to have reached surface water.

**Total Volume Recovered** -Amount of sewage discharged that was captured and disposed of properly.

**Upper Lateral** - Portion of a lateral usually from the building foundation to the property line or easement line where it connects to the Lower Lateral. The City does not own and maintain this portion of lateral since responsibility lies with the owner of the property that the lateral serves.

**WDID** - Waste Discharge Identification Number assigned as a unique identifier by the SWRCB to each Enrollee for regulatory recordkeeping and data management purposes.



## INTRODUCTION

On May 2, 2006, the California SWRCB adopted Statewide General Waste Discharge Requirements (WDR) Order No. 2006-003, for wastewater collection systems. The WDR requires all enrollees to develop a Sanitary Sewer Management Plan (SSMP) and make it available to the public, to the SWRCB, and the RWQCB. The SSMP must be audited at least every two (2) years and updated every five (5) years from the original adoption date by the Enrollee's governing board. The original SSMP must have been approved by the governing board of the enrollee at a public meeting and adopted. All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems with piping greater than one mile in length are required to comply with the WDRs. The City filed a NOI to comply with the terms of the Order on October 25, 2006 and originally certified the SSMP on July 20, 2009.

The Order includes eleven (11) mandatory elements that must be addressed in the SSMP. The SSMP elements describe the activities the City will employ to manage, operate, and maintain the wastewater collection system effectively.

**Table 1** briefly summarizes the WDR elements. Appendix 1 shows the exact text of each WDR element requirements.

**TABLE 1 - SSS WDR D.13 REQUIRED ELEMENTS**

SSMP Element	Requirements
1. Goals	a) Develop goals for operation and maintenance of SSS
2. Organization	a) Identify the Legally Responsible Official (LRO) b) SSMP responsibility and staff organization chart c) Chain of communication for reporting SSOs
3. Legal Authority	a) Prevent illicit discharges into SSS b) Require proper design and construction of SSS components c) Ensure access to laterals owned/maintained by City d) Limit the discharge of FOG or other debris that may cause blockages e) Enforce violations of sewer ordinance
4. Operations and Maintenance Program	a) Maintain up-to-date collection system maps b) Schedule, conduct, and document preventive O&M activities c) Condition assessment, rehabilitation and replacement (R&R) plan d) Training for SSS O&M staff e) Maintain adequate equipment and critical replacement part inventory

5. Design and Performance Provisions	<ul style="list-style-type: none"> <li>a) Maintain SSS design and construction specifications</li> <li>b) Procedures and standards for inspecting and testing new construction and R&amp;R projects</li> </ul>
6. Overflow Emergency Response Plan (OERP)	<ul style="list-style-type: none"> <li>a) Proper notification procedures for SSOs</li> <li>b) Program for appropriate SSO response</li> <li>c) Procedure for prompt notification to regulatory agencies</li> <li>d) Appropriate staff and contractor training for OERP execution</li> <li>e) Procedures to address emergency operations during SSOs</li> <li>f) Procedures to ensure containment of SSOs to prevent discharge to surface waters including water quality monitoring when required</li> </ul>
7. Fats, Oils, and Grease (FOG) Control Program	<ul style="list-style-type: none"> <li>a) Public education plan to promote proper disposal of FOG</li> <li>b) FOG disposal plan</li> <li>c) Legal authority to prohibit discharge of FOG</li> <li>d) Requirements to install and maintain grease removal devices</li> <li>e) Authority to inspect and enforce FOG ordinance</li> <li>f) FOG characterization assessment and hot spot cleaning schedule</li> <li>g) FOG source control program measures</li> </ul>
8. System Evaluation and Capacity Assurance Plan {"SECAP"}	<ul style="list-style-type: none"> <li>a) Develop SSS hydraulic model and identify capacity</li> <li>b) deficiencies Establish SSS hydraulic design criteria</li> <li>c) Establish short- and long-term CIP for capacity enhancement measures</li> <li>d) Develop schedule of completion dates for projects</li> </ul>
9. Monitoring, Measurement and Program Modifications	<ul style="list-style-type: none"> <li>a) Maintain records and information for SSMP</li> <li>b) activities Measure effectiveness of <b>SSMP</b></li> <li>c) elements and programs Assess success of the preventative maintenance program</li> <li>d) Update SSMP program elements based on performance evaluations</li> <li>e) Identify and illustrate SSO trends</li> </ul>
10. SSMP Program Audits	<ul style="list-style-type: none"> <li>a) Conduct periodic SSMP audits</li> </ul>
11. Communications Program	<ul style="list-style-type: none"> <li>a) Communicate on a regular basis with the public regarding SSMP development, implementation, and performance</li> </ul>

## SYSTEM OVERVIEW

The City of American Canyon (City) Maintenance and Utility Department operate and maintain a total of 34 miles of collection system gravity main piping, five (5) lift stations, and 4.4 miles of force main. The lift stations' capacities range from under 200 GPM to approximately 6 MGD. The table below summarizes the distribution of gravity main sizes throughout the collection system as of 2020.

**TABLE 2 - COLLECTION SYSTEM GRAVITY MAIN SIZE DISTRIBUTION**

Pipe Size (inch)	Total Length (LF)
4	278
6	57,323
8	158,359
10	23,646
12	29,862
14	1,103
15	11,316
21	1,078
24	925
<b>(Lineal Feet)</b>	<b>283,891</b>
<b>(Miles)</b>	<b>54</b>

An overview map of the City's Sewer Collection System can be found in **Appendix 4.1**

An overview of the City's larger Trunk Line Map is in **Appendix 4.2**

A Pump Station and Force Main Map is in **Appendix 4.3**

A map of all underground pipe type detail in **Appendix 4.4**

2021 underground facilities condition map is in **Appendix 4.5**

Our largest pump station is Building E, located at the current Corporation Yard for the City of American Canyon. Building E serves mainly residential flows from the southern half of the city to South Napa Jct. With a commercial area on Hwy 29 from southern city limit to South Napa Jct. A 15-inch trunk line on West American Canyon road was replaced in 2010, from Hwy 29 to Building E. Kimberly Lift Station is on the south west corner of the city, which serves 118 residents. Built in 2001 as part of a sub-division, this lift station is served by Building E. The force main from Building E to the WRF was replaced on 2006/07. Sunset pump station ties into the same force main. Installed in 2003, this pump station takes care of all the residential flow on the north half of the city as well as a commercial area on Hwy 29 between South Napa Jct. and Paoli Loop.

We have two pump stations that are served by industrial flow only. On the northern half of the city, Green Island pump station is served by the whole Green Island business park and along Hwy 29 north to South Kelly road. This is one of our older facilities and is scheduled to be completely replaced with a new pump station a few hundred feet north of the existing station. The smaller of the two commercial pump stations, Tower Road pump station is served by Tower Road, South Kelly road and Devlin road. This pump station is also scheduled to be replaced as this station is just as old and not needed once development in the area is complete. Flows will go to the new Green Island pump station. The same developer is working on both pump stations with 90% plans complete stage. A section of force main has also been relocated to allow for development in the area. With a plan to replace all old sections of force main that these two pump stations serve.

**Table 3 – Collection System Pump Stations**

City of American Canyon Pump Station and Lift Station Details

Industrial:

<b>Tower road</b>	3 pumps. The lowest flow of our Pump Stations. Slated to be eliminated in the next few years once a gravity main installed downstream.
Resiliency:	Pump bypass, portable generator and portable pump available.
<b>Green Island rd.</b>	2 pumps. New pump station is currently under construction and slated to replace the old Green Island pump station in 2022.
Resiliency:	Pump bypass, attached Diesel generator and 6 inch portable pump on site.

Residential:

<b>Sunset</b>	2 pumps. Newest pump station constructed in 2003.
Resiliency:	Pump bypass, attached Diesel generator and 6 inch portable pump available. Has the ability to bypass 80-90% of flows to Building E.
<b>Building E (corpyard)</b>	4 pumps. The largest of our pump stations, approx. 75% of city's residential flows. Currently part of a CIP, in conjunction with the Watson Ranch development.
Resiliency:	Pump bypass, attached Diesel generator and 6 inch portable pump available.

Lift Station:

<b>Kimberly</b>	2 pumps, constructed in 2001/02, the lift station serves about 200 homes and is gravity fed to Building E pump station.
Resiliency:	Pump bypass, attached Diesel generator. Portable pump available.

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## 1. SSMP ELEMENT 1: GOALS

The City of American Canyon recognizes that the sewer collection system is a key component of its Maintenance and Utility Division (MUD) and is committed to providing responsible and reliable service to the community through a comprehensive maintenance and operations program. The City has therefore implemented a sewer collection system maintenance program, which is intended to accomplish the following:

The City of American Canyons main goal is to protect public health and the environment. This is done through multiple programs such as cleaning, inspections, repairs, engineering and public outreach. This is done by minimizing sanitary sewer overflows and blockages by maintaining a clean collection system with the use of our Vac-Con jetter truck. Inspecting the collection system through CCTV and checking manholes and other structures to identify problem areas before they fail. Assuring our collection system meets current and future demand through hydraulic modeling and engineering. Reaching out to the public, in multiple avenues, to educate about our FOG program, wipes and local collection system issues. Through our pre-treatment program that inspects food service, dentistry and other commercial contributors on a scheduled and unscheduled basis, will minimize impacts on the collection system and WRF. Through outreach and pre-treatment inspections we will be minimizing contributing factors that would normally add our collection system issues.



## 2. SSMP ELEMENT 2: ORGANIZATION

### LEGALLY RESPONSIBLE OFFICIAL (LRO)

The City's legally Responsible Officials (LROs) are authorized to electronically sign and certify SSO reports in CIWQS. The City's LROs are:

### MUD DIRECTOR

- **WRF Operations Manager**

In addition to the LRO, the City's Data Submitters are authorized to input all data and reports that are ready for certification by the LRO. Data Submitters are:

- **Sewer Collections Supervisor**
- **Water Distribution Supervisor**

### ORGANIZATION CHART

**Appendix 2.1** defines the responsible party for each SSMP element, including names and telephone numbers.

### MAINTENANCE AND UTILITIES DEPARTMENT

The Maintenance and Utilities Department is responsible for the maintenance of the City's infrastructure and is responsible for safe and reliable delivery of water as well as proper conveyance and treatment of wastewater. Responsibilities include maintenance and operation of the potable water system (including production, treatment, storage and distribution), and operation of the wastewater system (including pumping stations and the City's Wastewater Reclamation Facility). Provides engineering review and inspection of the utility portion of public improvements, for new development projects and for public capital improvement and replacement projects.

The Wastewater Division has primary responsibility for operation and maintenance of the WRF, the Sewer collection system, water quality sampling and analysis, the SCADA communication system and inspection of commercial and industrial dischargers to ensure compliance with the City's sewer ordinances.

The Wastewater Division's Sewer Department takes primary responsibility for the gravity sewer collection system piping, as well as responsibilities for operation and maintenance of the City's sewer lift stations

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and WRF. The Sewer Department is responsible for planning and execution of the sewer collection system cleaning and CCTV inspection programs and works with engineering in construction projects.

**Figure 1** shows the organization chart for the City of American Canyon Maintenance and Utilities Department and Engineering Department.

#### **PUBLIC WORKS / ENGINEERING DEPARTMENT**

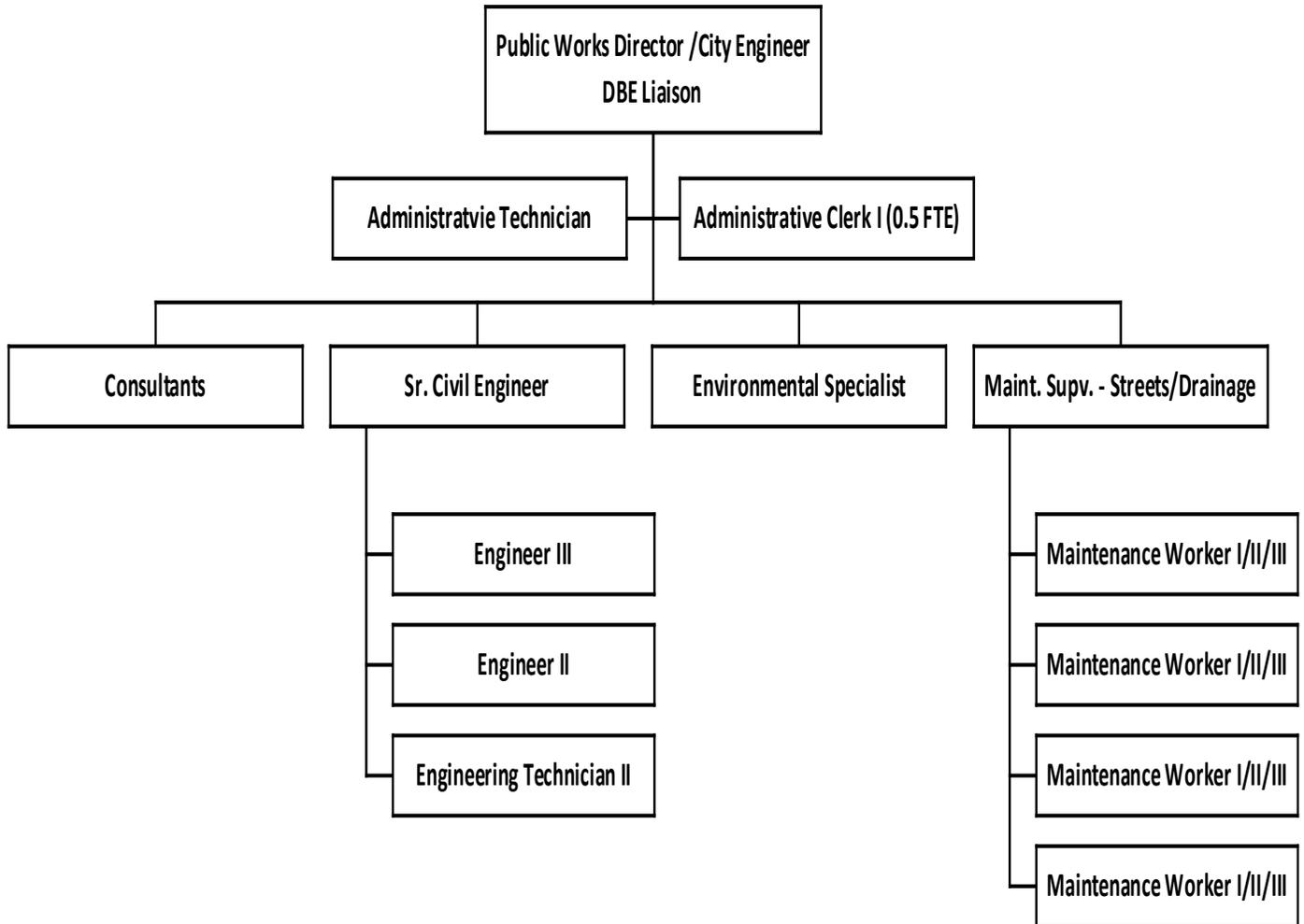
The Engineering Division consists of engineers, inspectors, environmental specialist, administrative technician as well as Streets and Drainage Supervisor and Maintenance workers. Responsibilities include implementing the City's Capital Improvement Program (CIP) and interacting on behalf of the City with outside agencies and reviewing land development projects. Other responsibilities include maintaining and updating the City's standard plans and specifications; inspections; issuance and administration of permits, licenses and agreements; flood plain administration; traffic engineering; surveying; and customer service related to public utilities, property development and public right-of-way issues.

The Engineering Department is responsible for development of the City's infrastructure. Responsibilities include design and construction of public streets (including sidewalks, street and traffic signs, and pavement markings), water system distribution, sewer collection, and storm drain systems. The Department also provides engineering review and inspection of public improvements for new development projects and for public capital improvement and replacement projects.

FIGURE 1 - ORGANIZATION CHART - MAINTENANCE AND UTILITIES 2021



**FIGURE 2 - ORGANIZATIONAL CHART - PUBLIC WORKS 2021**



**MAINTENANCE AND UTILITIES POSITION DESCRIPTIONS AND SSMP RESPONSIBILITIES**

General descriptions of each position and SSMP-specific responsibilities are listed below:

**Maintenance and Utilities Director:** Establishes policies; plans strategy; approves capital improvement projects; authorizes outside contractors to perform services; and serves as the public information officer.

**Administrative Clerk:** Performs clerical and organizational tasks, assists with FOG control program public outreach.

**WRF Operations Manager:** Responsible for planning and resource allocation for the sewer collection system cleaning and CCTV inspection programs. Responsible for overseeing execution of the City's Overflow Emergency Response Plan and conducting the training program for all Foreman and Utility Workers.

**Maintenance Supervisor:**Executes and documents scheduled preventative maintenance tasks. Responds to emergency repairs and SSOs; generates work orders for repairs and other services; maintains data/records; answers service request calls and relays information to the Operations Manager. Performs SSO incident investigation, communications as appropriate; and delivers the completed SSO report to the Water/Wastewater Operations Manager.

**Maintenance and Utilities Worker, I/II/III:** Executes and documents scheduled preventative maintenance tasks. Responds to emergency repairs and SSOs. Identifies sewer collection system mapping updates required. Performs collection system maintenance related traffic control, as well as marking out utilities.

**WRF Operator I/II/III:** Maintains the WRF, keeps it in compliance, efficiently operated and comprehensive records kept.

**Plant Mechanic:** Performs most repairs at the WRF, pump stations and WTP.

**Laboratory Technician:** Schedules compliance sampling for regulatory reporting.

**OIT:** Operator in training. For all utility workers to help out on multiple levels. To assist Wastewater operators with plant operations. To assist collections system crew as needed.

**Engineering Director:**Supervises development projects and systems; reviews and approves plans for new construction and ensures adherence to the City's design and construction standards.

**Senior Civil Engineer:** Conducts plan review, responsible for keeping the City's design and construction standards up to date. Develops and updates the City's overall Capital Improvement Plan, including budgeting and prioritization of projects. Ensures that sewer collection system defects identified through the CCTV inspection program are adequately addressed in the Capital Improvement Plan.

**Engineering Technician:** Supports work directed by Engineering Director` and Senior Civil Engineer.

**Maintenance and Utilities Inspectors:** Conduct review and inspection of new construction to ensure compliance with the City's design and construction standards and approved plans

#### CHAIN OF COMMUNICATION FOR REPORTING SSOS

The Maintenance and Utilities Maintenance Division perform SSO response and document each incident as indicated in the OERP (Appendix 6.1). Upon completion of the chain of custody, the report is delivered to the Water/Wastewater Operations Manager.

The Water/Wastewater Operations Manager or designee reviews the SSO report/checklist, and contacts the Maintenance and Utilities Crew for additional information if necessary. If there is an SSO backup into a home or a business, the documentation is sent to the City Administrative Specialist. The Wastewater Operations Manager completes the Collection System Failure Analysis Form, enters SSO data into CIWQS, and will complete the chain of custody.

***Related Appendices***

**Appendix 2.0 - SSMP Contributing Authors and Positions**

**Appendix 6.0 - Sanitary Sewer Overflow Emergency Response Plan (OERP)**

### 3. SSMP ELEMENT 3: LEGAL AUTHORITY

**Table 4 – Municipal Code Chapter 14.16 Sewer System Ordinance Codes**

<b>Chapter 14.16 SEWER USE REGULATIONS</b>			
<b>Municipal Code</b>	<b>Ordinance Number</b>	<b>Section Title</b>	<b>Description</b>
<b>14.16.010</b>	(Ord. 98-07 § 2, 1998; Ord. 93-01 § 503.01, 1993)	City may deny new or increased contributions of pollutants.	Authorizes the City to deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants, to the POTW by industrial users when contributions do not meet applicable pretreatment standards and requirements or when contributions would cause the POTW to violate its discharge permit.
<b>14.16.020</b>	(Ord. 98-07 § 2, 1998; Ord. 93-01 § 503.02, 1993)	Industrial users— Must comply with pretreatment standards.	Requires all industrial users be in consistent compliance with applicable pretreatment standards and requirements.
<b>14.16.030</b>	(Ord. 98-07 § 2, 1998; Ord. 93-01 § 503.03, 1993)	Discharge permit elements	Requires every significant industrial user and any other industrial user deemed necessary by the City be issued a permit.
<b>14.16.040</b>	(Ord. 98-07 § 2, 1998; Ord. 93-01 § 503.04, 1993)	Compliance schedule	May require a compliance schedule from any industrial user for the installation of technology required to meet applicable pretreatment standards and requirements.
<b>14.16.050</b>	(Ord. 98-07 § 2, 1998; Ord. 93-01 § 503.05, 1993)	Right of entry	Permits City representatives to enter all properties served by the city for the purposes of inspection, surveillance, observance, and monitoring procedures

<b>14.16.060</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 503.06, 1993	Remedies for noncompliance.	The City may obtain remedies for noncompliance by any industrial user with any pretreatment standard and requirement.
<b>14.16.070</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 504.00, 1993	Discharge permits	Lists the primary parameters and requirements that encompass discharge permits.
<b>14.16.080</b>	Ord. 2004-09 § 1, 2004; Ord. 98-07 § 2, 1998; Ord. 93-01 § 55.01, 1993	Acceptable wastes— Domestic and industrial sanitary sewage	Requires the physical, chemical and biological characteristics of domestic sanitary sewage be based on the daily composite average of the discharge and conform to the set limits.
<b>14.16.090</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.00, 1993	Prohibited wastes	Prohibits the discharge of any water or wastewater into public sewers outlined in Sections 706.01 through 706.04.3.
<b>14.16.100</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.01, 1993	Sewer use prohibitions	Prohibits the discharge of any pollutant(s) that could cause pass through or interference into the POTW.
<b>14.16.110</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.02, 1993	Application of most stringent limitation	Applies the most stringent regulations or standards: federal, state, regional or local.
<b>14.16.120</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.03.1, 1993	Specific prohibitions— Fire or explosion hazard	Prohibits pollutants that could create a fire or explosion hazard in the POTW, or pollutants with a closed-cup flashpoint of less than one hundred forty degrees Fahrenheit (sixty degrees Celsius).

<b>14.16.130</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.03.2, 1993	Specific prohibitions— Corrosive materials	Prohibits any waste having a pH lower than 5.0 or having any other corrosive property capable of causing damage or hazard to City structures, equipment or personnel.
<b>14.16.140</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.03.3, 1993	Specific prohibitions— Obstructions	Prohibits solids or viscous substances capable of causing obstruction to the flow in sewers, which could interfere with the proper operation of the sewer system.
<b>14.16.150</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.03.4, 1993	Specific prohibitions— Pollutant causing interference	Prohibits any pollutant, including oxygen demanding pollutants from being discharged at a flow rate and/or pollutant concentration that causes interference with the POTW.
<b>14.16.160</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.03.5, 1993	Specific prohibitions— Temperature	Prohibits heat that inhibits biological activity in the POTW resulting in interference, or heat that exceeds forty degrees Celsius (one hundred four degrees Fahrenheit).
<b>14.16.170</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.03.6, 1993	Specific prohibitions— Mineral oil	Prohibits discharges containing petroleum oil, nonbiodegradable cutting oil, or products of mineral origin in amounts that cause interference or pass through.
<b>14.16.180</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.03.7, 1993)	Specific prohibitions— Noxious and malodorous substances	Prohibits noxious or malodorous substances that may result in toxic gases, fumes, or vapors in a quantity capable of causing a public nuisance or worker health and safety problems.

<b>14.16.190</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.03.8, 1993	Specific prohibitions— Limitations on point of discharge	Prohibits discharge of any substances directly into a manhole or other opening in a public sewer, other than through an approved building without a wastewater discharge permit.
<b>14.16.200</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.03.9, 1993	Specific prohibitions— Pass through	Prohibits discharges that would exit the POTW into waters of the United States in quantities or concentrations that could cause a violation of any requirement of the POTW's NPDES permit.
<b>14.16.210</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.04.1, 1993	Local limits— Discharge limit development	Requires the City to continually develop and enforce the local limits.
<b>14.16.220</b>	Ord. 2004-09 § 2, 2004; Ord. 98-07 § 2, 1998; Ord. 93-01 §§ 506.04.2, 506.04.3, 1993	Local limits— Toxic substances	Prohibits discharges containing a toxic or poisonous substance in sufficient quantities to injure or interfere with or create any hazard in the sewage treatment process, effluent quality, sludge quality, or receiving water quality.
<b>14.16.230</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.1, 1993	General prohibitions— Rainwater or uncontaminated water	Prohibits discharges of rainwater, stormwater, groundwater, street drainage, subsurface drainage, water from yard fountains, ponds or lawn sprays or any other uncontaminated water into any sanitary sewer facility.
<b>14.16.240</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.2, 1993	General prohibitions— Groundwater from cleanup projects	Prohibits discharges from spill cleanups, leaking underground storage tanks, monitoring wells or similar sources without a discharge permit issued by the City.

<b>14.16.250</b>	Ord. 98-07 § 2, 1998; Ord. 9301 § 506.05.3, 1993	General prohibitions— Cooling water and swimming pool drainage	Prohibits discharges containing uncontaminated cooling or swimming pool drainage unless special permission has been granted by the city manager.
<b>14.16.260</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.4, 1993	General prohibitions— Garbage	Prohibits any garbage except properly shredded garbage from dwellings or restaurants that prepare food and beverages for consumption.
<b>14.16.270</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.5, 1993	General prohibitions— Suspended solids	Prohibits industrial process wastewater containing suspended solids that requires unusual attention or expense from the POTW.
<b>14.16.280</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.7, 1993	Pretreatment sludges— Nondegradable wastes	Prohibits discharges containing substances which are not treatable or that cause the treatment plant effluent to fail to meet any discharge requirements established by the State or the US.
<b>14.16.290</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.8, 1993	Pretreatment sludges— Chemical pesticides and similar toxicants	Prohibits discharges of chlorinated hydrocarbon, organo-phosphate or similar chemical compounds used as pesticides unless specifically approved in a wastewater discharge permit.
<b>14.16.300</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.9, 1993	Pretreatment sludges— Oxidizing and reducing agents	Prohibits discharge of strong oxidizing and reducing agents at concentrations exceeding 5 milligrams/liter, except by a special wastewater discharge permit.
<b>14.16.310</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.10, 1993	Pretreatment sludges—	Prohibits discharge of any radioactive wastes unless specific conditions are met.

		Radioactive wastes	
<b>14.16.320</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.11, 1993	Pretreatment sludges— Hospital wastes	Prohibits specific discharges from Hospitals, clinics, offices of medical doctors and convalescent homes.
<b>14.16.330</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 506.05.12, 1993	Pretreatment sludges— Unusual waste concentrations	Prohibits discharge of unusual wastes that could cause unusual concentrations of suspended solids, a significant load on the plant, excessive discoloration, foaming, or interference.
<b>14.16.340</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 507.00, 1993	Restricted waste discharges	Requires city manager approval of commercial or industrial discharges which may result in excessive operational costs, maintenance of sewage collection, or treatment facilities.
<b>14.16.350</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 507.01, 1993	Pretreatment	Requires pretreatment for incompatible pollutants discharged at each industrial plant site to the public sewer to be consistent with Federal Categorical Pretreatment Standards.
<b>14.16.360</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 507.02, 1993	Flow control	Requires limitations of discharge volume and flow rate into the sewer system to limit and equalize extreme flow and waste concentration.
<b>14.16.370</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 507.03, 1993	Surcharge payment	Requires payment in an amount established by the council to cover the added cost of handling and treating wastes.
<b>14.16.380</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 507.04, 1993	Damage caused by discharge	Authorizes the City to assess a reasonable charge for the work required to clean or repair a City facility when the discharge of a commercial waste causes an

			obstruction, damage or other impairment to the sewage system.
<b>14.16.390</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 507.05, 1993	Limitations of discharge quantity and rate of discharge	Authorizes the City to limit the quantity and rate of discharges, when the capacity of the sewer system would be overtaxed by the discharge, or the discharge would impose a disproportionate cost on the operation of the sewer system.
<b>14.16.400</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 507.06, 1993	Disposal of unacceptable wastes	Requires wastes to be disposed in accordance with all applicable federal, state and local laws, regulations, and ordinances.
<b>14.16.410</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 508.01, 1993	Hauled wastes— Septic tank pumpage discharges	Prohibits the direct or indirect discharge of septic tank pumpage to the POTW.
<b>14.16.420</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 508.02, 1993	Hauled wastes— Holding tank waste	Prohibits the discharge of holding tank waste or barrel waste, storage tanks, or similar containers into the sewer system without a City permit.
<b>14.16.430</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 508.03, 1993	Hauled wastes— RCRA wastes	Prohibits discharge of any hazardous waste transported to the POTW including truck, rail, or dedicated pipe that can subject the POTW to any RCRA hazardous waste requirements.
<b>14.16.440</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 509.00, 1993	National pretreatment standards— Categorical standards.	Establishes federal categorical pretreatment standards for applicable industrial users.

<b>14.16.450</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 510.00, 1993	Removal credits	Prohibits granting removal credits to any indirect dischargers within the city service area.
<b>14.16.460</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 511.00, 1993	Procedures— Outlined	Outlines the POTW pretreatment program procedures.
<b>14.16.470</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 512.00, 1993	Other implementing provisions— Outlined	Outlines additional POTW pretreatment program provisions.
<b>14.16.480</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.01, 1993	Reporting requirements— Baseline monitoring report	Outlines the baseline monitoring report requirements and procedures.
<b>14.16.490</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.02, 1993	Reporting requirements— Reports on progress in meeting compliance schedules	Outlines the specific requirements of compliance schedule progress reports.
<b>14.16.500</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.03, 1993	Reporting requirements— Report on final compliance (ninety-day report)	Outlines the specific requirements of a final compliance (ninety-day report).

<b>14.16.510</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.04, 1993	Reporting requirements— Periodic reports on continued compliance	Outlines the specific requirements of periodic reports on continued compliance.
<b>14.16.520</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.05, 1993)	Reporting requirements— Notice of slug loading	Requires industrial users to notify the City immediately of any slug loadings.
<b>14.16.530</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.06, 1993	Reporting requirements— Monitoring and analysis reports	Outlines the specific requirements for monitoring and analysis reports.
<b>14.16.540</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.07, 1993	Reporting requirements— Reports required by noncategorical industries	Requires significant noncategorical industrial users to sample their effluent at least once every six months and submit the results to the City. The report would not be required if the City elects to perform the sampling and analysis.
<b>14.16.550</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.08, 1993	Reporting requirements— Annual POTW reports.	Requires that the POTW submit an annual pretreatment report. Lists the items that must be included in the annual pretreatment report, at a minimum.
<b>14.16.560</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.09, 1993	Reporting requirements— Notification of changed discharge	Requires all industrial users to notify the City in advance of any waste discharge changes, including hazardous wastes.

<b>14.16.570</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.10, 1993	Reporting requirements— Signatory requirements for industrial user reports.	Requires all reports to include the City’s certification statement and to be signed by an authorized representative of the industrial user. Lists the requirements to be identified as an authorized representative.
<b>14.16.580</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.11, 1993	Reporting requirements— Provisions governing fraud and false statements	The reports required in 40 CFR 403.12 are subject to the provisions of 18 U.S.C. 1001 relating to fraud and false statements and the provisions of Section 309(c)(2) of the Act governing false statements, representations or certifications in reports required under the Act.
<b>14.16.590</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.12, 1993	Reporting requirements— Recordkeeping requirements	Requires industrial users to maintain all information from monitoring activity records. Requires industrial users to retain any monitoring activity and results records for at least 3 years.
<b>14.16.600</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 514.13, 1993	Reporting requirements— Hazardous waste notification	Requires industrial users to notify the EPA, the state and the City within one hundred eighty days of the domestic sewage study (DDS) regulations effective date of Hazardous waste discharges.
<b>14.16.610</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 515.00, 1993	Variances	Requires that a request for variances from categorical pretreatment standards for fundamentally different factors be made in accordance with 40 CFR 403.13.
<b>14.16.620</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 516.00, 1993	Confidentiality	Specifies the confidentiality rights of submitters to the Environmental Protection Agency, the State, or the City.

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<b>14.16.630</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 517.00, 1993	Net/gross calculation	Allows Categorical pretreatment standard adjustments when the presence of pollutants in industrial users wastewater meets requirements.
<b>14.16.640</b>	Ord. 98-07 § 2, 1998; Ord. 93-01 § 518.00, 1993	Statement of truthfulness— Required with all submissions	All applications, reports, or information submitted to the city must contain the City’s certification statement and must be signed by an authorized representative.



## 4. SSMP ELEMENT 4: OPERATIONS AND MAINTENANCE

The Maintenance and Utilities Division is responsible for execution of the City's sewer collection system preventative maintenance program for the gravity sewer system and responsible for execution of the preventative maintenance program for the sewer lift stations and WRF.

The following is a list of the sewer collection system O&M programs implemented by the City:

- Sewer main jetting (cleaning) the whole collection system every three years.
- Enhanced cleaning, problem areas, FOG, wipes. Done quarterly and as needed based on what is found during cleaning.
- Lift station maintenance
- CCTV inspection every ten years, based on what is found during inspection and future development needs.
- Repair broken or failing facilities, manhole structures, sewer laterals and mains.
- Assist with repairs and maintenance at the WRF and other city facilities.
- Inspect City owned portion of sewer laterals, clean, repair and unclog if needed.
- Training, done annually with weekly tailgates.
- Mapping updates, any updates for engineering department. Done as needed.

### COLLECTION SYSTEM MAPPING

The City of American Canyon maintains sewer system mapping as Environmental Systems Research Institute (ESRI) GIS shape files. The files are maintained as a part of a comprehensive GIS program used to document City infrastructure.

The City maintains electronic and hard copy mapping of the sewer collection system showing all gravity mains, manholes, cleanouts, lift stations, and force mains. In addition, to assist field personnel in the event of a sewer overflow, the City's mapping includes other City utilities including Storm Drain, Water, and Electric. The City's GIS sewer mapping includes the information listed in **Table 5**.

An overview figure showing the City's sewer collection system and lift station locations can be found in

#### ***Related Appendices***

#### **Appendix 4.1 – Sewer System Map**

**TABLE 5 - THE SEWER SYSTEM GIS MAP INFORMATION**

Asset Type	Map Information
Manholes, Cleanouts, Lift Stations (points)	<ul style="list-style-type: none"> <li>• Feature ID</li> <li>• Rim elevation</li> <li>• Location</li> <li>• Notes</li> </ul>
Gravity Mains (lines)	<ul style="list-style-type: none"> <li>• Feature ID</li> <li>• Diameter</li> <li>• Year lined (if applicable)</li> <li>• Upstream and downstream manhole ID</li> <li>• Upstream and downstream invert elevation</li> <li>• Pipe type</li> <li>• Year installed</li> <li>• Length</li> <li>• Reference documentation (construction plan number)</li> <li>• Staff comments</li> <li>• Links to CCTV records (via IT Pipes software)</li> </ul>

The sewer system mapping is available to all City personnel in a variety of formats. The GIS can be accessed from any City computer work station. For use in the field, The Esri ArcGIS maps can be accessed by the field crew utilizing an Esri Explorer application on their phones. Field staff has also been provided with hard copy indexed map books carried in their vehicles.

Updates to the sewer collection system mapping come from one of two sources:

1. New asset construction or rehabilitation/replacement of existing assets:
  - (a) The Maintenance and Utilities Sewer Supervisor maintains a file of all "as-built" drawings that are received from the Engineering Division.
2. Updates/corrections to existing mapping from field staff:
  - (a) Field staff record "red-line" markups on the hard copy indexed map books carried in their vehicles whenever they see something in the field that does not match what is shown on the system maps. Field staff take photos of the red-line

markups and transmit to the Maintenance and Utilities Maintenance Superintendent.

In order to keep the system maps up-to-date, the Maintenance and Utilities Sewer Supervisor maintains a spreadsheet log of all new map updates received from either the Engineering Division or field staff.

On an Annual basis, the Maintenance and Utilities Sewer Supervisor meets with a GIS technician who is capable of making edits to the GIS mapping system, and delivers and reviews the most current map update needs with the technician. At the beginning of each meeting, the Maintenance and Utilities Sewer Supervisor reviews the map update log and confirms with the technician that all map updates submitted during the previous meeting have been updated, and then updates the tracking log to mark those items as complete.

## PREVENTIVE OPERATIONS AND MAINTENANCE PROGRAMS

### Regular Preventative Sewer Cleaning Program

The City has invested over \$500,000 in specialized sewer cleaning equipment, the most significant of which is a combination Jetting/Vac-Con Truck. And have committed another \$500,000 to a new, larger, more capable Vac-truck.

- ▶ Vac-Con



In addition, the City has an additional Vactor which is used by the Water Distribution Department and is fully set up as a backup to the Vac-Con. The City uses several cleaning techniques for preventative maintenance and blockage removal. These methods include the following:

- ▶ **Flushing:** Introduces a heavy flow of water into the sewer line at a manhole. This method is typically used to remove floatable material as well as sand and grit. This method is commonly used in combination with other cleaning methods, especially mechanical auguring.
- ▶ **Jetting:** This is the most commonly utilized form of cleaning. Uses multiple jets of extremely high-pressure water directed against pipe walls. This technique is highly effective at removing debris and grease build-up, clearing blockages and cutting roots within small diameter pipes.
- ▶ **Auguring:** Mechanical rotating blades are used to break up grease deposits, cut roots and loosen debris. This method also partially removes large deposits of silt, sand, gravel and some types of solid waste. This is the primary method used for root removal, particularly in laterals. As a policy, the City of American Canyon does not employ chemical root control in the sewer collection system.

The regular preventative basin cleaning program, planned and executed by the Maintenance and Utilities Division, is an ongoing program that is designed to systematically clean all gravity sewer lines every 3 years. The City currently maintains spreadsheet-based lists of all gravity sewer pipes that are located within the City's Sewer Collection System.

Each spreadsheet is sub-divided by street, and all gravity lines on that street are listed by upstream and downstream manhole ID. The Maintenance and Utilities Maintenance Division plans and schedules to conduct cleaning of a basin starting at the upper most reaches and working downstream.

During sewer cleaning, a debris basket is typically placed in the flow channel at the downstream end of the manhole where the sewer cleaning nozzle is inserted to clean the upstream line. The crew attempts to capture as much debris as possible in the basket to prevent the material from simply being pushed downstream. Light debris may be collected from the manhole following cleaning using a manual "clam" extraction tool. Heavy debris is removed using the vacuum function of the combination truck and stored in the on-board debris tank. The crew observes both the number of passes and difficulty of cleaning the line, in

combination with the type and amount of debris removed from the downstream manhole after the cleaning is completed, all findings are documented.

The sewer crew reports the results of all cleaning work to the Maintenance and Utilities Sewer Supervisor who updates the basin cleaning tracking spreadsheets including the footage cleaned, date cleaned and any comments. At that time the Supervisor will schedule follow-up CCTV inspection of any lines as needed and subsequent to the CCTV inspection update the 180-day enhanced cleaning schedule as required based on the results.

The Maintenance and Utilities crews highlight completed segments of pipe on a large printed map of the sewer collection system located at the Corporation Yard, to visually help them tracking the cleaning progress and identify the next lines to be completed moving downstream. The City is moving toward implementation of a Computerized Maintenance Management System (CMMS), which will be used to generate work orders and document work by sewer asset. The CMMS will eventually replace use of the hard copy highlighted map and basin cleaning documentation spreadsheets which will allow for automatic report generation on work completed and visualization via GIS which will make the regular SSMP audit process more streamlined.

See Appendix 4.2 for an example of a current Basin Cleaning schedule spreadsheet.

#### **ENHANCED CLEANING PROGRAM**

The enhanced cleaning program, performed by the Maintenance and Utilities Division, involves cleaning of mainlines or laterals (the publicly-owner lower lateral) at a higher 6-month frequency. This program targets individual assets, unlike the regular basin cleaning program that includes all assets within a basin. Pipeline assets are added to the enhanced cleaning program based on one of the following criteria:

1. Asset experiences an SSC due to blockage
2. Asset is a known problem area for FOG or debris accumulation based on O&M experience
3. CCTV inspection shows defects that are known to cause heavy debris accumulation indicating high risk of future blockage/SSC

When an asset is cleaned, the debris load is noted similar to the regular preventative basin cleaning program. An asset may be removed from the enhanced cleaning program list at the discretion of the Maintenance and Utilities Maintenance Supervisor if the source/cause of the previously noted heavy debris load is known to have been eliminated.

Like the regular preventative basin cleaning program, this program is tracked using a spreadsheet, which is continuously assessed and revised based on the field reports. There are separate spreadsheets to track gravity mains and laterals. Assets that remain in the enhanced cleaning program for long periods of time will typically be targeted for rehabilitation or replacement if the reason for debris accumulation is related to the structural integrity of the line such as bellies, offset joints, protruding taps, and root intrusion.

**ADDITIONAL EQUIPMENT:**

**Storm Drain Cover**

A new preventative measure required for every spill. Self-sealing on concrete and asphalt. To protect the Storm Drain System and the environment. To minimize the Spill footprint and impact. Makes cleanup faster and more efficient. 3 in stock, one is kept in the standby vehicle.



**Electric EEL**

Dual Drive, Model 325, Serial number 2828A. For most blockages in sewer mains and laterals. From 3" to 12" diameter pipes, up to 200 feet in Length. Multiple attachments for roots and debris.



**RIGID Flexshaft drum machine**

K9-204

Clears blockages in 2 to 4 inch lines. Allows for simultaneous camera use, FlexShaft lets you keep your camera in-pipe while you work. Lightweight, one man operation. Uses a high speed cordless drill to operate. 70 ft length.

**SNAKE**

Easy Rooter Power Drain Cleaner

Serial number ER4Y346.

A.O. Smith AC motor serial number 325P446

1/3 HP, 1725 RPM

**LIFT STATION MAINTENANCE**

The City's Wastewater and Sewer Division operates and maintains 5 lift stations, including the 6 MGD Building E Pump Station and 4 smaller lift stations, which are described in **Appendix 4.3**. Building E pump station is located in the City of American Canyon Corporation Yard.

Each of the lift stations has been equipped with an electrical transfer switch so that they can be readily powered by stand-by generators. For the smaller satellite lift stations, portable generators owned and maintained by the City are used with manual transfer switches. At the Building E Pump Station, a permanently installed dedicated generator is connected through an automatic transfer switch which starts and operates during a power outage. The City owns a portable trailer-mounted 6-inch diesel engine-driven pump which is

normally parked at the Building E Pump Station. This pump can be used for sewer bypassing at the satellite lift stations or within the collection system for gravity main repair work, and also as a back-up to the four permanently mounted pumps at the Building E Pump Station.

The City operates an extensive Supervisory Control and Data Acquisition (SCADA) system that closely monitors all of the City's water and sewer facilities, including the lift stations. All lift stations are each monitored by a local programmable logic (PLC) controller, which transmits data to the SCADA system over a wireless network. Each lift station is monitored for water levels and pump status. A level indicator is shown on the local lift station display, and also sends a remote reading to the SCADA system. The PLC controller uses this indication to start and stop the pumps and to generate an alarm when warranted.

For protection, a high-high level float in each lift station operates as a hard-wired backup to the level indicator to start both pumps if the wet well reaches a level above the normal operating range. The controller also monitors and transmits pump data, number of pump starts, pump runtime and wet well level for historical data collection. In addition to the alarm call-outs, the on-call operator can access the SCADA system for remote sites via an internet connection and observe the status of all water and sewer facilities, including the lift stations.

The PLC at each lift station also sends remote alarms for high (or low) level, high-high level float trigger, incorrect pump control settings, loss of power, PLC cabinet intrusion, or a communication or pump failure. These alarms are transmitted back to the SCADA system, where a voice dialer calls the on-call operator and describes the location and the specific alarm condition. As a backup to the wireless data link, a general lift station failure relay (operated by the high-high float or loss-of-power) also sends a signal by a dedicated phone line to the main sewage lift station (Magnolia), where a cellular dialer will also notify the on-call operator. Taken together, these monitoring and alarming systems provide robust protection against lift station failures that could otherwise cause a spill or overflow.

Each lift station is visited by the Wastewater Utility Division weekly, and any observations or notes are kept in a logbook located at each station. Typical weekly inspection activities include:

- Record pump run hours
- Manually run both pumps to trigger and verify operation of low-level alarm
- Manually test operation of high-high level float
- General visual inspection and level transducer cleaning

Annually, the Maintenance and Utilities Maintenance Division conducts a thorough cleaning of each lift station wet well, and the Wastewater Utility Division conducts a mechanical inspection of each station. Typical pump maintenance/inspection activities are listed in **Table 6**.

**TABLE 6-TYPICAL SEWER LIFT STATION PUMP INSPECTION/MAINTENANCE ACTIVITIES**

Service Item	Action
Change Oil	<ul style="list-style-type: none"> <li>• Pull pump, drain and change oil according to Manufacturer's O&amp;M Manual.</li> </ul>
Cable	<ul style="list-style-type: none"> <li>• If the outer jacket is damaged, replace the cable.</li> <li>• Check that the cables do not have any sharp bends and are not pinched.</li> </ul>
Connection to Power	<ul style="list-style-type: none"> <li>• Check that all connections are properly secured.</li> </ul>
Impeller	<ul style="list-style-type: none"> <li>• Check impeller clearance vs. Manufacturer's O&amp;M Manual recommendations.</li> <li>• Adjust the impeller if necessary.</li> <li>• Check condition of wear parts including bearings and mechanical seal.</li> </ul>
Stator Housing	<ul style="list-style-type: none"> <li>• Drain liquid, if any.</li> <li>• Check the resistance of the leakage sensor to verify it is working.</li> </ul>
Motor Insulation Resistance	<ul style="list-style-type: none"> <li>• Check the resistance between the ground (earth) and phase lead is within Manufacturer's O&amp;M Manual recommendations.</li> <li>• Conduct a phase-to-phase resistance check per Manufacturer's O&amp;M Manual.</li> </ul>
Junction Box	<ul style="list-style-type: none"> <li>• Check that it is clean, dry, and free from damage</li> </ul>
Lifting Handle	<ul style="list-style-type: none"> <li>• Check the screws and condition of the lifting handle and chain.</li> <li>• Replace if necessary.</li> </ul>
O-rings	<ul style="list-style-type: none"> <li>• Replace the oil plug O-rings.</li> <li>• Replace the O-rings at the entrance or junction cover.</li> <li>• Grease the new O-rings.</li> </ul>
Voltage and Amperage	<ul style="list-style-type: none"> <li>• Check the running values and compare to past values to identify any degradation in performance.</li> </ul>

Pump overhauls for pumps 3 HP or greater include bearing, mechanical seal, and/or impeller replacement are conducted as-needed based on the results of pump inspections, or in some cases the pumps may simply be replaced if an overhaul is needed. Typically pumps less than 2HP are simply replaced when they are approaching the end of service life, and are not designed to be overhauled.

The City utilizes the OPRA System for work orders and can track all work orders as well as run reports through their database. We use Springbrook for utility billing, customer service calls and can run any type of report needed. The Sewer department keeps detailed records, spreadsheets and maps of all work performed by the Sewer department. The Sewer department along with the WRF will be utilizing Asset Essentials in the coming future for all assets, work order tracking and reports.

**REHABILITATION AND REPLACEMENT (R&R) PROGRAM**

**CCTV Inspection Program Equipment:**

**SEESNAKE**

Push camera, 200 ft length. With new wireless monitor.



**RIGID Inspection Camera**

Micro CA-350 with extensions for 40 feet of length. 12V Lithium-ion.



### ARIES PATHFINDER Camera

Saturn 3 control unit, I.T. PIPES software and Dell laptop computer.



## CCTV INSPECTION PROGRAM

The City's collection system CCTV inspection program is performed by the Maintenance and Utilities Division. The City conducts CCTV condition assessment using the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) coding standard. The NASSCO PACP method provides quantitative standardized inspection results that allow for straight-forward prioritization of system deficiencies.

The City owns one closed-circuit television (CCTV) truck that is used to conduct internal inspections of gravity sewer pipes. The CCTV inspection truck was outfitted and provided by RST Technical Services (RST) and includes CCTV cameras, several different camera transporters (for mobility down the sewer line), camera remote control equipment, camera cable reel system, power generator, and computer equipment. The City operates the CCTV truck and equipment according to the RST's latest Manufacturer's Operations and Maintenance Manual, which provides guidance and instructions that cover topics including:

- Positioning the truck
- Safety zone creation around manhole and truck
- Generator startup
- Equipment inspection and selection of transporter equipment
- Equipment connections, cable grip and tension adjustment
- Powering on the equipment and testing operation
- Laying out the down-hole roller set to guide camera cable into manhole and pipe
- Launching the equipment into the manhole

- Conducting the inspection
- Retrieving camera and transporter

The City utilizes IT Pipes Pipe Inspection Management Software on the CCTV truck computers to create CCTV inspection records for each pipe utilizing NASSCO PACP standardized defect coding. The results of all CCTV inspections are entered into a PACP standard database, and the CCTV video inspection records are available using the IT Pipes software, which links the videos to the pipes in the City's GIS system. The IT Pipes software also has the ability to create point shape files for all identified defects that can be viewed using the GIS to assist *with* development of the City's rehabilitation and replacement program. The City recently upgraded its IT Pipes software, which enhanced the system's GIS interface capability.

The City utilizes IT Pipes software documentation and training materials to guide collection and management of the City's CCTV data by City Staff.

Sewer manholes are inspected visually during sewer cleaning and/or CCTV, and any significant leaks or defects are documented on a standard Manhole Observation Form (refer to **Appendix 4.5**) which is transmitted to the Maintenance and Utilities Maintenance Supervisor. Manholes with significant defects may be scheduled for near-term repairs that are performed internally by the Maintenance and Utilities Department which has the capability to perform injection grouting to stop infiltration and inflow. Manhole repairs that cannot be completed internally will be completed by contractors as part of the R&R program.

## CONDITION ASSESSMENT METHODOLOGY

CCTV inspections conducted using the NASSCO PACP coding interface result in the creation of a standardized report that documents the locations within the pipe at which observations were made. A still picture of each observation is taken, and a live video for the entire inspection is also provided.

Every observation made using a PACP code is classified as either a structural defect (i.e. cracks, offsets, corrosion, etc.), maintenance defect (i.e. debris, grease, roots, etc.), or a miscellaneous observation (i.e. tap, manhole, end of survey, etc.). Appendix D of the PACP Manual includes a condition grading system that rates the severity of each defined structural and maintenance defect on a scale from 1-5. Standard NASSCO PACP reports can be configured to automatically record the associated "maintenance grade" and "structural grade" for each observation made during an inspection. As a general guideline, defect severity levels 1-5 may cause failure of the asset on a timeline as described below:

- Severity 5 - asset has failed or will likely fail within next 5 years (asset requires immediate attention, very poor condition)
- Severity 4 - asset will probably fail in 5 to 10 years (asset is in poor condition)
- Severity 3 - asset may fail in 10 to 20 years (asset is in fair condition)
- Severity 2 - asset unlikely to fail for at least 20 years (asset is in good condition)
- Severity 1 - asset failure unlikely in the foreseeable future (asset is in excellent condition)

NASSCO has developed an overall asset condition rating system, known as the PACP "Quick Rating".

The Quick Rating is a four-digit code, with the following characteristics:

1. First digit is the highest severity observation noted (1-5)
2. Second digit is the number of observations of the highest severity
3. Third digit is the second highest severity observation noted
4. Fourth digit is the number of observations of the second highest severity

The Quick Rating provides a quantitative assessment of asset condition. A quick rating can be generated for either structural observations only, maintenance observations only, or for both types of observations combined. The quick rating system prioritizes assets first by the highest severity observation (the first digit), and second by the quantity of defects. It only takes one severity 5 defect, which may indicate that the asset has already failed or is near to failing, to cause an SSO. A single severity 5 defect is considered more serious than several severity 4 defects.

#### **REHABILITATION AND REPLACEMENT (R&R) PRIORITIZATION**

The City's policy is to repair, rehabilitate, or replace all Severity 5 Structural defects as soon as possible, but no longer than 5 years from the date of discovery via CCTV and no longer than 2 years if the defect is within 150' of a waterway. Severity 5 Maintenance defects that require a physical repair to alleviate the defect will also be addressed in the same priority. Severity 5 Maintenance defects that do not require physical repair but can be managed through targeted enhanced O&M techniques will be added to the City's enhanced cleaning program.

The City's policy regarding Severity 4 Structural defects is to also include the necessary repairs in the City's overall Capital Improvement Plan. The repair of Severity 4 Structural defects is prioritized and scheduled based on a Risk of Failure analysis as further described below.

*Risk of Failure = Probability of Failure x Consequences of Failure*

*Probability of Failure = PACP Structural Quick Rating/1000 + PACP Maintenance Quick Rating/1000 + X*

Where X = 2 for pipes on the enhanced cleaning schedule due to roots, and; X = 1 for other pipes on the enhanced cleaning schedule.

*Criticality of Failure = Capacity Rating + Location Rating*

The Capacity Rating is based on the pipe diameter and is related to the potential spill volume according to **Table 7** below.

**TABLE 7 - CAPACITY RATINGS**

Pipe Diameter	Capacity Rating
8" or less	1
10"-12"	2
14"-18"	3
Greater than 18"	4

To determine the Location Rating, a series of buffering evaluations are made in GIS with respect to waterways and roadways. All assets are given Location Ratings on a 1-6 scale, with 1 being the lowest rating and 6 being the highest rating. The following routine is executed in GIS to assign ratings to each asset. Assignments are made by making buffering selections in GIS and overwriting ratings within the attribute tables throughout the routine to ensure the highest applicable rating is assigned to each asset.

1. Assign an initial rating of 1 to all assets.
2. Assign a rating of 2 to all assets further than 250' from a roadway.
3. Assign a rating of 4 to all assets within 500' of a waterway of the US.
4. Assign a rating of 3 to all assets further than 500' from a roadway, or are otherwise considered extremely difficult to access by City Staff.
5. Assign a rating of 5 to all assets with 250' of a waterway of the U.S.
6. Assign a rating of 6 to all assets with 150' of a waterway of the U.S.

The risk of failure score is the product of the overall criticality of failure and probability of failure scores. The highest possible risk of failure score is approximately 100. An example of a risk of failure

calculation is provided below:

- PACP structural quick rating= 4833
- PACP maintenance quick rating= 4131
- Asset is on the enhanced cleaning schedule for grit accumulation
- Asset is within 150' of a waterway
- Pipe Diameter= 12"

*Probability of Failure* =  $4833/1000 + 4131/1000 + 1 = 9.96$

*Consequence of Failure* =  $2 + 6 = 8$

*Risk of Failure* =  $9.96 \times 8 = 79.7$

**Table 8** below provides guidance for initial capital improvement project prioritization based on results from the asset risk analysis:

**TABLE 8 - CIP PRIORITIZATION GUIDANCE FOR SEVERITY 4 DEFECTS**

Risk of Failure Score	Recommended Action
0-50	Described in Capital Improvement Plan but may not yet be scheduled
50-75	Consider for rehabilitation or replacement within next 10+ years
75-90	Consider for rehabilitation or replacement within next 5-10 years
90-100	Consider for rehabilitation or replacement within next 5 years

The City retains sole discretion regarding the prioritization and scheduling of repair for Severity 4 defects. The recommendations shown in **Table 8** are to be considered guidelines only. All Severity 4 defects shall be at minimum listed within the City's CIP including their Risk of Failure score, however the repair of these defects is likely to be driven by coordination with other City maintenance projects such as water line repair and street paving. Prioritizing and scheduling the repair of Severity 4 defects will also take into consideration City budgeting constraints and risk analysis, compared to Severity 5 defects which trigger an automatic requirement to repair or replace the asset within 5 years.

City Staff (typically Senior Civil Engineer- Capital Improvements) initially review condition assessment data when new data is available from CCTV field work. Licensed City Staff or contracted

civil engineering consultants will review CCTV inspection videos and reports for assets with Severity 4 and 5 defects and provide preliminary R/R method recommendation reports including cost estimates. The Senior Civil Engineer- Capital Improvements and Utility Engineering Manager will then conduct the Risk of Failure analysis to aid in prioritizing and scheduling future capital improvement projects on a 10-year horizon.

#### **SHORT-TERM ACTIONS**

The Maintenance and Utilities Division has the ability to conduct emergency manhole and pipeline repairs in the case of SSOs caused by asset failures, or severe defects identified during CCTV inspections that pose in imminent risk of causing an SSO which cannot wait for engineering design and public bidding to contractors. The Maintenance and Utilities Division has two backhoes that can be used to expose sewer pipe and the parts and equipment necessary to conduct sewer bypassing and pipe segment and lateral replacement.

#### **CAPITAL IMPROVEMENT PROGRAM DEVELOPMENT**

City Staff group identified sanitary sewer collection system asset R/R activities into capital improvement project bid packages that are publicly bid for construction. Projects may be bundled by risk, for example the highest risk assets may be bundled into the first year of the capital improvement plan {CIP}. Projects may also be bundled by geographic proximity, construction methodology, or ease of coordination with other City Maintenance and Utilities projects such as water and streets projects. The Senior Civil Engineer- Capital Improvements updates the CIP at least bi-annually based on work completed and new CCTV inspection data received. Projects that are scheduled within the next two years are contracted out for design to civil engineering consultants, or designed in-house if practicable. Civil engineering consultants or City Staff produce construction plans and specifications, which are bid publicly for construction. The City may also develop an on-call list for typical sanitary sewer collection system R/R work {i.e. cured-in-place- pipe lining, manhole sealing, etc.) that can be used to complete work which does not require civil engineering design. Small R/R projects may also be completed in-house, if practicable.

The City has invested significantly in the sewer collection system within the CIP. The City currently has several sewer rehabilitation/replacement projects in its ten-year term:

- Rio Del Mar Basin, Estimated cost \$7,170,000, Reduce I/I and reduce peak flows in local sewers and pump station.
- Napa Logistics and Green Island Pump Station, Estimated cost \$18,800,000, increase capacity of Green Island Pump Station, abandon Tower Road Pump Station and serve airport area development.
- Huntington Way, Estimated cost \$4,580,000, Bypass peak flows away from Sunset Meadows Pump Station to the main basin pump station and upgrade capacity of bypass sewer.
- Broadway, north of American Canyon road, estimated cost \$2,540,000, reduce I/I and peak flows to main basin pump station and serve Watson Ranch.
- Summerfield Project, estimated cost \$370,000, improve collection system hydraulics, removes creek crossing.
- Theresa Ave and Los Altos Drive, estimated cost \$2,050,000, reduce I/I and peak flows to main basin pump station and replace sewers in poor condition.

Long-Term CIP projects (11-20 years):

- Main Basin pump station, Estimated cost \$12,860,000, Upgrade capacity to meet peak flows and serve Watson Ranch.
- Broadway, Cartagena Way to mobile home park entrance, Estimated cost \$680,000, Address hydraulic deficiency.
- Elliott Drive south of Northampton, Estimated cost \$1,090,000, Address hydraulic deficiency.
- Broadway north of Rio Del Mar, Estimated cost \$1,030,000, Address hydraulic deficiency.

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## CAPITAL IMPROVEMENT BUDGETING

The City's sewer collection system is operated as an enterprise fund, meaning that its operations are financed in a manner similar to private business enterprises, where the costs (expenses, including capital depreciation) of providing sewer service are financed primarily through user charges. Using a valuation of all of its sewer facilities and an estimate of design life, the City has identified annual depreciation amounts in the sewer system. In the City's sewer collection system, depreciation amounts are estimated for gravity sewers, manholes, lift stations, and the public portions of sewer laterals and cleanouts.

The goal of the Capital Improvement Program (CIP) is to fully fund this annual depreciation amount, primarily by setting sewer service rates at a level which generates revenue in excess of operating expenses, with the additional revenue directed to projects that replace aging and fully depreciated sewer infrastructure. Where portions of a specific replacement project are attributable to new development, funding derived from service charge revenue may be augmented by revenue from sewer capacity (development) fees.

## TRAINING

The City of American Canyon conducts weekly 10 to 15-minute tailgate meetings covering a range of topics. These tailgate safety meetings also are required by Cal/OSHA regulations in Title 8, Sections 8406 and 1509 of the California Code of Regulations; however, the City has expanded the tailgate schedule to include topics of sewer operations & maintenance. The Maintenance and Utilities Wastewater Utility Division are trained annually on the critical topics outlined in **Table 9** below.

**TABLE 9 - CITY OF AMERICAN CANYON TRAINING TOPICS**

<b>Training Category</b>	<b>Topics</b>
<b>SSMP Review</b>	Review latest updates to the City's SSMP
O&M Training	Work order scheduling and documentation
	Standard operating procedures for Vac-Con/jetting truck
	Standard operating procedures for auger equipment
	Standard operating procedures for CCTV inspection equipment/software
	Lift station inspection and equipment maintenance
	Use of portable generator at lift stations
	Conducting sewer bypassing at lift stations including use of portable pump
	Conducting sewer bypassing and point repair for gravity mains
OERP Training	Review recent changes to the OERP
	SSO response procedures, containment, and chain of communication reporting
	SSO volume estimation techniques
	Impacted surface waters and response/notification procedures, water quality sampling
	Private lateral backups and customer service
Safety Training	Excavator use
	Confined Space Entry Policy and gas detector use

Maintenance and Utilities Utility Workers that conduct CCTV inspections are re-trained and recertified in PACP defect coding at least every 3 years. The City also requires all contractors working on sewer collection system assets to review and maintain a hard copy of the City's OERP, and to develop a project-specific OERP that includes specific details regarding the nature of the work and the worksite. Contractors are required to train their workers on the contents of the City's OERP and the project-specific OERP as part of their pre-project safety training and preparation.

When sewer bypass pumping is required for project construction, the City will require the contractor to develop a detailed bypass pumping plan that includes redundancy for all equipment as well as spill detection and remote alarming equipment. Review of the sewer bypass pumping plan will be conducted by the Maintenance and Utilities Maintenance Superintendent and/or the Water/Wastewater Operations Superintendent.

## EQUIPMENT AND REPLACEMENT PART INVENTORIES

The Maintenance and Utilities Maintenance workers and Operators manages the City's supply of spare parts for gravity sewer repair that is located at the WRF. Spare parts include various sizes of pipe, repair couplings, wyes, tees, etc. New parts are ordered as soon as they are used. The Maintenance and Utilities Maintenance Workers also manages the tool inventory to track purchase and replacement of tools used to maintain the sewer collection system including saws, drills, generators, concrete mixers, wrenches, work lights, shovels, spill containment materials, etc. Tracking of spare parts and tools maintained at the WRF is currently done using spreadsheets but will likely transition to CMMS in the future.

The Plant Mechanic maintain inventories of spare parts for the City's Lift Stations. All mechanical and electrical components of each individual sewer lift station are maintained as assets in the LLumin CMMS that is used by the Utilities Department to manage the WRF and lift stations. An inventory of common critical spare parts is maintained at the WRF that includes:

1. One spare for each type of pump in the sewer collection system
2. Float switches
3. Motor starters
4. Level transducers

In the case of a PLC or radio communications equipment failure, the lift station can be operated using float switches only while the electrical equipment is repaired or replaced.

All vehicles used for operations and maintenance of the sewer collection system, including two Vac-Con trucks and one CCTV truck are maintained by the City's Administrative Services Department. The Vehicle and Equipment Services Section schedules, performs, and documents routine maintenance on vehicles using Mitchell1, which is a web-based maintenance planning program that can be used to:

- o Schedule maintenance and create work orders
- o Manage spare parts inventory and stocking levels
- o Vendor setup and ordering parts for inventory and daily needs
- o Create estimates, repair orders, invoices, and reports

***Related Appendices***

**Appendix 4.0** – Pump Station Detail

**Appendix 4.1** – Sewer System Map

**Appendix 4.2** – Sewer System Trunk Line Map

**Appendix 4.3** – Sewer System Force Main and Pump Station Map

**Appendix 4.4** – Sewer System Map by Pipe Type

**Appendix 4.5** – Sewer System Condition Map

**Appendix 4.6** – Sewer Cleaning Form

**Appendix 4.7** – Pump Station Wet Well Inspection Form

**Appendix 4.8** – Sewer Lateral Inspection Form

**Appendix 4.9** – Sewer Hot Spot Form

## 5. SSMP ELEMENT 5: DESIGN AND PERFORMANCE PROVISIONS

### STANDARDS FOR INSTALLATION, REHABILITATION AND REPAIR

Design and performance provisions for work related to the City's public sanitary sewer system are detailed in the Maintenance and Utilities Standard Specifications and Details. The current Maintenance and Utilities Standard Specifications and Details were approved in May 1995, and is currently undergoing a complete update to reflect new procedures, materials and other improvements/changes within the industry. An updated Standard of Specifications should be ready for the next SSMP update. Bound versions of the Maintenance and Utilities Standard Specifications and Details are available or can be downloaded from the City's website.

The Maintenance and Utilities Standard Specifications and Details are composed of four elements:

- Engineering Design Standards - Provides detailed guidance for design of public sewer system improvements.
- Specific Provisions - Provides guidance to design professionals and construction contractors on the materials, installation and required testing methods for public sewer system improvements.
- Approved Materials list - Provides a list of the approved materials as they relate to the Standard Details.
- Standard Details - provides details for the installation of the public sewer system improvements.

### STANDARDS FOR INSPECTION AND TESTING OF NEW AND REHABILITATED SEWER

All new construction, rehabilitation and repair projects affecting the City sanitary sewer system are reviewed and tested by the Maintenance and Utilities Department for conformance with the Maintenance and Utilities Standard Specifications and Details. The Development Section of Maintenance and Utilities Engineering oversees permitting and plan review for new development projects. The Capital Improvement Section of Maintenance and Utilities Engineering performs construction inspection and testing. The City has a full-time Inspector and an Engineering Technician. Inspection is required for all sewer improvements and other work within the public right-of-way, all

public easements, and for any work for which an encroachment permit has been issued. The City inspects new sewer facilities at all phases of the work in order to ensure complete conformance with the requirements of the City's standard specifications. At a minimum, work is inspected at the following points during the progress of sewer installation:

- Prior to the placement of any fill material.
- Immediately after the placement of all pipe and prior to bedding or to backfill.
- During all backfill and compaction operations.
- Prior to and during the placement and compaction of any aggregate base material.
- Form and reinforcement inspections prior to pouring any concrete.
- Prior to paving.
- During all paving operations.
- Prior to requests for payment for any contract items of work.

The City's Specific Provisions include specific testing procedures for public sewers that include:

- Cleaning and flushing
- Low pressure air testing
- Pipe deflection testing
- CCTV inspection
- Water or vacuum manhole testing

The City has a well-established inspection scheduling and tracking system and utilized a VPM, Virtual Project Management software that tracks all phases of projects. The inspection standards are enforced for private development projects, as well as City capital improvement projects.

Sewer municipal codes link: [cityofamericancanyon.org/municipal\\_codes/title 14 sewer and sanitation services](http://cityofamericancanyon.org/municipal_codes/title_14_sewer_and_sanitation_services).

Sewer ordinance list: [cityofamericancanyon.org/municipal\\_codes/ordinance list](http://cityofamericancanyon.org/municipal_codes/ordinance_list).

Design and specification standards link: [cityofamericancanyon.org/government/public works/Engineering Standard Plans](http://cityofamericancanyon.org/government/public_works/Engineering_Standard_Plans).

### ***Related Appendices***

#### **Appendix 5.0 – Sewer System Engineering Standards and Specifications**

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## 6. SSMP ELEMENT 6: OVERFLOW EMERGENCY RESPONSE PLAN

**Overflow Response:** The City has an Overflow Emergency Response Plan {see Appendix 6.1) for handling service calls and sewer overflows. The plan includes notification procedures for emergency response, spill recovery, overflow mitigation, cleanup, and restoration of damaged dwellings and buildings. It also includes provisions for public notification, testing for contamination, and notification to regulators.

The plan includes procedures for after-hours and weekend spill events. One Utility Worker II and one Utility Operator are available on an on-call basis at all times. These employees can be reached 24-hours per day on their City cell phones.

**Overflow Reporting Policy:** All overflows and backups are investigated to determine the cause and corrective actions needed to prevent future incidents. Category 1 SSOs greater than or equal to 1,000 gallons are reported to the State Office of Emergency Services (OES) within two (2) hours after the City is notified of the spill.

All overflows are reported in the State Water Board's electronic reporting system (CIWQS). The plan also includes reporting requirements to other regulatory agencies as may be appropriate. The Water/Wastewater Operations Superintendent is responsible for reviewing and completion of the SSO reports and entering the data into CIWQS.

### ***Related Appendices***

**Appendix 6.0** - Sanitary Sewer Overflow Emergency Response Plan(OERP)



## 7. SSMP ELEMENT 7: FOG CONTROL PROGRAM

### PUBLIC EDUCATION

The City's FOG Public Outreach Program includes two main components:

1. Outreach to permitted Food Service Establishments (FSEs) as part of regular annual inspections.
2. Distribution of information in conjunction with City utility service billing or in FOG problem areas.

Examples of informational flyers distributed to the public in the past can be found in **Appendix 7.4**

### FOG DISPOSAL

The City maintains a list of known licensed grease haulers that service FSEs located within the City's collection system based on records obtained from the FSE inspection program. All licensed grease haulers in the service area dispose at either East Bay Municipal Utility District, the Santa Rosa, or Napa Wastewater Treatment Plants. The City's WRF does not accept hauled grease.

If an FSE reports grease interceptor cleaning/hauling by a grease hauler that is not on the City's list of known providers, the City will contact the company to confirm they are appropriately licensed and are disposing of grease at an appropriately licensed acceptance facility.

### LEGAL AUTHORITY

Legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG is granted to City representatives in the American Canyon Municipal Code.

City Code Section 14.16.220 prohibits any water or waste containing petroleum-based oil and grease in excess of 50 parts per million, or vegetable and animal-based oil and grease in excess of 75 parts per million."

City Code Section 14.16.470 states "Grease, oil and sand interceptors shall be provided when, in the opinion of the city manager or his designee, they are necessary for the proper handling of liquid wastes, containing grease in excessive amounts, or any flammable wastes, sand and other harmful ingredients; except that such interceptors shall not be required for building used for residential purposes. All interceptors shall be of a type and capacity approved by the city manager or his designee, and shall be so located as to be readily and easily accessible for cleaning and inspection. Domestic waste from toilets, urinals, wash basins or any fixture receiving fecal material

shall not flow through the removal device. All grease, oil and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times. (Emulsifying chemicals may not be used to dissolve grease.)”

The City permits and inspects FSEs as part of its implemented Industrial Wastewater Pretreatment Program. This program is established in City Code Section 14.16.070 which states “Permits will be issued to all significant industrial users, categorical industrial users and all nonresidential users that the city deems necessary. A permit fee shall be established to recover administrative costs associated with each class of permitted user.”

#### GRD INSTALLATION AND MAINTENANCE REQUIREMENTS

To monitor and control grease in the collection system, the City issues wastewater discharge permits with grease control provisions to restaurants and FSEs. See **Appendix 7.0** for an example of a Commercial Wastewater Discharge Permit. Permits are typically valid for a period of 3 years.

#### GRD INSTALLATION AND DESIGN REQUIREMENTS

The City requires that new Food Service Establishments (FSEs) and existing FSEs being remodeled install GRDs as part of the building permit review and approval process. The City may require existing FSEs that are found to be discharging FOG excessively in violation of City Code Section 14.16.220 to install grease removal devices. The City of American Canyon has adopted the California Plumbing Code (CPC), which is strictly applied to all new or remodeled FSEs.

Ultimately, Chapter 10 of the CPC serves as the City’s design standard for GRDs. Typically, newly constructed FSEs will be required to install gravity grease interceptors per CPC Section 1014.3 and Appendix H of the CPC. Where existing or remodeled FSEs are determined to require additional GRDs, the City may consider the use of smaller distributed hydromechanical grease interceptors as described in CPC Section 1014.2.

#### GRD MAINTENANCE REQUIREMENTS

Section C of the City’s standard Commercial Wastewater Discharge Permit requires each permittee to implement minimum best management practices (BMPs) that include the installation of drain screens, the segregated disposal of waste cooking oil, prohibitions against discharge of food waste into the drainage system, dry wiping of greasy pots and pans, and training of employees on FOG disposal methods.

## FSE RECORD RETENTION REQUIREMENTS

Section C of the City's standard Commercial Wastewater Discharge Permit requires permittees to maintain records for a minimum of 3 years for all BMPS implemented and grease disposal activity.

## FSE INSPECTIONS

The City's Environmental Services Division maintains a spreadsheet database of all permitted FSEs. All permittees are scheduled for an inspection during the permit cycle, and the City creates a schedule that distributes the inspections throughout the year. Some permittees may be inspected more frequently and this can be triggered by any of the following:

- Excessive FOG accumulation noted downstream of the facility
- Private lateral spill or backup
- Poor condition of GRD noted during previous inspection

A copy of the current inspection schedule is provided in **Appendix 7.1** for reference.

When conducting the inspections, the City uses the FOG Inspection Report. An example is included in **Appendix 7.2**

A typical inspection includes the following items:

1. Review any changes to ownership, business operations, or wastewater/drain utilities.
2. Inspect each GRD for solids/grease accumulation and review grease hauling records/receipts. Determine if current GRD maintenance schedule appears adequate or if changes to the schedule and permit specifications are warranted.
3. Determine if any liquid wastes (such as used cooking oil) are being stored on-site and if storage and spill prevention is adequate to prevent an illicit discharge to the storm drain system.

The City maintains on file all previous Industrial Discharger Inspection Reports for each FSE, and also keeps a spreadsheet for each permittee that provides an abbreviated summary of the results of each FSE inspection that is easier for a City employee to review in order to gain an understanding of previous inspection results and enforcement actions that have occurred.

### ENHANCED COLLECTION SYSTEM MAINTENANCE FOR FOG

Sewer lines that have been subject to increased FOG accumulation are moved into the Enhanced 180- day Cleaning Program (see Section 4.2). Triggers for identifying lines subject to increased FOG accumulation include the following:

- The occurrence of SSOs that are due to FOG based on SSO investigatory CCTV inspection
- The occurrence of private lateral spills or backups due to FOG
- Observations from the City’s regular CCTV inspection program that show a high level of FOG accumulation
- Observations of material removed from the line during the City’s regular cleaning program

### SOURCE CONTROL MEASURES

FOG problem areas that are included on the Enhanced 180-day Cleaning Program are typically due to one of the following sources:

1. Food Service Establishments
2. High Density Residential Areas

The City uses the wastewater discharge permits and FOG Inspections to control FOG from FSEs. The City uses its Public Education Outreach to control FOG from high density residential areas.

### FOG HOT SPOTS

As part of our weekly hot spot inspections, FOG hot spots are included and are regularly updated. We do outreach when we notice FOG and also notify the Environmental Specialist. The Environmental Specialist will also do customer outreach. In addition to users discharging FOG, some FOG hot spots are due to structural defects such as bellies or low points in the gravity mains and low flow conditions where FOG can accumulate. These areas have been inspected by CCTV and show no structural damage. An up to date list and breakdown is shown below:

Structural (part of CIP SS5):

- 115 Independence Drive
- 724 Westpark

Customer discharging, (grease traps in place and inspected regularly):

- 5075 Main street (restaurant area, Sonic, Panda Express, Hilo Hawaiian BBQ, etc.)
- South end of Main street

***Related Appendices***

**Appendix 4.9** – Sewer Hot Spot Form

**Appendix 7.0** – Industrial Waste Permits

**Appendix 7.1** – Industrial Waste Inspection Schedule

**Appendix 7.2** – FOG Inspection Report

**Appendix 7.3** – Public Awareness Materials



## 8. SSMP ELEMENT 8: SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

Estimated flows for the City's sewer collection system are based on various data including water billing records, flow monitoring data collected by V&A Consulting Engineers (V&A) in 2014, WRF flow data, and land use information for planned developments provide by the City. For hydraulic evaluation of the wastewater collection system, PDWF and PWWF are loaded into model scenarios for existing and future conditions. The PDWF and PWWF for existing conditions are based on flow monitoring work performed by V&A with the PWWF normalized to the design storm. The PDWF for each basin is the distributed throughout each basin based on the distribution of indoor potable water demand established from water billing records. Estimated I/I is distributed by inch-diameter-mile of pipe in each basin. Having the base and peak flows established for existing conditions, estimated base flows for future development are then added to the simulated buildout conditions.

The sewer collection system is split into three primary basins shown in figure 7. Sewer flow patterns vary in each sewer basin, with the base and peak flows varying depending on several factors including land use type (i.e., industrial vs. residential customers) for base flows and the condition of the existing sewer mains for peak flows. Therefore, each basin has its own unique base flows and peaking factors that are established from measured flows.

### HYDRAULIC CAPACITY EVALUATION PROCESS

Hydraulic models have previously been prepared for the 1996 and 2001 Sewer Master Plans. Previous models were prepared using Hydra developed by Pizer. The hydraulic methods used in the Hydra program were determined to be too simplistic for use in the current master plan and the software does not have the capability to account for complex hydraulics. SewerCAD by Bentley was initially selected due to its ease of use; ability to use the product as a stand-alone application or work within AutoCAD or MicroStation; and the built-in conversion utilities from CAD, GIS and database files. During model development, GHD needed to utilize a different modeling platform in order to accurately convey flows through the flow split located in Rio Del Mar at its intersection with Rio Grande. H2O Map Sewer (10.5, SP1, update #7) developed by Innovyze was selected to meet projected hydraulic modeling needs.

#### Flow Monitoring Data Collection and Analysis

## HYDRAULIC MODEL FLOW DISTRIBUTION

Distribution of flows within the collection system for hydraulic modeling is based on two factors:

1. Measured base flows for each sewer basin were distributed based on indoor water use determined from elevation of water billing data.
2. I/I flows are distributed within each sewer basin based on inch-diameter-mile of pipe. This methodology is modified in some locations where specific information was provided by the City that would scale I/I flows up or down (i.e., areas of known high wet weather flow).

## MODEL INPUTS

Pipelines to be included in the model were exported from Hydra model; however, model flows were not exported due to the availability of metered sewer flows and water billing records for the collection system. The following general modeling input data was utilized in the creation of the hydraulic model.

- Manning's "N" value: 0.013 for all pipes.
- Ground elevations were extracted from a topographic GIS shapefile based on information from Napa County. The elevation for each manhole was assigned by linearly interpolating between the 5-foot contours in the GIS shapefile.
- Junctions were placed at all manholes.
- Pipe lengths were based on GIS mapping or as-built mapping (record drawings).
- Static model runs were made under the PDWF and PWWF flow scenarios described in section 4 for current flows and under the PWWF scenario for future buildout flows.
- Pipe diameters included in the model range from 6- to 24-inches.
- Pipe diameters are of nominal size.
- Sewer flows are expressed in gallons per minute (GPM) or million gallons per day (MGD) and were assigned to manholes based on the analysis presented in section 5.

## FLOW METER DATA

Flow meter data provides the basis for the cumulative base and peak flows in each collection system sewer basin. V&A prepared estimates for base flows (ADWF), PDWF, and PWWF for the main basin and Sunset Meadows Basin following the flow monitoring effort that was conducted between January 15 and March 6, 2014. The flow meter data recorded by V&A correlated to the City's WRF influent meter data for the same time period. For the industrial sewer basin V&A used the City's flow meter at the WRF to determine ADWF, PDWF and PWWF in that basin. V&A's *Sanitary Sewer Flow Monitoring and Inflow / Infiltration Study (2014)* and subsequent analysis for the Industrial Basin are provided in Appendix A of the Sewer Master Plan.

The V&A flow meter data captures one major storm event that occurred from February 6 to 9, 2014 that generated significant I/I flows. With the diurnal base flows already established, the I/I component could be isolated for each basin. I/I flow is based on a synthetic hydrograph analysis for a 10-year return frequency, 24-hour duration design storm event, with NOAA data providing the basis for the 10-year, 24-hour rainfall total. Having established the normal dry weather diurnal flow patterns in each basin the peak wet weather I/I component for the design storm is added to the PDWF to establish the PWWF.

## EXISTING CONDITIONS HYDRAULIC MODEL SCENARIO

The existing sewer collection system was analyzed using two flow scenarios (PDWF) and PWWF) with the current flows, as discussed in section 5. The existing model pipes and junctions were evaluated using the pipe capacity (d/D) ratio and minimum and maximum pipe slope and velocity criteria presented in section 4. The hydraulic model results for the existing conditions are included in appendix B.

In general, the velocities in a majority of the existing pipelines were below the recommended minimum of 2 fps (feet per second) for the PDWF scenario, which is primarily the result of minimal pipe slopes throughout the system. This may contribute to additional city effort for cleaning pipelines to clear blockages and reduce odors. Velocities are improved for the PWWF scenario, with I/I contributing additional flow in the collection system.

Collection system hydraulic capacity was assessed using the PWWF scenario. Pipelines that exceeded hydraulic evaluation criteria were primarily located in the Sunset Meadows 1 basin and main basin 4, in the vicinity and downstream of Rio Del Mar. the model also identified hydraulic deficiencies in the eastern (upstream) portion of main basin 4 and in Broadway within main basin 3.

Peak flows within the model also exceeded the capacity of the main basin, Sunset Meadows, and Green Island Pump Stations, CIPs SS2, SS3, and SS7 address the capacity at each pump station.

The City also indicated concern for collection system hydraulics between Cartagena Way and Westpark located in main basin 4. Relocation of the sewer at the area of concern was addressed in the hydraulic model. CIP SS5, also known as the Summerfield project, addresses City concerns at this location in the collection system.

The peak flow velocity for existing pump stations is less than the maximum velocity criterion of 7 fps.

#### **FUTURE CONDITIONS HYDRAULIC MODEL SCENARIO**

For the general plan buildout scenario, the existing wastewater flows are updated to account for planned development projects and buildout of undeveloped parcels in accordance with the City's zoning map. Development projects in the planning and approval phase as of December 2015 were identified by the City including estimated wastewater flows for each project. Wastewater flows for undeveloped parcels are projected based on unit demand factors estimated from indoor water demands by utility land use category. In aggregate, these modified demands represent the buildout scenario.

Peaking factors for dry weather flow are based on existing conditions peaking factors. I/I flows are assumed to remain constant within each sewer basin, even though the number of pipelines and potential sources for I/I increases with development. This assumption is based on increases in I/I from new development and elsewhere in the collection system being countered by decrease in I/I from repair and rehabilitation of the wastewater collection system. It is assumed that over time the City will manage the system such that I/I does not increase.

The purpose of the Future Conditions Scenario is to identify hydraulic capacity deficiencies that are triggered by the addition of future development that do not occur under the current level of development. Capital improvement projects that are required to provide additional hydraulic capacity for future development are planned to be constructed in conjunction with those projects and are to be funded by the developers of those projects.

## HYDRAULIC CAPACITY DESIGN CRITERIA

The City's Maintenance and Utilities Standard Specifications provide design requirements for new sanitary sewer collection system piping. The standards generally include the following:

- Base sewer flow factors are provided for residential, commercial, and industrial developments  
Peak sewer flow factors are provided for residential, commercial, and industrial developments
- Infiltration and Inflow (1/1) is required to be added to peak sewer flow, and an 1/1 rate is provided for both new and existing sewer lines
- Manning's Equation is required to be used to determine pipe capacity, minimum Manning's "n" value of 0.013 shall be used
- Minimum public sewer main size is 8" and cannot be designed to flow surcharged

The City's Maintenance and Utilities Standard Specifications do not include hydraulic design/performance criteria specific to system-wide collection system hydraulic modeling and the identification of hydraulic capacity deficiencies for the purposes of capital improvement planning. The City's design/performance criteria for hydraulic model evaluation of the existing collection system infrastructure are defined below:

1. For the City's Existing Conditions hydraulic model, sewer loads from currently developed parcels are based on the analysis of flow monitoring data, not based on application of the City Standard flows.
2. For the City's Existing Conditions hydraulic model, I/I loads from currently developed parcels are based on the analysis of flow monitoring data and the development of synthetic hydrographs for the Design Storm, not based on application of the City Standard flows.
3. For the City's Future Conditions hydraulic model, additional flows from new and infill development shall be determined based on the City Standard flow factors.
4. The City's Design Storm is the 10-year, 24-hour return period event of 6.47" per NOAA Atlas 14, Volume 6, Version 2. The temporal distribution of the storm is developed per the applicable Soil Conservation Service (SCS) standard distribution.
5. A hydraulic capacity deficiency for the gravity sewer system is defined as any location where the calculated hydraulic grade line at peak wet weather flow associated with the Design Storm is less than 3'-0" below the rim of a manhole.

6. A hydraulic capacity deficiency for a sewer lift station is defined as any lift station where there is not a redundant standby pump available to pump the calculated peak wet weather flow associated with the DesignStorm.

## CAPACITY ENHANCEMENT MEASURES

The City's Sewer System Master Plan (refer to **Appendix 8.1**) summarizes the results of the flow monitoring and hydraulic model analysis. The Master Plan identifies all hydraulic deficiencies (for both Existing Conditions and Future Conditions) and develops planning level capital improvement project descriptions and cost estimates to address each deficiency.

A recommended completion date for each capital improvement project is provided in the Master Plan based on consideration of the following factors:

- Severity of the deficiency and potential volume of an SSO caused by this deficiency
- Proximity of the deficiency to waterways
- Coordination with other City Publics Works projects
- Anticipated pace of development for deficiencies triggered by future growth

## INFILTRATION AND INFLOW REDUCTION

Updates to the Sewer System Master Plan may include the collection and analysis of additional temporary flow monitoring conducted at locations strategically selected to identify potential sources of increased infiltration and inflow. The City's Sewer System Master Plan will describe the City's efforts to monitor 1/1 occurring during storm events and take steps to identify sources of excess 1/1 that could potentially be eliminated to make additional collection system hydraulic capacity available. 1/1 reduction strategies that may be employed by the City as defined in the Sewer System Master Plan may include:

- Conducting CCTV during storm events in suspected problem areas to pinpoint 1/1 sources
- Conducting smoke testing to identify illicit storm drain connections to the SSS
- Performing replacement or lining of pipes identified through CCTV to have excessive 1/1 through cracks, offset joints, break-in lateral connections, etc.
- Lining of manholes with observed I/I leakage through joints
- Replacement of sewer laterals found to be defective

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**SCHEDULE**

The City's Sewer System Master Plan will be updated every 5 years coincident with the required 5-year SSMP update and recertification. Whenever an update to the Sewer System Master Plan is completed, the City's 5-year Overall Capital Improvement Program will be updated to include projects identified in the Sewer System Master Plan.

***Related Appendices***

**Appendix 8.0** – Sewer System Master Plan



## 9. SSMP ELEMENT 9: MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

### MAINTAIN RELEVANT INFORMATION

Relevant and accurate data is important for the assessment of performance against goals established by the SSMP and for the formulation of program modifications when necessary. The City maintains a variety of documented information that is used to develop or modify SSMP activities. A summary of the documentation maintained for applicable SSMP elements is provided below:

- Section 4(a) - Mapping:
  - o Map Update Log- to document and verify completion of requested GIS map updates
- Section 4(b) - O&M Program:
  - o Spreadsheet Based, Transitioning to CMMS - Documentation of all sewer cleaning activities by year and by pipe segment
  - o Spreadsheet Based, Transitioning to CMMS- Continuous update of Enhanced 180-day sewer main cleaning schedule for high FOG, root, or debris areas
  - o Spreadsheet Based, Transitioning to CMMS - Continuous update of Enhanced 180-day auger list for problematic sewer laterals
  - o Spreadsheet Based, Transitioning to CMMS - Documentation of lift station cleaning
  - o CMMS (Llumin) - Documentation and scheduling of lift station maintenance work orders.
- Section 4(c) - R&R Program:
  - o IT Pipes - CCTV inspection historical database
  - o Spreadsheet Based, Transitioning to CMMS - tracking of sewer collection system replacement value and annual spending on rehabilitation and replacement projects
  - o 5-year City Capital Improvement Program - Updated with any new identified sanitary sewer collection system rehabilitation projects identified via CCTV
- Section 4(d) - Training Program:
  - o Employee Training Documentation
- Section 4(e) - Replacement Parts Inventory:
  - o Spreadsheet Based- Gravity Sewer Spare Parts and Tool Inventory
  - o CMMS (Llumin) - Lift Station Spare Parts Inventory

- o Mitchell - Fleet Maintenance Tracking Software
- Section 5 - Design and Performance Provisions:
  - o Plan Review and Maintenance and Utilities Inspection records for new construction
- Section 6 - Overflow Emergency Response Plan
  - o SSO Reports Submitted via CIWQS
  - o Internal City Sanitary Sewer Overflow Field Reports (OERP Appendix C)
  - o SSO Collection System Failure Analysis Report (OERP Appendix F)
- Section 7 - FOG Control Program
  - o Public outreach materials used or developed
  - o List of known licensed grease haulers
  - o FSE permit inspection schedule
  - o FSE inspection Industrial Discharger Inspection Reports
  - o FSE self-monitoring BMP implementation and GRD maintenance reports
- Section 8 - System Evaluation and Capacity Assurance
  - o Building E Pump Station flow data
  - o Wastewater Reclamation Facility rain gauge data
  - o Temporary sewer flow monitoring data
  - o Temporary rain gauge data
  - o GIS-based sewer collection system hydraulic model results
  - o Sewer System Master Plan

## MEASURE SSMP ELEMENT EFFECTIVENESS

The City has established performance indicators relative to specific SSMP activities that can be quantitatively measured. Performance indicators are developed to provide the City a means by which to monitor its performance in effectively executing SSMP programs. Each key performance indicator (KPI) is tracked by a responsible person who documents specific statistics and ensures that adequate data is being collected to evaluate performance. The responsible person is an employee that is naturally involved with the collection or use of the data required to track the performance indicator to ensure effective and accurate data collection and tracking.

The City's KPI tracking summary is shown in **Appendix 9.0**

Each responsible person will collect the necessary information and enter the calculated KPI value into the overall tracking sheet during each SSMP audit. The Key Performance Indicator Tracking Sheet will be collected by one of the LROs and reviewed to assist in the completion of the mandatory internal audit.

SSMP activities will be evaluated during the audit and revisions to the SSMP will be made at that time.

### PM PROGRAM ASSESSMENT

The success of the preventative maintenance program is based on the completion of established numerical goals for regular and enhanced (180-day) preventative sewer cleaning and CCTV inspection. If the City falls short of the established goals in any given year, the City will determine if additional staffing is required in order to ensure completion of the goals for the following year.

### UPDATE SSMP PROGRAM ELEMENTS

As part of the biennial SSMP Audit, all KPIs are reviewed, and specific recommendations are made by one of the City's LROs to address poor performance compared to established numerical goals. It is during the auditing process that potential updates to program elements are identified and documented in the audit. Physical changes to the SSMP text will be made at a minimum of every 5 years which may include but is not limited to the following:

- **Detailed efforts to increase funding or staffing**
- **Changes to the cleaning, CCTV inspection, or FOG programs (i.e. procedural changes, changes to work production levels, modifications to documentation methods, etc.)**
- **Updates to CIP prioritization and funding processes**
- **Changes to OERP protocols**
- **Additions or modifications to the Ordinance Code or Improvement Standards**
- **Changes in hydraulic modeling methods or priorities, etc.**

Any major changes to SSMP elements or programs will be presented to the Board of Supervisors, and approval gained for budgetary or staffing impacts resulting from program modifications.

**SSO ANALYSIS**

As a required part of each SSMP Audit, SSO events are analyzed in detail to identify key information such as frequency, location, cause, and volume. These trends are illustrated in order to determine causation that may be addressed through adjustment of the preventative maintenance program.

***Related Appendices***

**Appendix 9.0** – Key Performance Indicators (KPI)

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## 10. SSMP ELEMENT 10: PROGRAM AUDITS

Evaluation of established key performance indicators (KPIs), described in SSMP Section 9, forms the basis for the audit process. The KPIs are used to determine if programs are being implemented as planned. The KPI tracking and evaluation process can be used to determine if the necessary resources are in place for successful execution of key programs and activities. The KPI tracking results are reviewed by the City's LROs as described in SSMP Section 9. The results are intended to be used to guide decision making regarding modifications and updates to SSMP programs that are deemed necessary.

During each SSMP audit, it will be determined if all recommendations from the previous audit have been implemented, and if not, a course of action will be identified to ensure implementation over the next audit period.

This current SSMP has been compiled by department employees, reviewed by managers and the rest of the department, with input from all and dozens of rounds of edits. This is the first version of our SSMP and does not have any program audits. The updated, next version of our SSMP will have program audits.



## 11. SSMP ELEMENT 11: COMMUNICATION PROGRAM

### COMMUNICATION WITH THE PUBLIC

The City maintains a web page specific to the SSMP:

<https://www.cityofamericancanyon.org/government/maintenance-and-utilities/wastewater>

The SSMP webpage allows the public to download the entire contents of the most recent version of the City's SSMP, and also includes an email link that can be used by the public to submit comments on the SSMP to the City.

The City's SSMP webpage includes a link from the City's website to the State Water Resources Control Board CIWQSSSO Public Reports website and the City will be publicizing the updating of the City's SSMP and the City's SSMP webpage to members of the public through a City billing insert notification in 2020. Additionally, the City's SSMP webpage includes contact information for the City's Utility Trouble Hotline which is used for the public to report SSOs which is available 24-hours, 7 days per week.

### COMMUNICATION WITH TRIBUTARY SYSTEMS

The City does not have any tributary or satellite systems to the City's main sewer collection system.

#### ***Related Appendices***

**Appendix 7.4** – Public Awareness Program Materials



## **Appendix 2.0 – SSMP Contributing Authors and Positions**



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## SSMP Contributors

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**Plant Operator III:**

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**Senior Civil Engineer:**

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**Engineering Tech II:**

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**Maintenance Worker II:**

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**Maintenance Worker II:**

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**Administrative Technician:**

Sherri Cassidy.....[Scassidy@cityofamericancanyon.org](mailto:Scassidy@cityofamericancanyon.org) (707) 647-5325

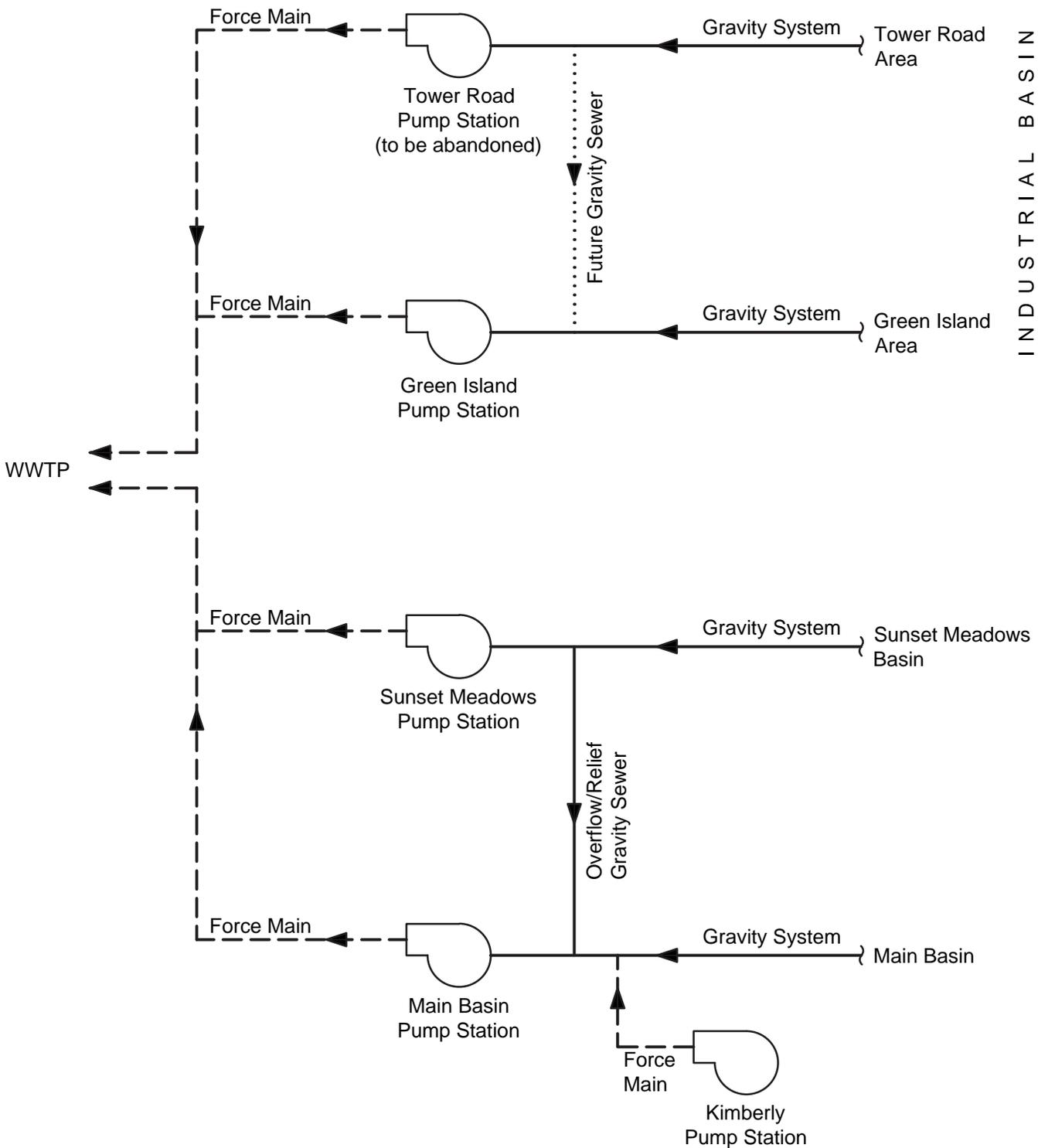
**DKF Solutions Group**

CSRMA Risk Control Advisor:

David Patzer.....[Dpatzer@dkfsolutions.com](mailto:Dpatzer@dkfsolutions.com) (707)-373-9709

## Appendix 4.0 – Pump Station Detail



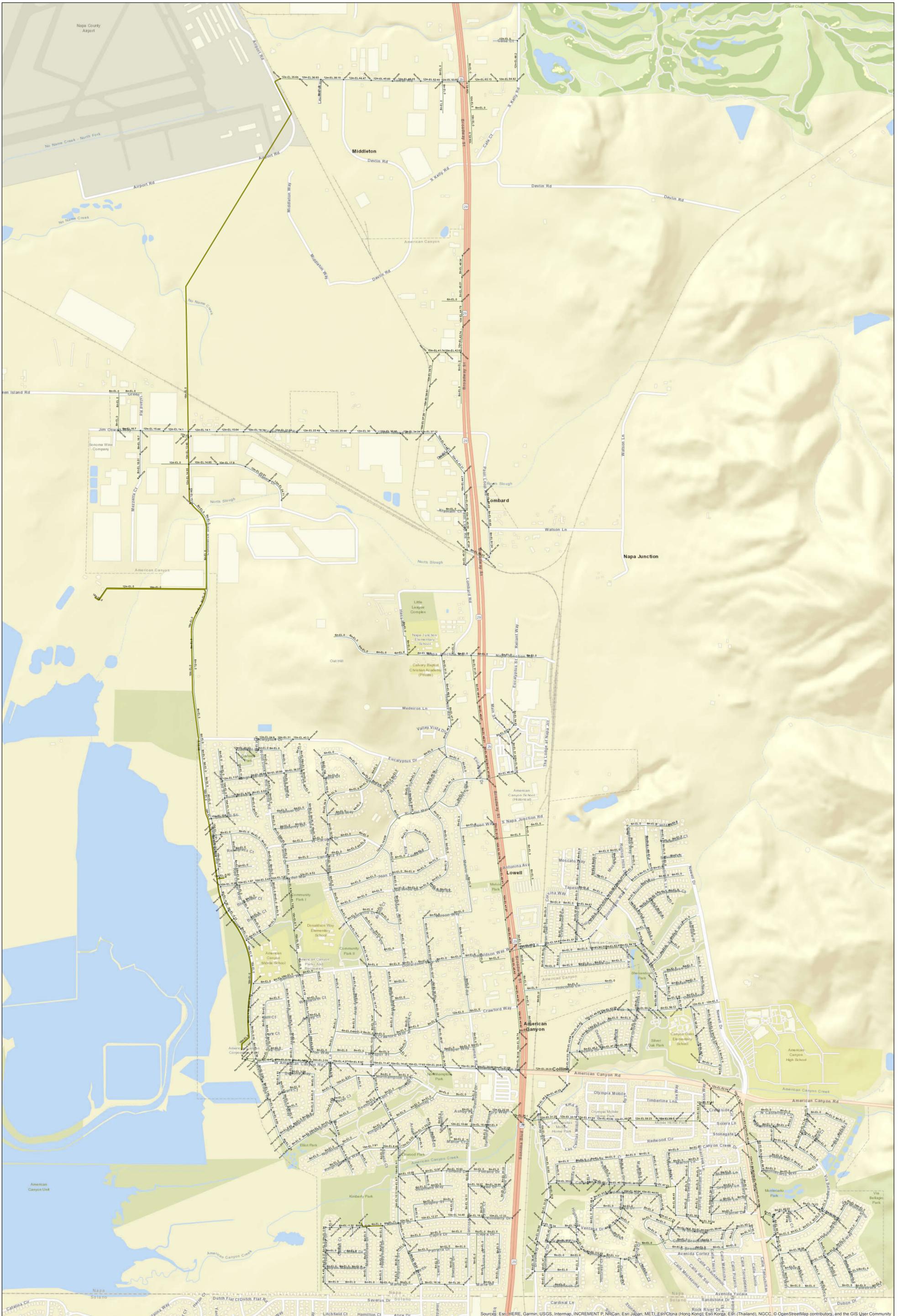




## Appendix 4.1 – Sewer System Map



# SANITARY SEWER SYSTEM MAP



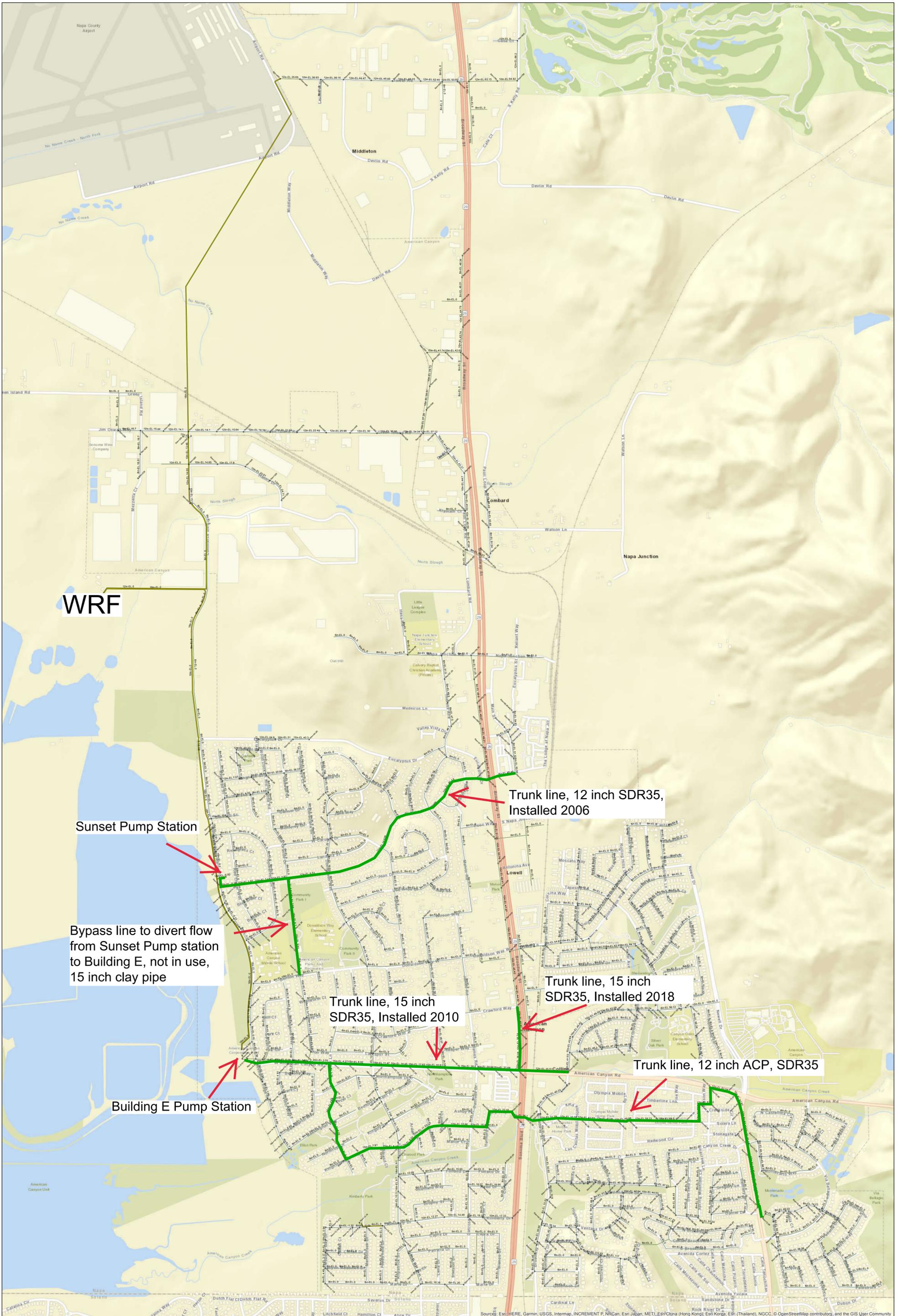
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



## Appendix 4.2 – Sewer System Trunk Line Map



SEWER TRUNK LINE MAP



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



## **Appendix 4.3 – Sewer System Force Main and Pump Station Map**



PUMP STATION AND FORCE MAIN MAP



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



## Appendix 4.4 – Sewer System Map by Pipe Type



PUMP STATION AND FORCE MAIN MAP



Tower road pump station

New section installed 2018 for future development  
10 inch SDR35 pipe

Green island pump station

Installed 2006

WRF

Force main, from building E to WRF, installed 2006

Sunset pump station

Building E pump station

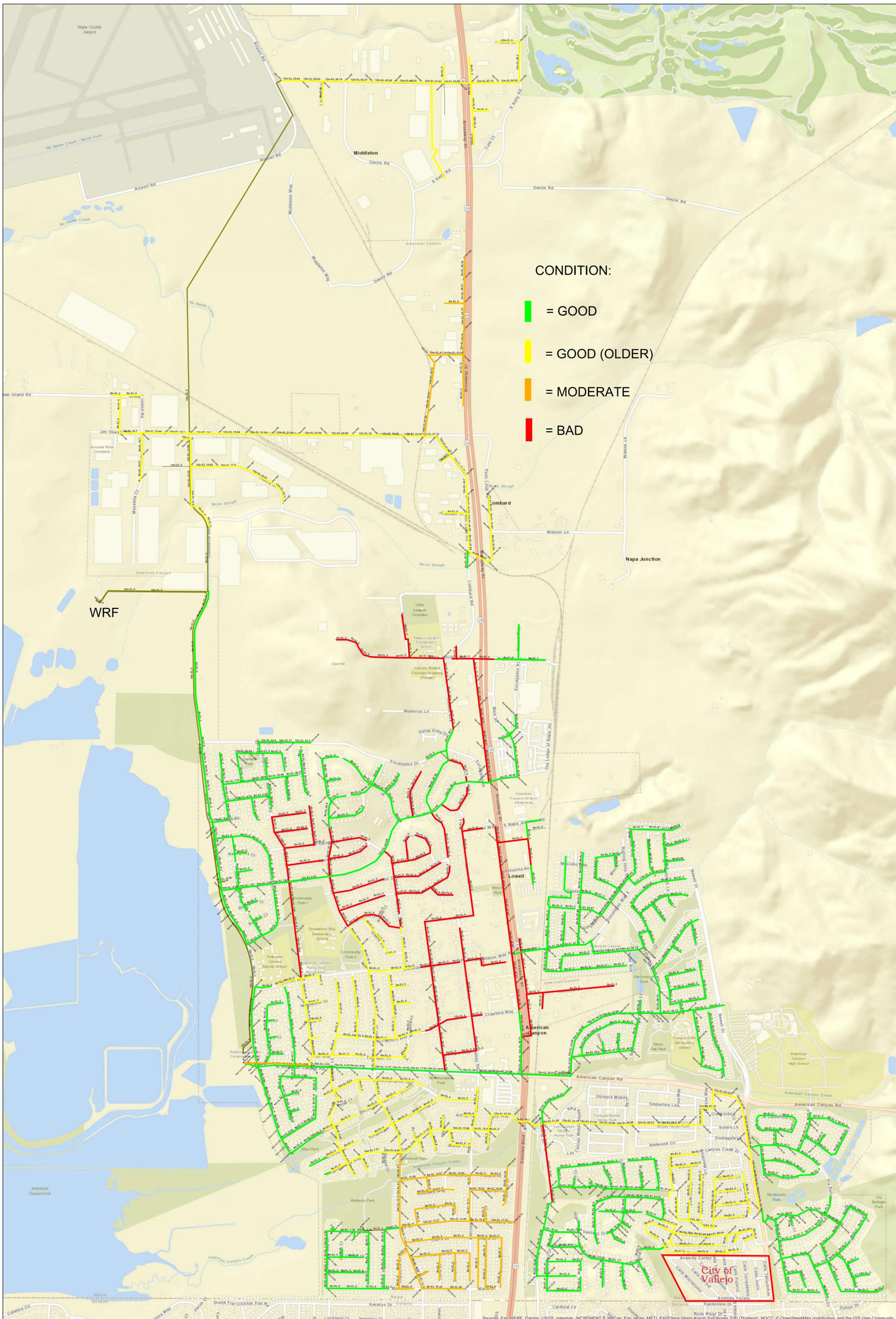
Kimberly lift station



**Appendix 4.5 – Sewer System Condition Map**



# SEWER SYSTEM CONDITION MAP



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



## Appendix 4.6 – Sewer Cleaning Form







## **Appendix 4.7 – Pump Station Wet Well Inspection Form**



**CITY OF AMERICAN CANYON  
PUBLIC WORKS DEPARTMENT  
SEWER DIVISION WEEKLY WET WELL INSPECTIONS**

DATE: \_\_\_\_\_ INSPECTED BY: \_\_\_\_\_

Pump Station wet well condition:

BUILDING E (corpyard) Needs cleaning Y/N

Comments: \_\_\_\_\_

SUNSET PUMP STATION: Needs cleaning Y/N

Comments: \_\_\_\_\_

KIMBERLY PUMP STATION: Needs cleaning Y/N

Comments: \_\_\_\_\_

TOWER ROAD PUMP STATION: Needs cleaning Y/N

Comments: \_\_\_\_\_

GREEN ISLAND PUMP STATION: Needs cleaning Y/N

Comments: \_\_\_\_\_

Note type and amount of solids, grease, structural condition, if it needs cleaning, anything out of the ordinary.



## Appendix 4.8 – Sewer Lateral Inspection Form







## Appendix 4.9 – Sewer Hot Spot Form



# Sewer Hot Spots

Checked by: \_\_\_\_\_

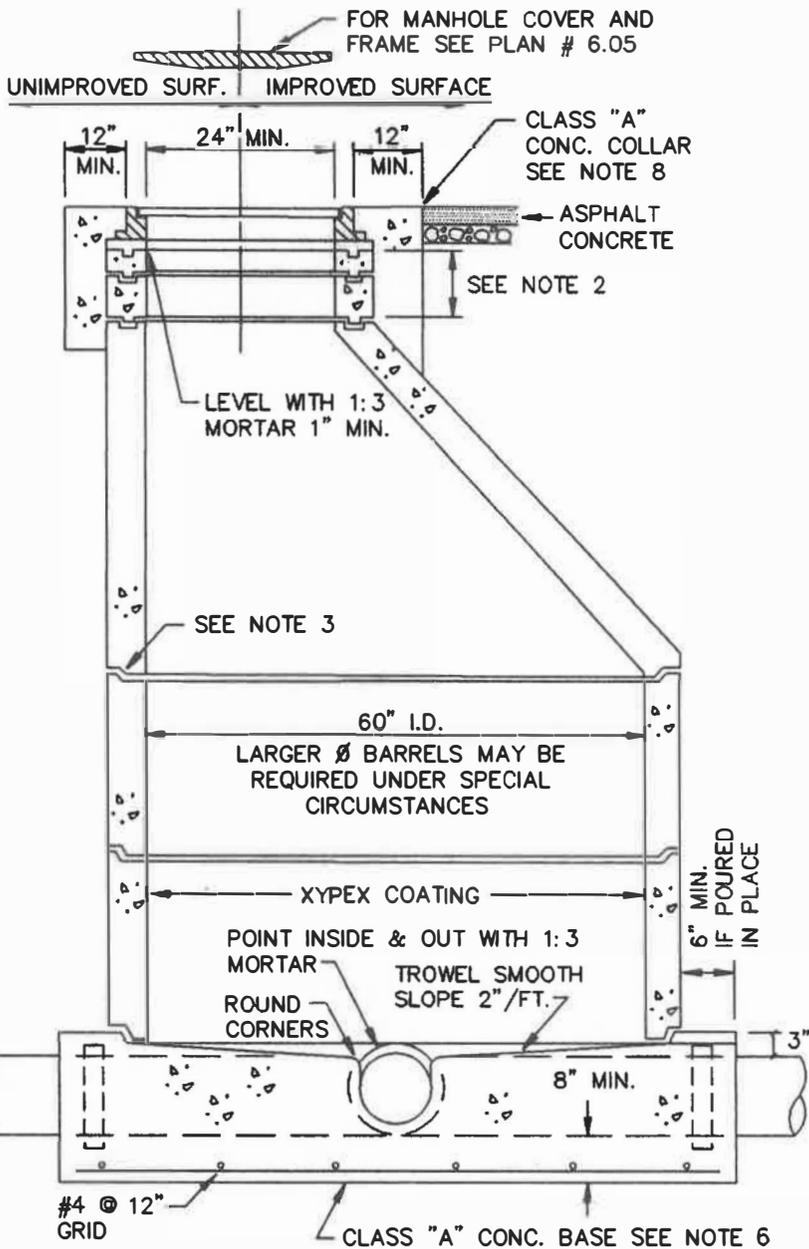
Date: \_\_\_\_\_

Location	Condition	Comments
585 Chaucer Ln		
Chaucer ct.		
Chaucer @ Knightsbridge		
Meadow bay @ kimberly		
Elliott & Capra		
31 Marla Dr		
Andrew Rd @ Wilson Way		
Crawford Way @ Andrew Rd		
Hwy 29 @ West America Bank		
115 Independence		
Broadway @ Cartagena		
south of Broadway/Cartagena in field		
3000 Broadway (by creek)		
724 West Park		
5075 Main St. (in front of Sonic)		
South end of Main st.		
H & R block		
4545 Hess		
Little league		
120 West Carolyn Dr		
2 Alta Loma		
6 Alta Loma		
Wetlands edge @ Rio Del Mar		
In front of corp yard		

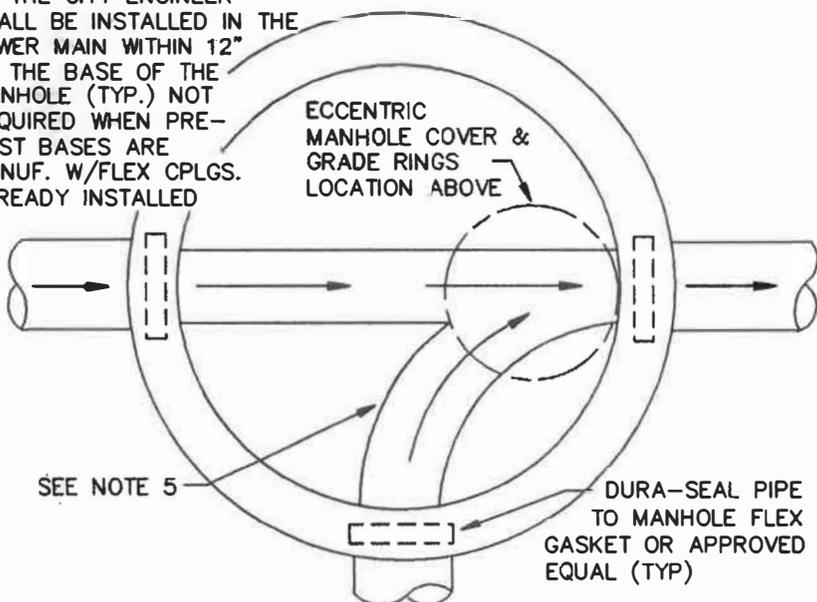


## **Appendix 5.0 – Sewer System Engineering Standards and Specifications**





A FLEXIBLE COUPLING, AS APPROVED BY THE CITY ENGINEER SHALL BE INSTALLED IN THE SEWER MAIN WITHIN 12" OF THE BASE OF THE MANHOLE (TYP.) NOT REQUIRED WHEN PRE-CAST BASES ARE MANUF. W/FLEX CPLGS. ALREADY INSTALLED



MANHOLE BASE

CHANNELIZATION PLAN AND LOCATION OF ECCENTRIC MANHOLE COVER

NOTES:

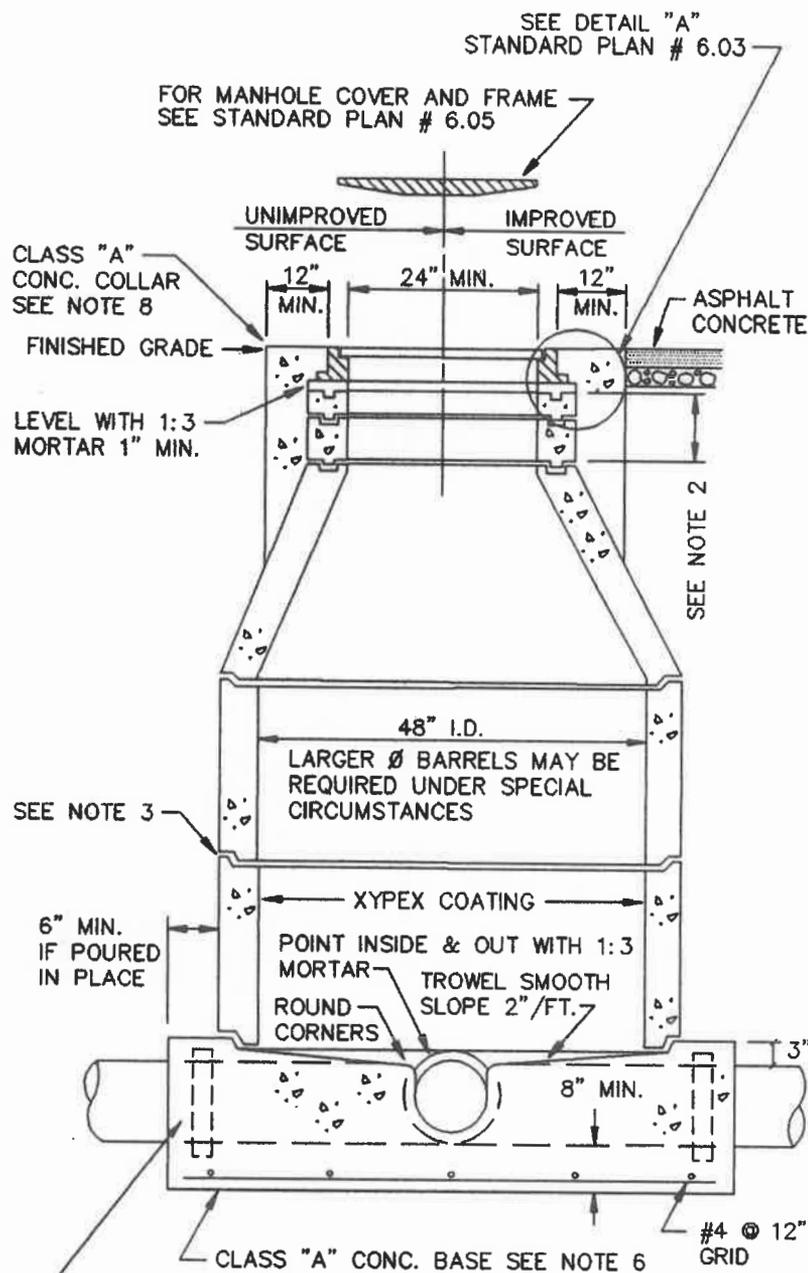
1. WHEN MANHOLES ARE INSTALLED IN UNIMPROVED AREAS, THE TOP OF THE COVER SHALL BE A MIN. OF 1 FOOT ABOVE ADJACENT FINISHED GRADE.
2. MIN. OF ONE 3" AND ONE 6" GRADE ADJUSTMENT RINGS. MAX. HEIGHT OF GRADE ADJUSTMENT RINGS = 20" ALTERNATELY, CONTRACTOR MAY CAST GRADE ADJUSTMENT RINGS IN PLACE.
3. SET ALL BARREL SECTIONS & TAPER SECTIONS IN PLASTIC GASKET, RAM-NEK OR APPROVED ALTERNATE. TYP. JOINT: 1-1/2" (3/4" X 2-1/2") RAM-NEK SEAL (2 SEALS IN HIGH WATER AREAS).
4. CONE SECTION (TAPER) MUST BE ECCENTRIC FOR 60" MANHOLE.
5. CONSTRUCT ALL FLOW CHANNELS OF PIPE WHEREVER POSSIBLE. AFTER LOWER RING SECTION IS SET, BREAK OUT TOP HALF OF PIPE FLUSH WITH INSIDE FACE OF M.H. WALL AND CONSTRUCT SHELF AND U-SHAPED CHANNEL MAKE ELEVATION CHANGES GRADUALLY AND DIRECTIONAL CHANGES WITH SMOOTH CURVES.
6. POURED-IN-PLACE BASE SHALL BE POURED FULL THICKNESS TO UNDISTURBED SIDES OF EXCAVATION OR SHALL BE FORMED. JOINT BETWEEN BASE AND BARREL TO BE SEALED W/1-1/2" (3/4" X 2-1/2") RAM-NEK SEAL (2 SEALS IN HIGH WATER TABLE AREAS) OR PLASTER 6" FILLET. 1:3 MORTAR. PRE-CAST BASE TO BE PLACED ON 12" THICK 3/4" DRAIN ROCK SUBBASE INSTALLED AGAINST UNDISTURBED EARTH.
7. JOINT BETWEEN BASE AND BARREL TO BE SEALED W/1-1/2" (3/4" X 2-1/2") RAM-NEK SEAL (2 SEALS IN HIGH WATER TABLE AREAS).
8. CLASS "A" CONC. COLLAR SHALL BE AT FINISHED GRADE.
9. STANDARD MANHOLE BARREL SECTION PER ASTM C478.
10. BARREL AND TAPER SECTIONS MAY BE CAST IN PLACE AS APPROVED AND DIRECTED BY THE CITY ENGINEER.
11. 60" I.D. M.H. TO BE USED FOR ALL TRUNK AND COLLECTOR SEWERS 18" TO 48" OR WHERE DIMENSION FROM FINISHED GRADE TO THE SEWER FLOW LINE IS GREATER THAN 8'-0", AS INDICATED ON THE DESIGN PLANS.
12. MANHOLES ON TRUNK SEWERS LARGER THAN 48" SHALL BE SIZED BY THE CITY ENGINEER.
13. WHEN MANHOLES ARE COMPLETE THEY SHALL BE THOROUGHLY CLEANED INSIDE & THEN GIVEN ONE COAT OF XYPEX WATER PROOFING MATERIAL.



CITY OF AMERICAN CANYON

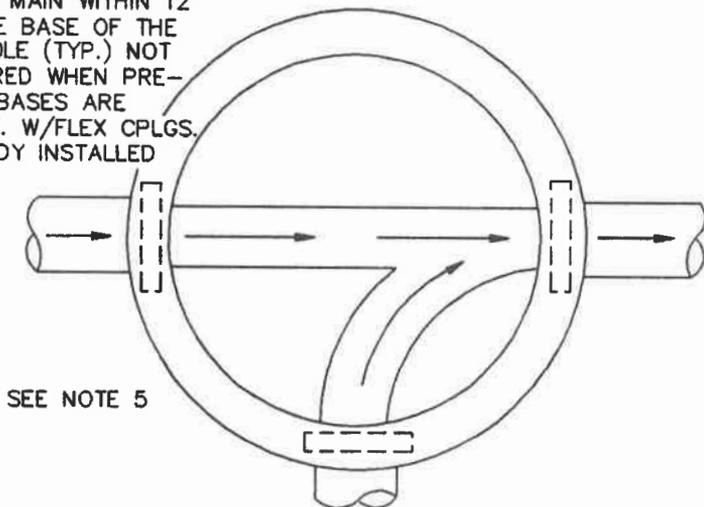
STANDARD 60" Ø PRECAST  
CONCRETE MANHOLE  
SANITARY SEWER

DATE	5/1/95
SCALE	NONE
STANDARD DWG. #	6.01



A FLEXIBLE COUPLING, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS SHALL BE INSTALLED IN THE SEWER MAIN WITHIN 12" OF THE BASE OF THE MANHOLE (TYP.) NOT REQUIRED WHEN PRE-CAST BASES ARE MANUF. W/FLEX CPLGS. ALREADY INSTALLED

DURA-SEAL PIPE TO MANHOLE FLEX GASKET OR APPROVED EQUAL



MANHOLE BASE  
CHANNELIZATION PLAN

NOTES:

1. WHEN MANHOLES ARE INSTALLED IN UNIMPROVED AREAS, THE TOP OF THE COVER SHALL BE A MIN. OF 1 FOOT ABOVE ADJACENT FINISHED GRADE.
2. MIN. OF ONE 3" AND ONE 6" GRADE ADJUSTMENT RINGS. MAX. HEIGHT OF GRADE ADJUSTMENT RINGS = 20". ALTERNATELY, CONTRACTOR MAY CAST GRADE ADJUSTMENT RINGS IN PLACE.
3. SET ALL BARREL SECTIONS & TAPER SECTIONS IN PLASTIC GASKET, RAM-NEK OR APPROVED ALTERNATE. TYP. JOINT: 1-1/2" (3/4" X 2-1/2") RAM-NEK SEAL (2 SEALS IN HIGH WATER AREAS).
4. CONE SECTION (TAPER) MUST BE CONCENTRIC FOR 48" MANHOLE.
5. CONSTRUCT ALL FLOW CHANNELS OF PIPE WHEREVER POSSIBLE. AFTER LOWER RING SECTION IS SET, BREAK OUT TOP HALF OF PIPE FLUSH WITH INSIDE FACE OF M.H. WALL AND CONSTRUCT SHELF AND U-SHAPED CHANNEL. MAKE ELEVATION CHANGES GRADUALLY AND DIRECTIONAL CHANGES WITH SMOOTH CURVES.
6. POURED-IN-PLACE BASE SHALL BE POURED FULL THICKNESS TO UNDISTURBED SIDES OF EXCAVATION OR SHALL BE FORMED. JOINT BETWEEN BASE AND BARREL TO BE SEALED W/1-1/2" (3/4" X 2-1/2") RAM-NEK SEAL (2 SEALS IN HIGH WATER TABLE AREAS) OR PLASTER 6" FILLET. 1:3 MORTAR. PRE-CAST BASE TO BE PLACED ON 12" THICK 3/4" DRAIN ROCK SUBBASE INSTALLED AGAINST UNDISTURBED EARTH.
7. JOINT BETWEEN BASE AND BARREL TO BE SEALED W/1-1/2" (3/4" X 2-1/2") RAM-NEK SEAL (2 SEALS IN HIGH WATER TABLE AREAS).
8. CLASS "A" CONC. COLLAR SHALL BE AT FINISHED GRADE.
9. STANDARD MANHOLE BARREL SECTION PER ASTM C478.
10. BARREL AND TAPER SECTIONS MAY BE CAST IN PLACE AS APPROVED AND DIRECTED BY THE CITY ENGINEER.
11. 48" I.D. MANHOLE TO BE USED FOR SEWER MAINS LESS THAN 18" DIA. & LESS THAN 8 FT. DEEP FROM FINISHED GRADE.
12. WHEN MANHOLES ARE COMPLETE THEY SHALL BE THOROUGHLY CLEANED INSIDE & THEN GIVEN ONE COAT OF XYPEX WATER PROOFING MATERIAL.
13. ALL INTERIOR JOINTS MUST BE GROUTED AND FLUSHED.



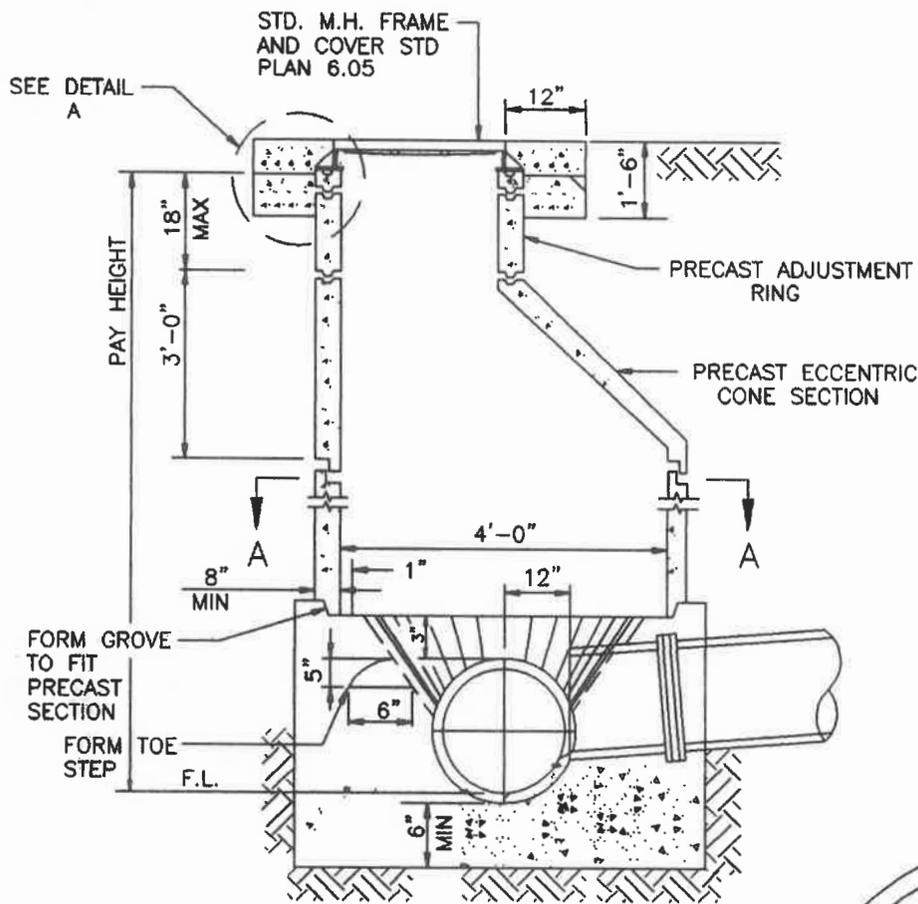
CITY OF AMERICAN CANYON

STANDARD 48" Ø PRECAST  
CONCRETE MANHOLE  
SANITARY SEWER

DATE 5/1/95  
SCALE NONE  
STANDARD DWG. # 6.02

DATE REVISIONS

MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS

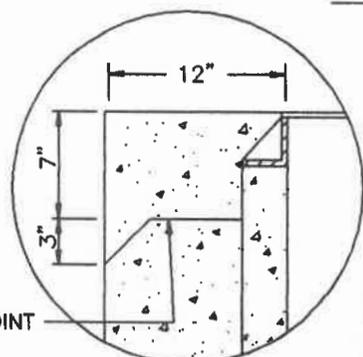


MINIMUM HEIGHT TYPE "A" MANHOLE

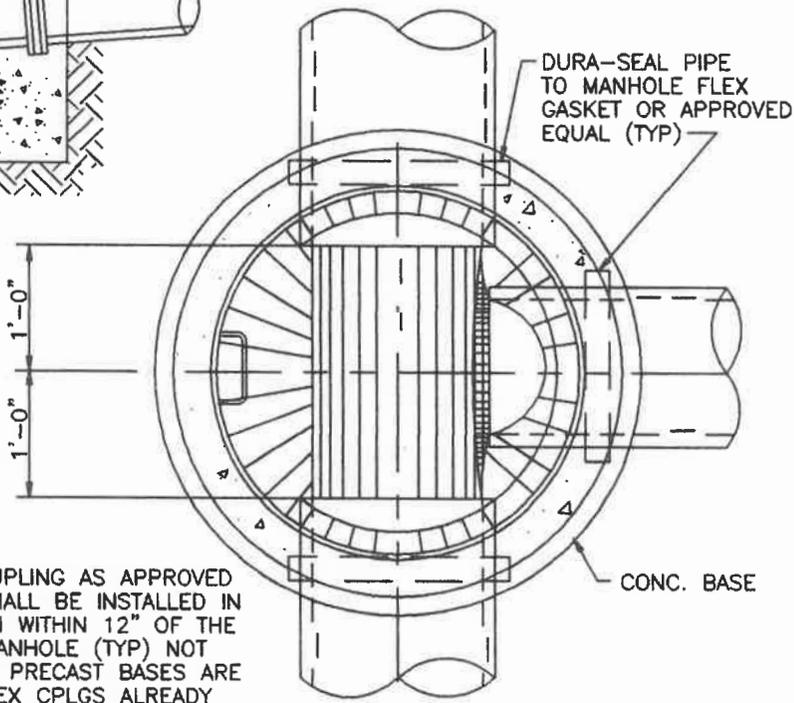
DIA (rcp)	PAY HEIGHT (ft)
12"	5.17'
15"	5.44'
18"	5.71'
21"	6.00'
24"	6.25'
27"	6.52'
30"	6.79'
33"	7.06'
36"	7.33'

FOR HEIGHTS LESS THAN SHOWN ABOVE USE TYPE "B" STANDARD MANHOLE OR SPECIAL; DESIGN

ELEVATION



DETAIL A



SECTION A-A

NOTE:  
A FLEXIBLE COUPLING AS APPROVED BY ENGINEER SHALL BE INSTALLED IN THE SEWER MAIN WITHIN 12" OF THE BASE OF THE MANHOLE (TYP) NOT REQUIRED WHEN PRECAST BASES ARE MANUF. WITH FLEX CPLGS ALREADY INSTALLED.

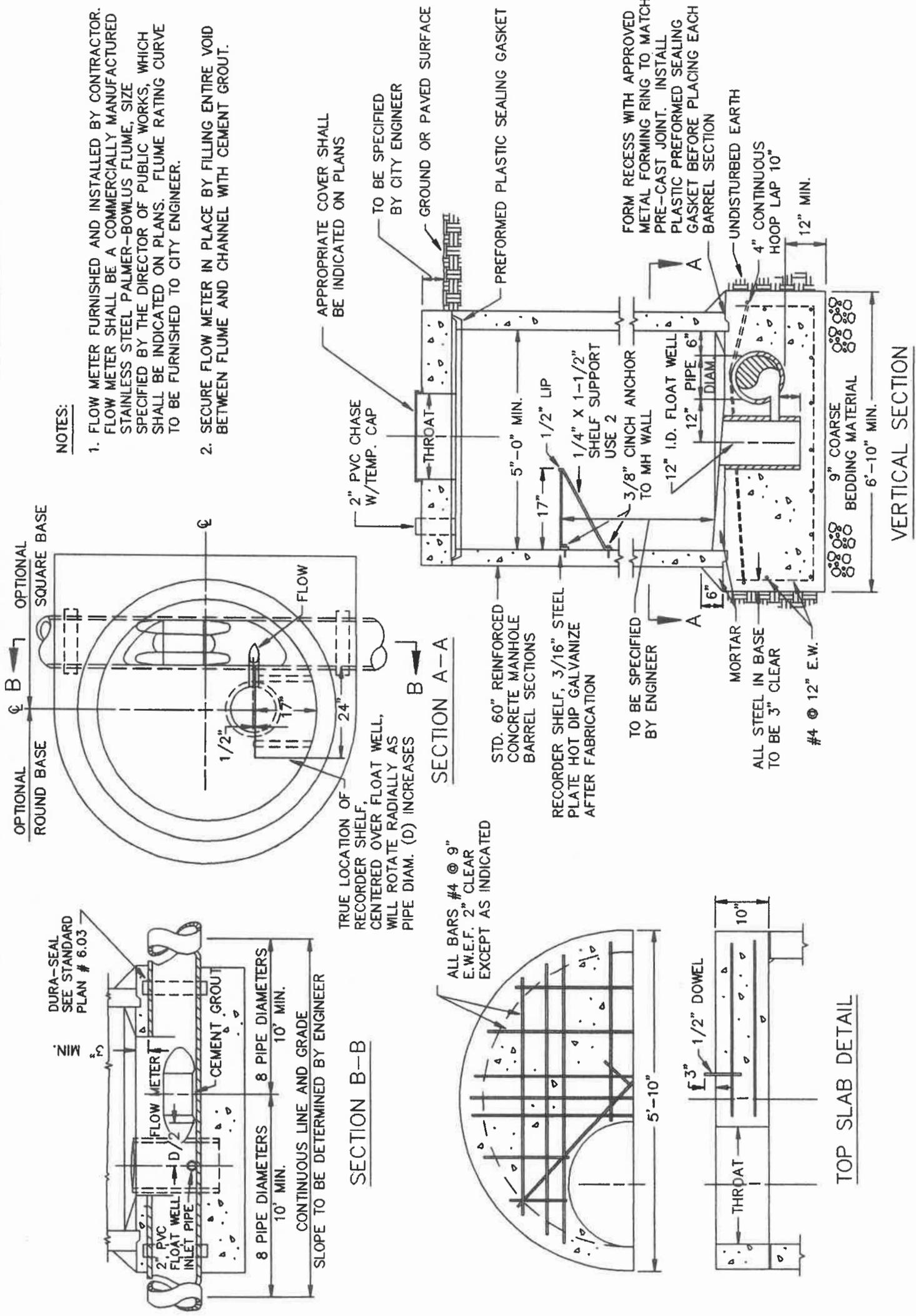
NOTES:

1. ECCENTRIC CONES SHALL BE USED WHERE SPECIFIED ON THE PLANS. JOINTS MAY BE EITHER KEYED OR TONGUE AND GROVED.
2. RAM-NEK OR APPROVED EQUAL MAY BE USED IN JOINTS ELIMINATING NECESSITY FOR OUTSIDE PLASTERING OF JOINTS.
3. CONE SECTION MAY BE EITHER CONCENTRIC OR ECCENTRIC.
4. CONCRETE BLOCK AND BASE SHALL BE A MIN. OF CLASS A CONC.
5. CONCRETE JOINTS SHALL BE CLEANED, WETTED AND MORTARED PRIOR TO SETTING NEXT JOINT. JOINTS SHALL THEN BE PATCHED, TROWELED AND BRUSHED SMOOTH. BASE OF MANHOLE SHALL BE GROUTED AND SACKED.
6. MANHOLE COVER FRAME SHALL BE ADJUSTED TO GRADE AND CROSS SLOPE OF PAVEMENT PRIOR TO POURING CONCRETE BLOCK.
7. RISER SECTIONS, CONES AND ADJUSTING RINGS SHALL CONFORM TO ASTM C-478.
8. ALL INTERIOR JOINTS MUST BE GROUTED & FLUSHED.



CITY OF AMERICAN CANYON

DATE	REVISIONS	 MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS	DATE	5/1/95
			SCALE	NONE
			STANDARD DWG. #	6.03



**NOTES:**

1. FLOW METER FURNISHED AND INSTALLED BY CONTRACTOR. FLOW METER SHALL BE A COMMERCIAL MANUFACTURED STAINLESS STEEL PALMER-BOWLUS FLUME. SIZE SPECIFIED BY THE DIRECTOR OF PUBLIC WORKS, WHICH SHALL BE INDICATED ON PLANS. FLUME RATING CURVE TO BE FURNISHED TO CITY ENGINEER.
2. SECURE FLOW METER IN PLACE BY FILLING ENTIRE VOID BETWEEN FLUME AND CHANNEL WITH CEMENT GROUT.

APPROPRIATE COVER SHALL BE INDICATED ON PLANS

TO BE SPECIFIED BY CITY ENGINEER

GROUND OR PAVED SURFACE

PREFORMED PLASTIC SEALING GASKET

FORM RECESS WITH APPROVED METAL FORMING RING TO MATCH PRE-CAST JOINT. INSTALL PLASTIC PREFORMED SEALING GASKET BEFORE PLACING EACH BARREL SECTION

UNDISTURBED EARTH

4" CONTINUOUS HOOP LAP 10"

12" MIN.

9" COARSE BEDDING MATERIAL  
6'-10" MIN.

**VERTICAL SECTION**

OPTIONAL ROUND BASE

OPTIONAL SQUARE BASE

FLOW

TRUE LOCATION OF RECORDER SHELF, CENTERED OVER FLOAT WELL, WILL ROTATE RADIALLY AS PIPE DIAM. (D) INCREASES

**SECTION A-A**

STD. 60# REINFORCED CONCRETE MANHOLE BARREL SECTIONS

RECORDER SHELF, 3/16" STEEL PLATE HOT DIP GALVANIZE AFTER FABRICATION

TO BE SPECIFIED BY ENGINEER

MORTAR ALL STEEL IN BASE TO BE 3" CLEAR

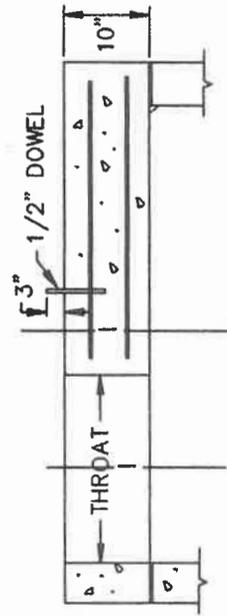
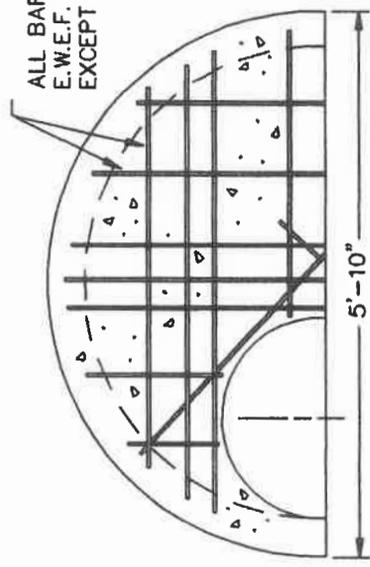
#4 @ 12" E.W.

DURA-SEAL SEE STANDARD PLAN # 6.03



**SECTION B-B**

ALL BARS #4 @ 9" E.W.E.F. 2" CLEAR EXCEPT AS INDICATED



**TOP SLAB DETAIL**



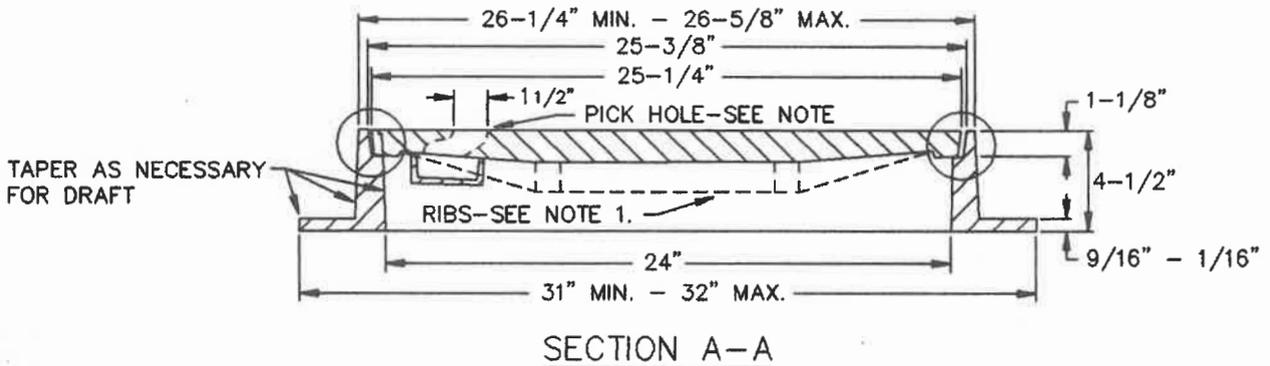
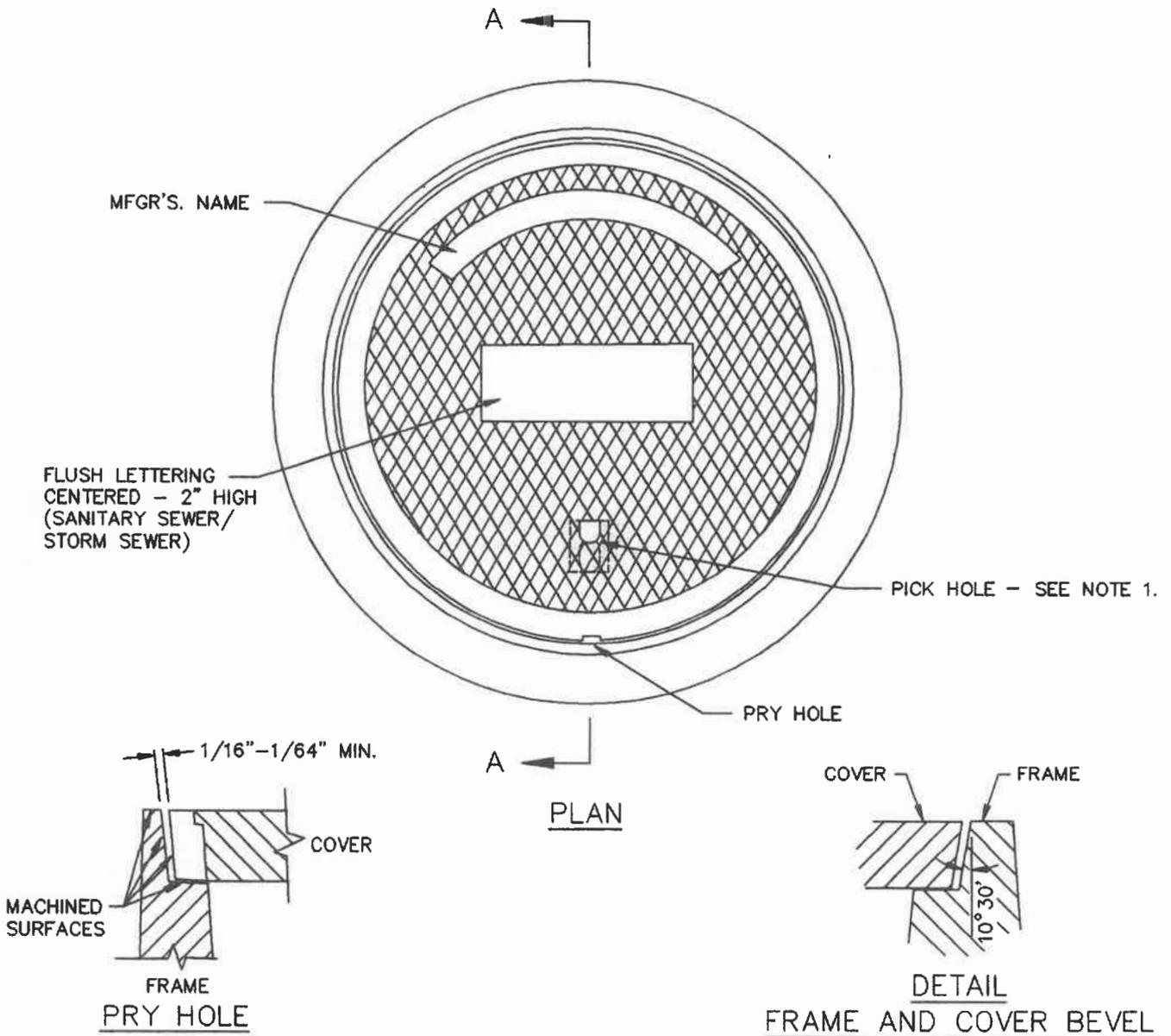
**CITY OF AMERICAN CANYON**

**METERING MANHOLE**

MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS

DATE	5/1/95
SCALE	NONE
STANDARD DWG. #	6.04

DATE	REVISIONS



**NOTES:**

1. COVER MAY BE FURNISHED WITH OR WITHOUT RIBS BUT MUST BE DESIGNED FOR H-20 HIGHWAY LOADING. PICK HOLE SHALL FIT A STANDARD PICK AND BE FORMED OR PROVIDED WITH A CUP OR CHANNEL SECTION BENEATH HOLE SUCH THAT BARS OR STICKS CANNOT FALL THROUGH.
2. ALL MATERIAL USED IN MANUFACTURING SHALL CONFORM TO A.S.T.M. DESIGNATION A-159-G3000.
3. MINIMUM WEIGHT COMPONENTS: COVER - 130 LBS. FRAME - 135 LBS.



**CITY OF AMERICAN CANYON**

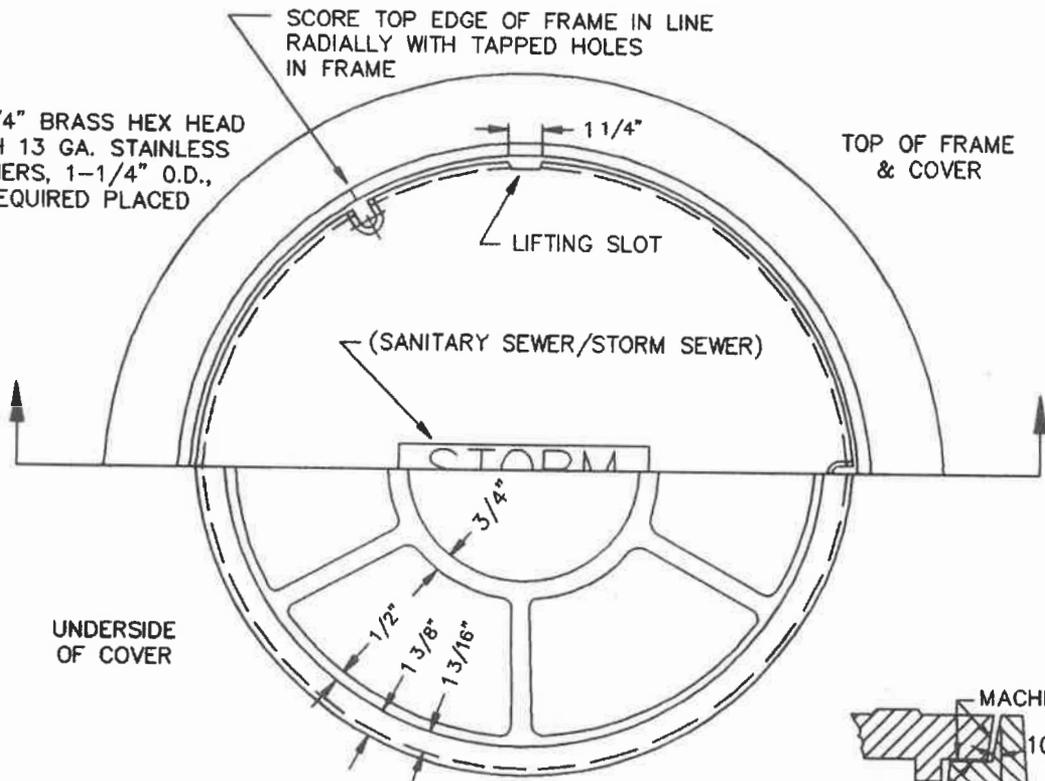
STANDARD MANHOLE  
FRAME & COVER

MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS

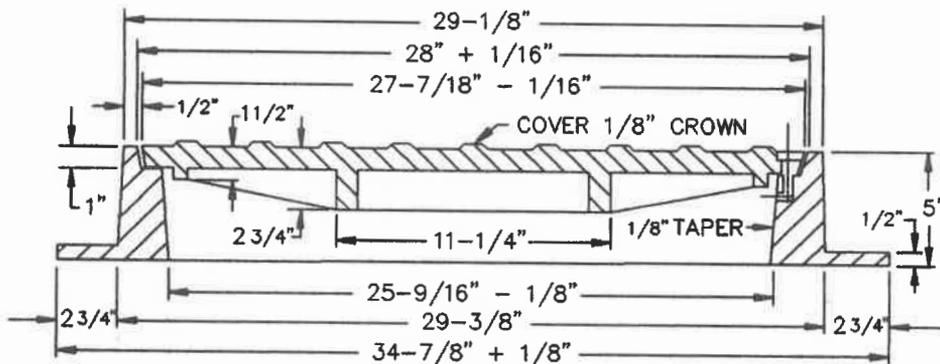
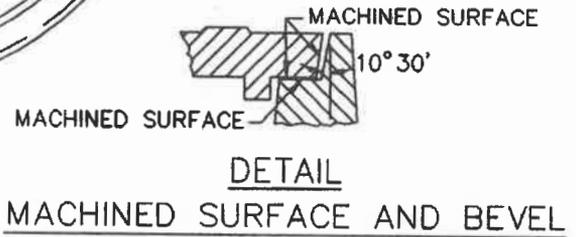
DATE 5/1/95  
SCALE NONE  
STANDARD DWG. # 6.05

DATE REVISIONS

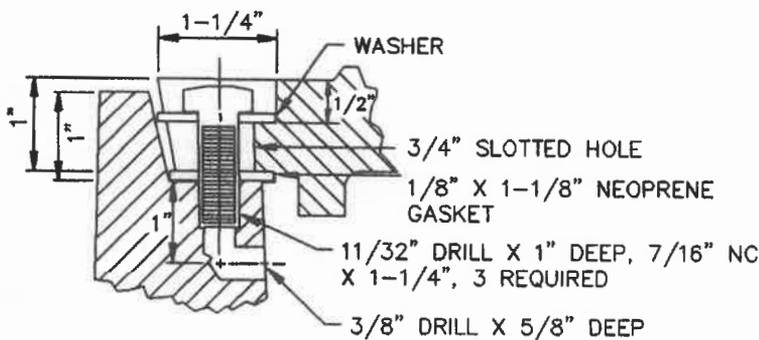
NOTE:  
 7/16" NC X 1-1/4" BRASS HEX HEAD  
 CAP SCREWS WITH 13 GA. STAINLESS  
 STEEL FLAT WASHERS, 1-1/4" O.D.,  
 7/16" I.D. - 3 REQUIRED PLACED  
 AT 1/3 POINTS



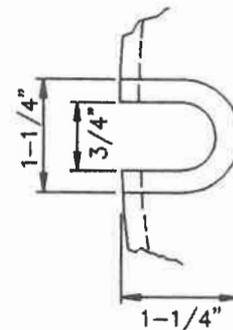
PLAN



SECTION A-A



DETAIL OF TAPPED  
 AND SLOTTED HOLES



PLAN  
 SLOTTED HOLES IN COVER

NOTES:

1. SPECIFY SANITARY SEWER/STORM SEWER WHEN ORDERING
2. ALL MATERIAL USED IN MANUFACTURING SHALL CONFORM TO A.S.T.M. DESIGNATION A-159-G3000



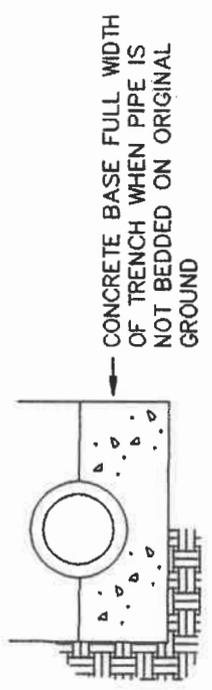
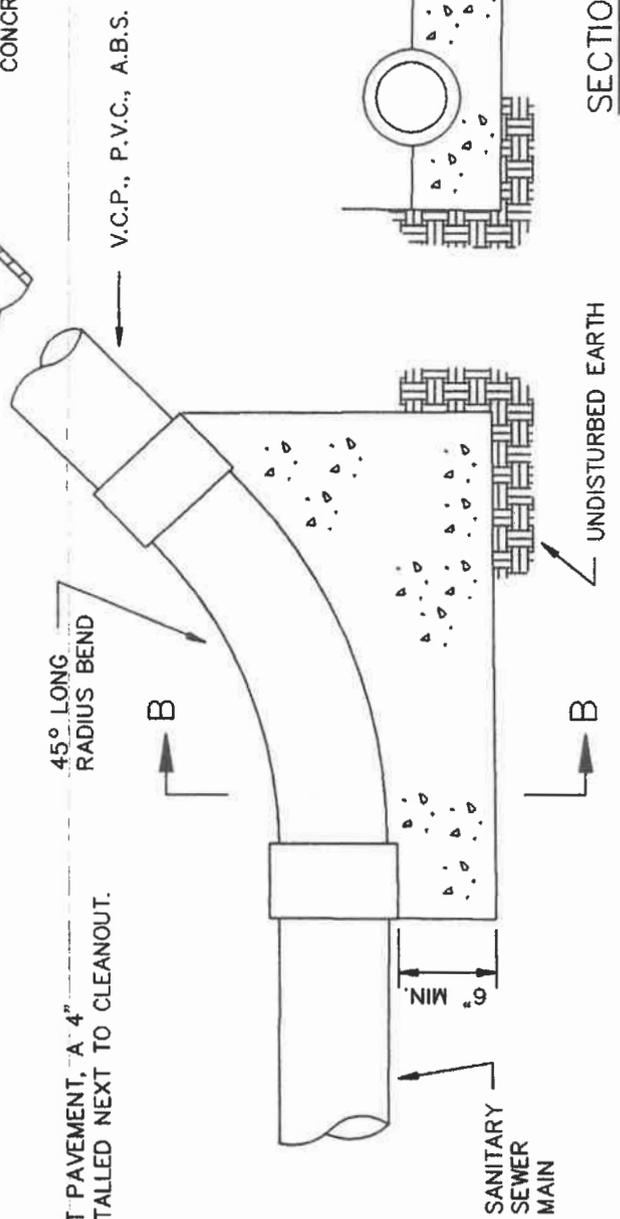
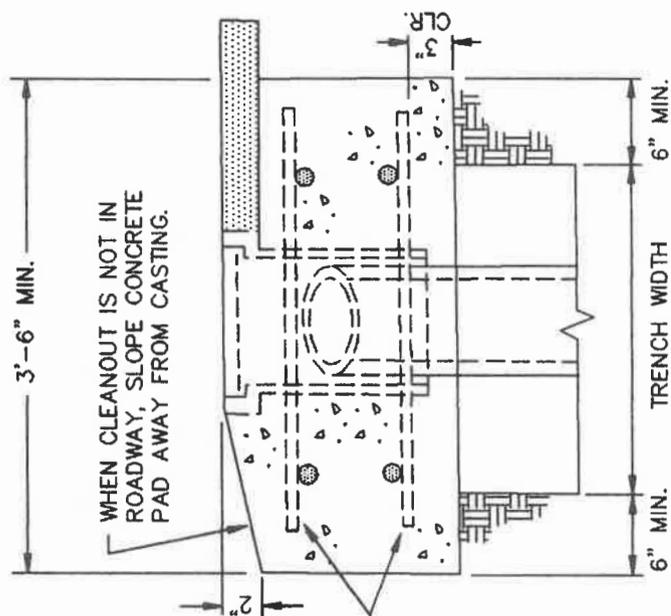
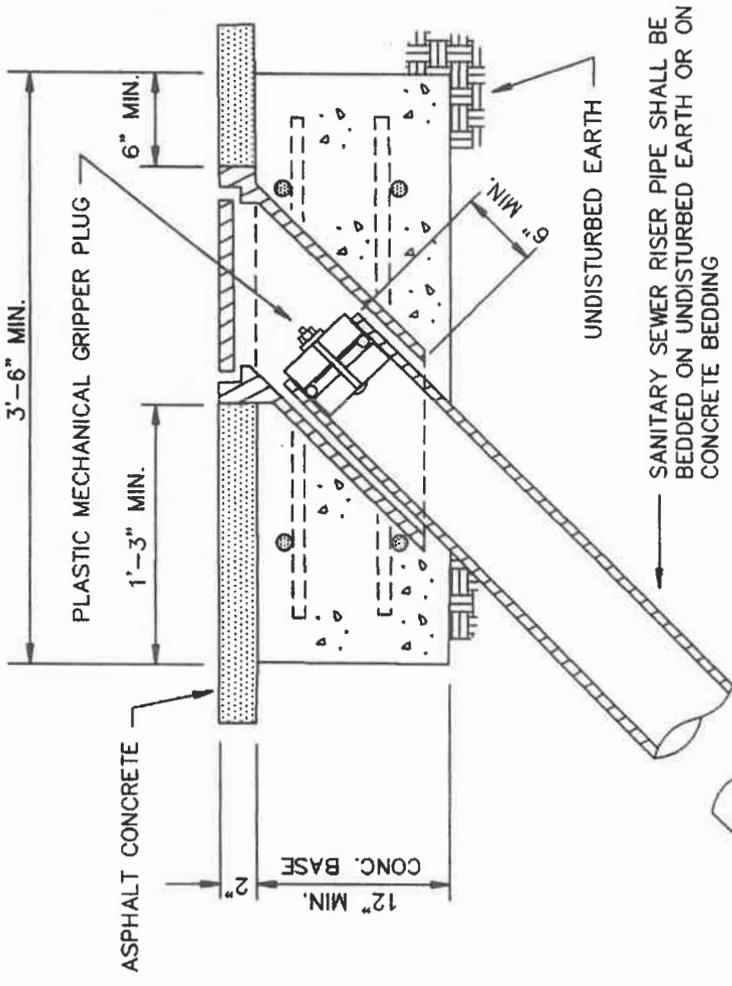
CITY OF AMERICAN CANYON

BOLT DOWN MANHOLE  
 FRAME & COVER

DATE 5/1/85  
 SCALE NONE  
 STANDARD DWG. # 6.06

DATE REVISIONS

MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS



SECTION B-B

NO. 4 BARS 3'-0" LONG EACH WAY, TOTAL 8

WHEN CLEANOUT IS NOT IN ROADWAY, SLOPE CONCRETE PAD AWAY FROM CASTING.

WHERE CLEANOUT DOES NOT ABUT PAVEMENT, A 4" DIAMETER BALLARD SHALL BE INSTALLED NEXT TO CLEANOUT.



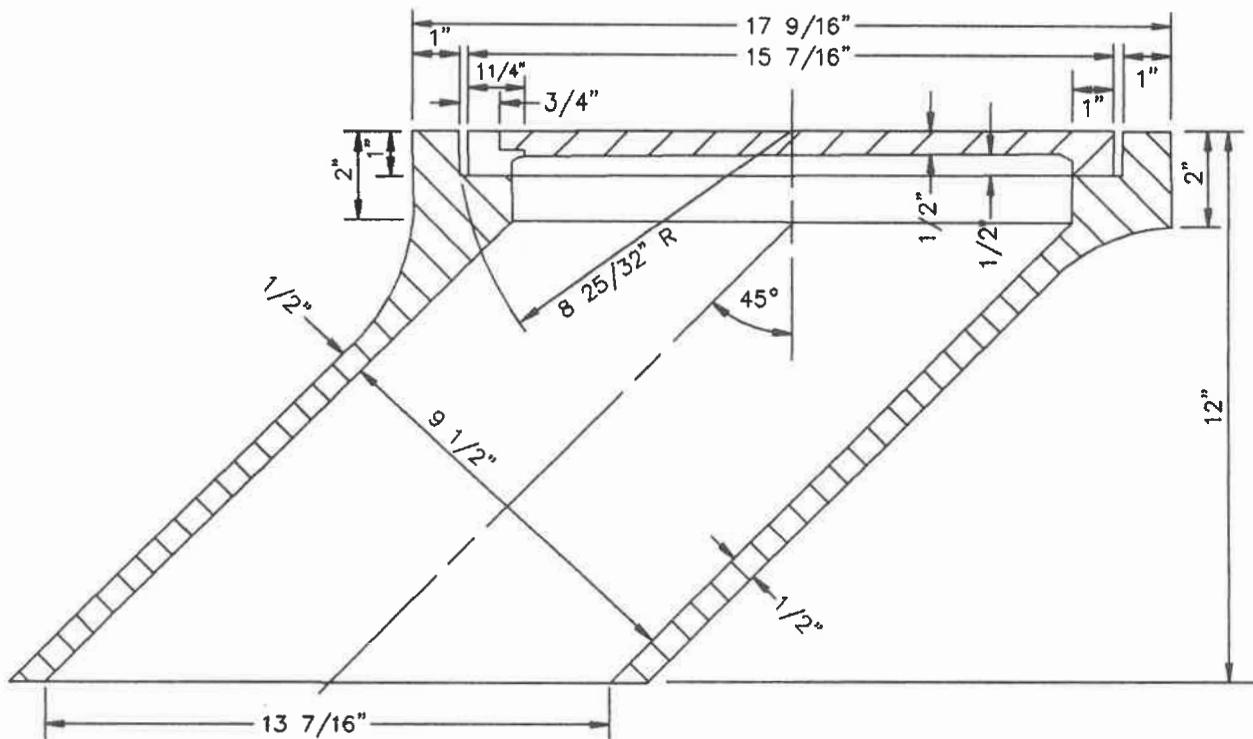
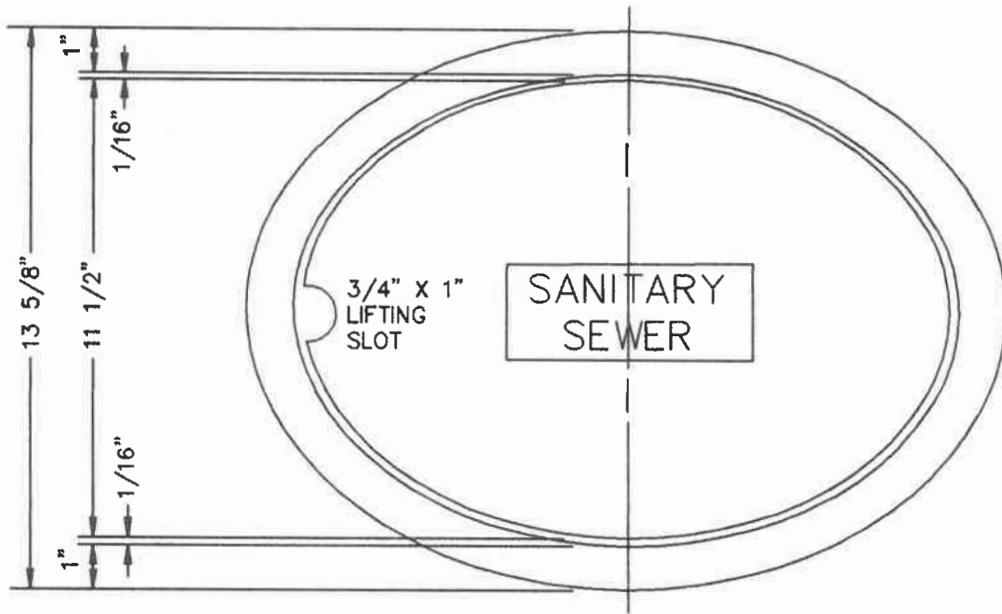
CITY OF AMERICAN CANYON

MAINLINE CLEANOUT

*[Signature]*  
MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS

DATE	5/1/95
SCALE	NONE
STANDARD DWG. #	6.07

DATE	REVISIONS

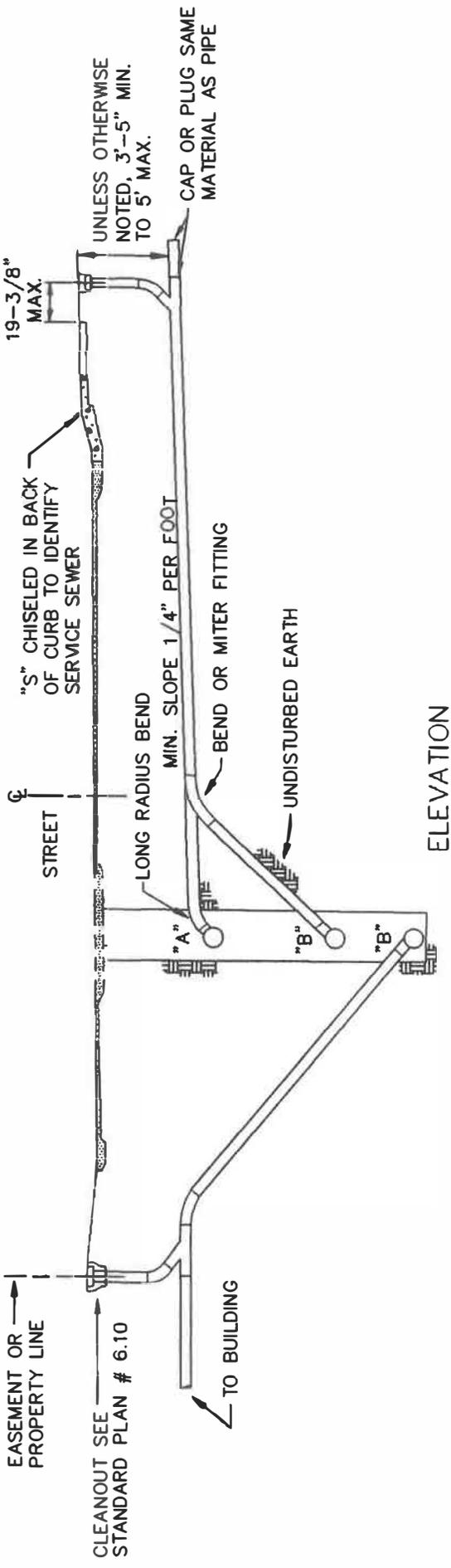


CITY OF AMERICAN CANYON

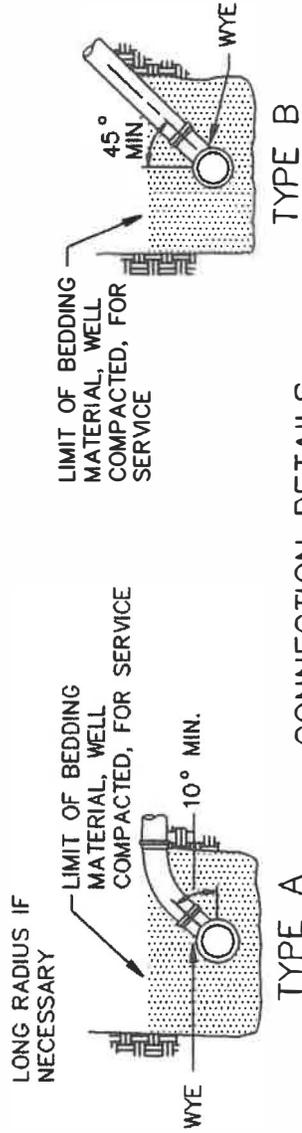
8" LAMP HOLE 45° CAST IRON FRAME & COVER

DATE	5/1/95
SCALE	NONE
STANDARD DWG. #	6.08

DATE	REVISIONS	MARK CLARKSON, P.E.,	DIRECTOR OF PUBLIC WORKS
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ELEVATION



CONNECTION DETAILS

NOTES:

1. ALL SERVICE LINES SHALL BE 4" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
2. SERVICES SHALL HAVE SAME BEDDING AND BACKFILL AS LATERAL SEWER.
3. CONTRACTOR SHALL USE THE MOST APPROPRIATE TYPE CONNECTION (A,B) FOR THE PARTICULAR SITUATION ENCOUNTERED.
4. SERVICE SEWER SHALL HAVE A MINIMUM 4'-0" COVER AT PROPERTY LINE WHENEVER LATERAL DEPTH AND SERVICE SEWER SLOPE OF 1/4" PER FOOT (MINIMUM) PERMIT.
5. WHEN THE LATERAL SEWER DEPTH IS SUCH THAT MINIMUM COVER AT PROPERTY LINE CANNOT BE MET, THE MINIMUM SLOPE OF 1/4" PER FOOT SHALL GOVERN THE COVER.
6. PLACE CONCRETE 12" WIDE AND OVERLAP LENGTH UNDER THE TEE BRANCH, THE FITTING AND UNSUPPORTED PIPE. WHEN BEDDING MATERIAL IS USED, PLACE ADDITIONAL BEDDING MATERIAL TO TOP OF BEND, THE FULL WIDTH OF THE TRENCH.
7. MINIMUM SPECIFIED COVER AT THE PROPERTY LINE SHALL BE MEASURED FROM EXISTING GROUND SURFACE OR EDGE OF ADJACENT ROADWAY, WHICHEVER IS LOWER.
8. A SPECIFIC ELEVATION AT THE PROPERTY LINE, WHEN SHOWN ON THE PLANS, SHALL GOVERN.
9. MITER FITTING SHALL BE MAX. 45°.



CITY OF AMERICAN CANYON

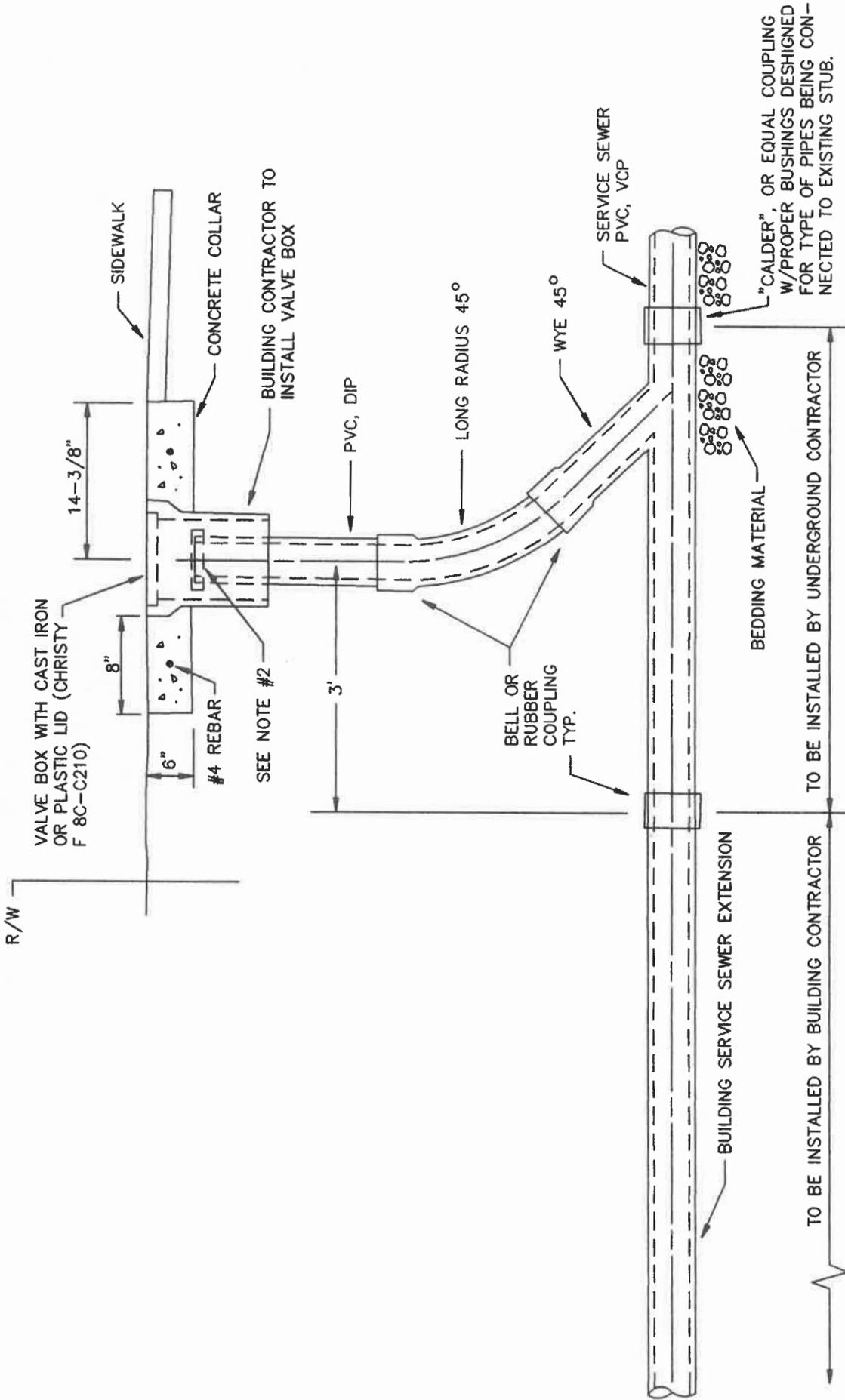
DATE	REVISIONS

SERVICE SEWERS

*[Signature]*

MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS

DATE	5/1/95
SCALE	NONE
STANDARD DWG. #	6.09



"CALDER", OR EQUAL COUPLING W/PROPER BUSHINGS DESIGNED FOR TYPE OF PIPES BEING CONNECTED TO EXISTING STUB.

**NOTES:**

1. ALL CLEANOUT PIPE AND FITTINGS SHALL BE THE SAME SIZE AND MATERIAL AS THE SERVICE SEWER IN WHICH THEY CONNECT.
2. CAP SHALL BE MOULDED RUBBER COMPRESSION COUPLING WITH STAINLESS STEEL CLAMPS OR ABS MALE THREADED CAP.



**CITY OF AMERICAN CANYON**

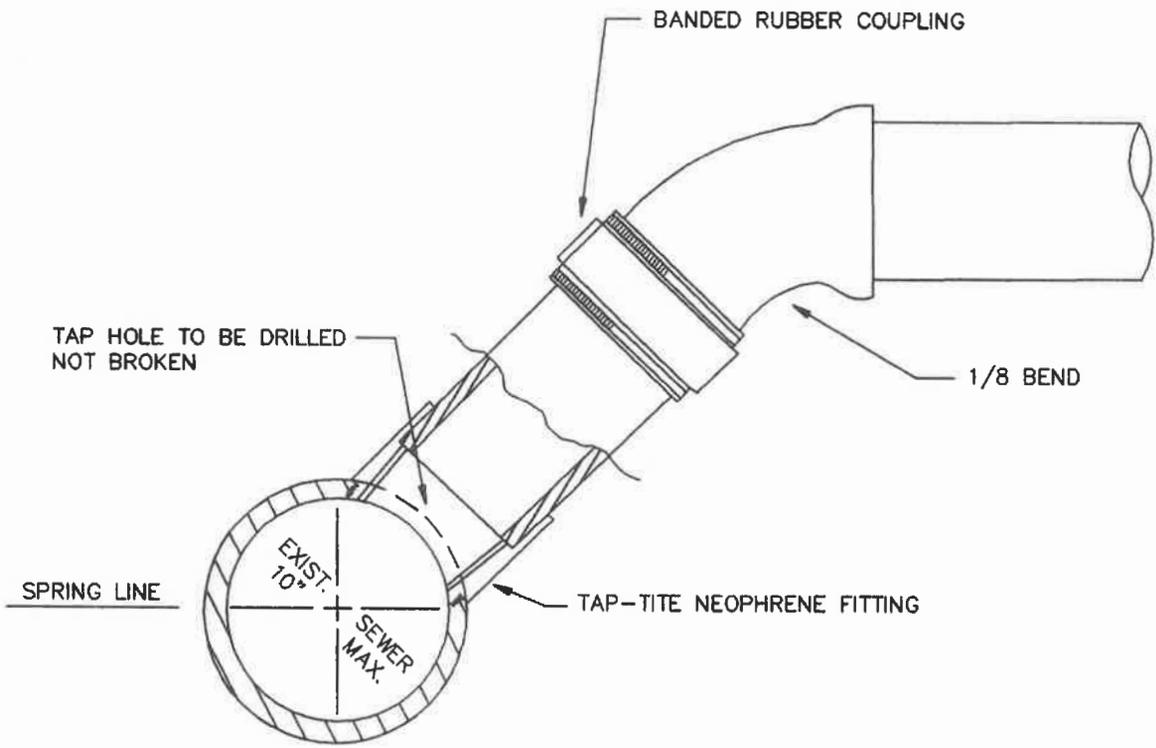
PROPERTY LINE  
CLEANOUT TO GRADE

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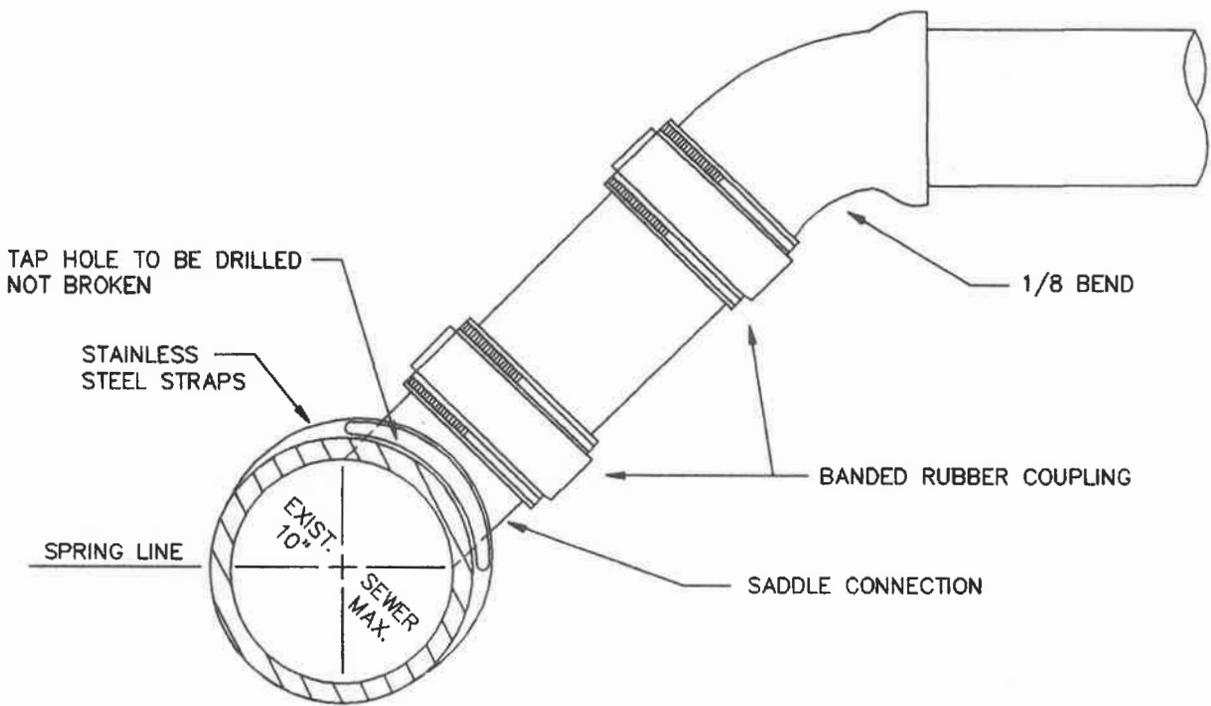
MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS

DATE	5/1/95
SCALE	NONE
STANDARD DWG. #	6.10

DATE	REVISIONS



TAP-TITE CONNECTION



SADDLE CONNECTION

**NOTES:**

1. NO TAP SHALL BE ALLOWED INTO EXISTING SEWER LESS THAN 6" IN DIAMETER.



**CITY OF AMERICAN CANYON**

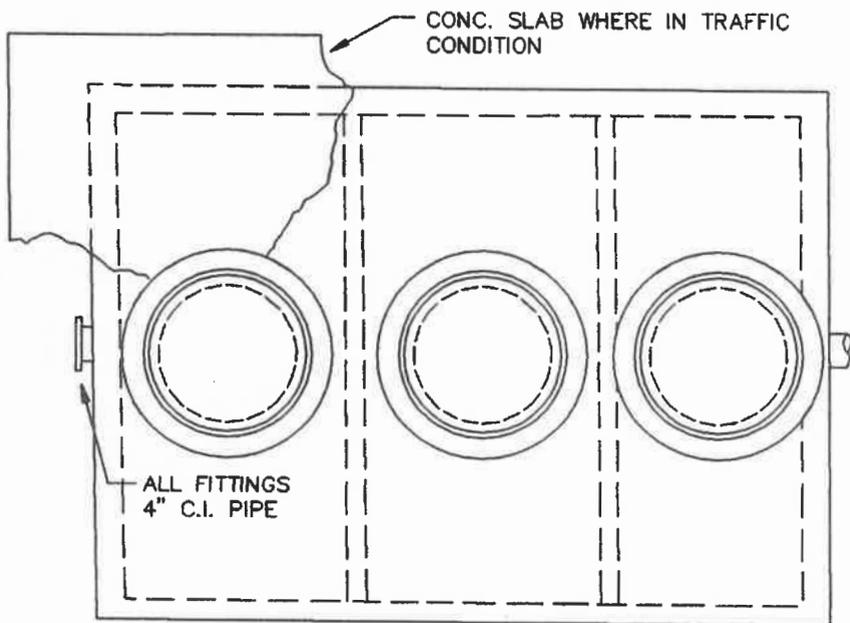
**STANDARD SEWER  
LINE TAPS**

*[Signature]*  
 MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS

DATE	5/1/95
SCALE	NONE
STANDARD DWG. #	6.11

DATE	REVISIONS

NOTE: TANK TO BE STENCILED ON UPPER LEFT-HAND CORNER OF INLET END IN WHITE

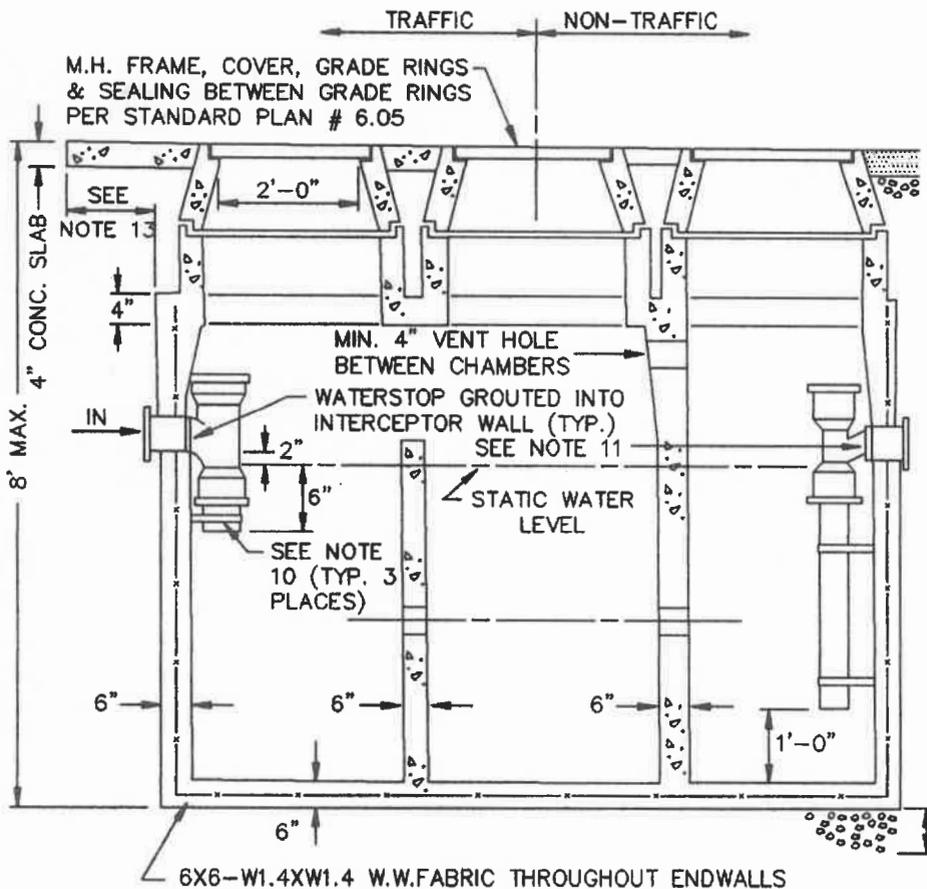


NOTE: ALL WASTE MUST ENTER THROUGH INLET FITTING ONLY

PLAN

NOTES:

1. TANK SHALL BE PRECAST AS MANUFACTURED BY:  
M.C. NOTTINGHAM  
PACIFIC CONCRETE PRODUCTS  
SELVAGE CONCRETE PRODUCTS  
OR CITY ENGINEER APPROVED EQUAL.
2. ALL GREASE INTERCEPTORS SHALL BE LOCATED OUTSIDE PUBLIC RIGHT-OF-WAY.
3. GREASE INTERCEPTORS SHALL BE LOCATED OUTSIDE OF BUILDINGS IN A LOCATION ACCESSIBLE TO WASTEHAULER PUMPER. LOCATION SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
4. ALTERNATE DESIGN BY A REGISTERED ENGINEER MAY BE SUBSTITUTED FOR REVIEW BY THE CITY ENGINEER.
5. PIPE SHALL BE 6" MAX. DIA. TYPE PER U.P.C.
6. EXCAVATION SHALL BE NEAT LINE TYPICALLY ALL SIDES.
7. HEIGHT OF TANK ABOVE FITTINGS VARIABLE. ONE FT. SECTIONS MAY BE ADDED TO REQUIRED FINISH GRADE.
8. ALL WYES SHALL BE ONE-WAY CLEAN OUT WYES, EXCEPT AS NOTED. TYPE PER U.P.C.
9. INTERCEPTOR TO BE USED IN CONJUNCTION WITH "METERING MANHOLE" PER STANDARD PLAN # 6.04
10. STAINLESS STEEL CLAMP AND BOLTS 3'-0" O.C. MAX. (TYP.) MIN. 2 REQ'D.
11. A WATERSTOP CONSISTING OF A STD. MANHOLE ADAPTER GASKET AS SUPPLIED BY THE PIPE MANUFACTURER SHALL BE GROUTED INTO THE INTERCEPTOR WALL NEAR THE CENTER OF THE WALL.
12. 12" MIN. BEDDING MATERIAL
13. SLAB TO EXTEND MIN. 24" BEYOND ALL SIDES OF TANK. (TRAFFIC AREA)
14. TANK CAPACITY TO BE DETERMINED AT TIME OF INDUSTRIAL WASTE PERMIT APPLICATION.
15. PIPE AND FITTINGS TO BE 4" SCHL. 40 PVC.



SECTION

MATERIAL SPECIFICATIONS

CONCRETE-MIN. COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.  
 REINFORCING BAR-INTERMEDIATE GRADE ASTM A615-62T & A305-56T  
 REINFORCING WIRE FABRIC ASTM A185-61T.

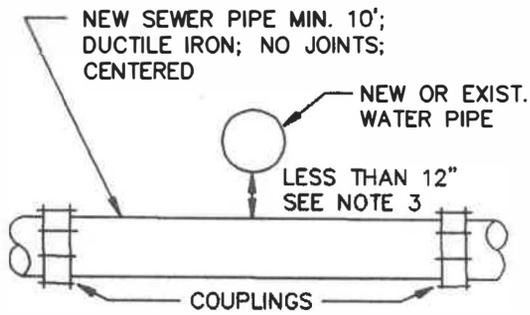


CITY OF AMERICAN CANYON

SAND & GREASE INTERCEPTOR

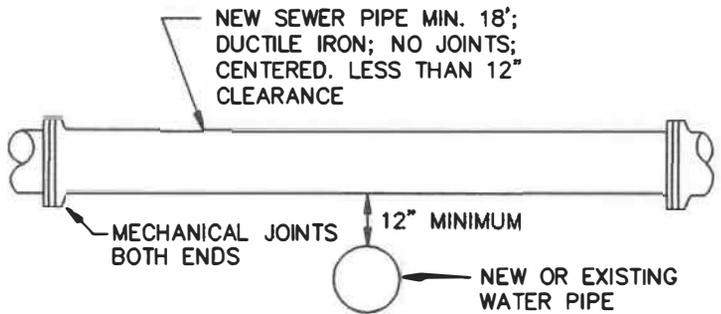
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 STANDARD DWG. # 6.12

DATE REVISIONS MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS



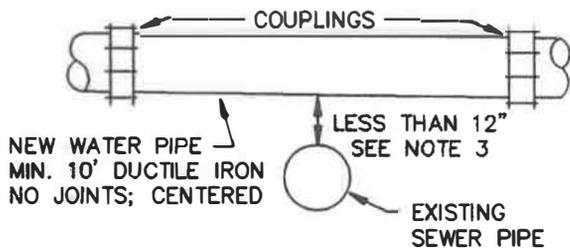
NEW SEWER UNDER  
NEW OR EXISTING WATER

CASE 1



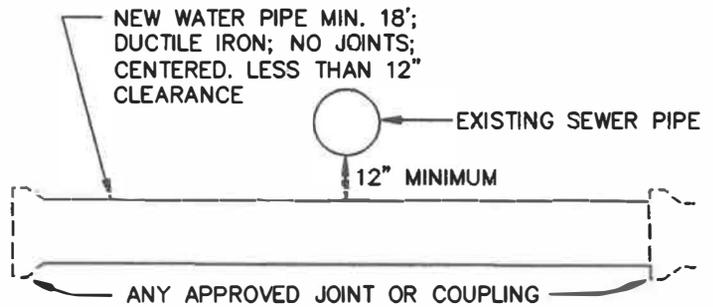
NEW SEWER OVER  
NEW OR EXISTING WATER

CASE 2



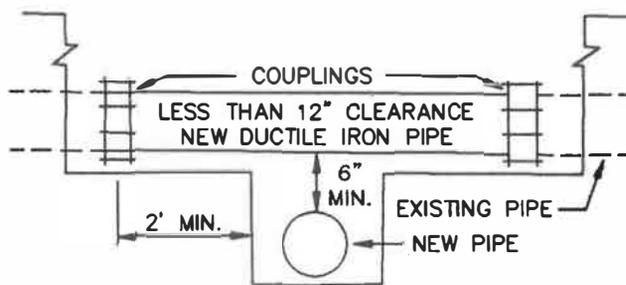
NEW WATER OVER  
EXISTING SEWER

CASE 3



NEW WATER UNDER  
EXISTING SEWER

CASE 4



NEW PIPE UNDER EXISTING

CASE 5

NOTES:

1. THIS STANDARD APPLIES TO PIPES UP TO AND INCLUDING 16" DIAMETER. ALL CROSSINGS OF LARGER DIAMETER SHALL BE AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
2. ALL NEW DUCTILE IRON SHALL BE WRAPPED IN POLYETHYLENE AND CADWELDED.
3. WHERE SEWER CROSSES BELOW A WATER MAIN, WITH 1' OR MORE VERTICAL CLEARANCE, NO SPECIAL INSTALLATION IS REQUIRED.
4. "NEW PIPE UNDER EXISTING - CASE 5" SHALL BE USED WHEN THE EXISTING PIPE HAS A JOINT OVER OR WITHIN 2' OF THE NEW TRENCH.
5. ANY PIPE-PIPE CROSSING WITH LESS THAN 6" VERTICAL CLEARANCE SHALL NOT BE INSTALLED.
6. FOR WATER MAIN LOWERING DETAIL, SEE STANDARD PLAN # 7.09



CITY OF AMERICAN CANYON

PIPE-PIPE  
CROSSING DETAILS

*[Signature]*  
MARK CLARKSON, P.E., DIRECTOR OF PUBLIC WORKS

DATE 5/1/95  
SCALE NONE  
STANDARD DWR: # 6.1 169

DATE REVISIONS



## **Appendix 6.0 – Sanitary Sewer Overflow Emergency Response Plan (OERP)**



# City of American Canyon

## Overflow Emergency Response Plan



Effective Date: \_\_\_\_\_

Revised Date: \_\_\_\_\_

Approved by: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Prepared by David Patzer, DKF Solutions Group  
(707) 373-9709 dpatzer@dkfsolutions.com

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# Sanitary Sewer Overflow Emergency Response Plan

## 1. Purpose

The purpose of the City of American Canyon's Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). The OERP provides guidelines for City personnel to follow in responding to, cleaning up, and reporting SSOs that may occur within the City's service area. This OERP satisfies the SWRCB Statewide General Waste Discharge Requirements (GWDR), which require wastewater collection agencies to have an Overflow Emergency Response Plan.

## 2. Policy

The City's employees are required to report all wastewater overflows found and to take the appropriate action to secure the wastewater overflow area, properly report to the appropriate regulatory agencies, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The City's goal is to respond to sewer system overflows as soon as possible following notification. The City will follow reporting procedures in regards to sewer spills as set forth by the San Francisco Regional Water Quality Control Board (*SFRWQCB*) and the California State Water Resources Control Board (*SWRCB*).

## 3. Definitions as Used in This OERP

**CALIFORNIA INTEGRATED WATER QUALITY SYSTEM (CIWQS):** Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system.

**FOG – Fats, Oils, and Grease:** Refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system.

**LEGALLY RESPONSIBLE OFFICIAL (LRO):** Refers to an individual who has the authority to certify reports and other actions that are submitted through CIWQS.

**MAINLINE SEWER:** Refers to City wastewater collection system piping that is not a private lateral connection to a user.

**MAINTENANCE HOLE OR MANHOLE:** Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

**MAJOR SPILL:** A spill of whatever size that, based on a reasonable assessment of the spill size, location, and potential impacts, is deemed to pose an imminent and substantial endangerment to public health or the environment.

**NOTIFICATION OF AN SSO:** Refers to the time at which the City becomes aware of an SSO event through observation or notification by the public or other source.

**NUISANCE** - California Water Code section 13050, subdivision (m), defines nuisance as anything that meets all of the following requirements:

- a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

- b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
- c. Occurs during, or as a result of, the treatment or disposal of wastes.

**PREVENTATIVE MAINTENANCE:** Refers to maintenance activities intended to prevent failures of the wastewater collection system facilities (e.g. cleaning, CCTV, inspection).

**PRIVATE LATERAL SEWAGE DISCHARGES** – Sewage discharges that are caused by blockages or other problems within a privately-owned lateral.

**SANITARY SEWER OVERFLOW (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

- (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
- (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
- (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

SSOs that include multiple appearance points resulting from a single cause will be considered one SSO for documentation and reporting purposes in CIWQS.

*NOTE: Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned are not SSOs.*

**SSO Categories:**

- Category 1: Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee’s sanitary sewer system failure or flow condition that:
  - Reach surface water and/or reach a drainage channel tributary to a surface water; or
  - Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
- Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:
  - Does not reach surface water, a drainage channel, or an MS4, or
  - The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.
- Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition.

**SANITARY SEWER SYSTEM:** Any publicly-owned system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to

the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

**SENSITIVE AREA:** Refers to areas where an SSO could result in a fish kill or pose an imminent or substantial danger to human health (e.g. parks, aquatic habitats, etc.)

**SEWER SERVICE LATERAL:** Refers to the piping that conveys sewage from the building to the City's wastewater collection system.

**UNTREATED OR PARTIALLY TREATED WASTEWATER:** Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

**WATERS OF THE STATE:** Waters of the State (or waters of the United States) means any surface water, including saline waters, within the boundaries of California. In case of a sewage spill, storm drains are considered to be waters of the State unless the sewage is completely contained and returned to the wastewater collection system and that portion of the storm drain is cleaned.

## 4. State Regulatory Requirements for Element 6, Overflow Emergency Response Plan

### GWDR Requirement

The collection system agency shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

- (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- (b) A program to ensure appropriate response to all overflows;
- (c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System (NPDES) permit requirements. The Sewer System Management Plan should identify the officials who will receive immediate notification;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (f) A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to Waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The Sewer System Management Plan and critical supporting documents are available to the public via submission of an electronic copy to the State Water Resources Control Board.

## 5. Goals

The City's goals with respect to responding to SSOs are:

- Work safely;

- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Prevent sewage system overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO;
- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to certain SSOs; and
- Revise response procedures resulting from the debrief and failure analysis of certain SSOs.

## 6. SSO Detection and Notification

*ref. SWRCB Order No. 2006-0003-DWQ D.13vi(a)*

The processes that are employed to notify the City of the occurrence of an SSO include: observation by the public, receipt of an alarm, or observation by City staff during the normal course of their work.

The City operates five wastewater lift stations. In the event of any pump failure, the high-level sensor activates the SCADA alarm system and the City is contacted. To prevent overflow, wastewater from the wet well can either be pumped into a vacuum truck for disposal to a nearby sanitary sewer manhole or bypassed around the station into the sanitary sewer system.

### 6.1 PUBLIC OBSERVATION

Public observation is the most common way that the City is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are in the phone book and on the City's website: <http://www.cityofamericancanyon.org>. The City's telephone number for reporting sewer problems is (707) 647-4550.

#### Normal Work Hours

When a report of a sewer spill or backup is made during normal work hours, the Public Works Administrative Technician receives the call. They will collect the caller's name, address, phone and nature of the service request on the Sewer Service Request Form. This information is forwarded to the Sewer Supervisor who will dispatch an available Maintenance Crew.

#### After Hours

After hours callers will hear a message directing them to an after-hours emergency number. This will ring to an answering service and they will notify the Standby Employee to respond.

The responding Maintenance Crew will investigate the sewer service request and report their findings and any actions taken back to the Sewer Supervisor. They will note the findings and actions taken on the Sewer Service Request Form and file it if it is not an SSO or attach to the SSO file if it is an SSO. The Maintenance Crew will complete the Sanitary Sewer Overflow/Backup Response Workbook if the service request is a Sanitary Sewer Overflow or Backup.

When calls are received, either during normal work hours or after hours, the individual receiving the call will collect the following information:

- Time and date of call
- Specific location of potential problem
- Nature of call
- In case of SSO, estimated start time of overflow
- Caller's name and telephone number

- Caller's observation (e.g., odor, duration, location on property, known impacts, indication if surface water impacted, appearance at cleanout or manhole)
- Other relevant information

If the overflow/backup is not in the City's service area they provide the customer with the contact information for the responsible agency, and then notify that agency.

## **6.2 CITY STAFF OBSERVATION**

City staff conducts periodic inspections of its sewer system facilities as part of their routine activities. Any problems noted with the sewer system facilities are reported to appropriate City staff that, in turn, responds to emergency situations. Work orders are issued to correct non-emergency conditions.

## **6.3 CONTRACTOR OBSERVATION**

The following procedures are to be followed in the event that a contractor/plumber causes or witnesses a Sanitary Sewer Overflow. If the contractor/plumber causes or witnesses an SSO they should:

1. Immediately notify the City.
2. Protect storm drains.
3. Protect the public.
4. Provide Information to the City Maintenance Crew such as start time, appearance point, suspected cause, weather conditions, etc.
5. Direct ALL media and public relations requests to the City Manager at (707) 647-5323, or the Public Works Director at (707) 647-4558.

## **6.4 NO OBSERVATION**

If there are no witnesses or no call was received for an SSO, the City staff will contact nearby residences or business owners in the vicinity of the SSO, in an attempt to obtain information that brackets a given start time that the SSO began. This information will be collected and placed with records for the specific SSO.

# **7. SSO Response Procedures**

*ref. SWRCB Order No. 2006-0003-DWQ D.13vi(b)*

## **7.1 Sewer Overflow/Backup Response Summary**

The City will respond to SSOs as soon as feasible following notification of an overflow/backup or unauthorized discharge.

If it is not possible that the overflow/backup is due to a failure in the City-owned/maintained sewer lines the Maintenance Crew performs the following:

- Follows the instructions in the Sanitary Sewer Overflow/Backup Response Workbook.
- If the customer is not home the Maintenance Crew completes the Door Hanger and leaves it on the customer's door.
- If the customer is home the Maintenance Crew:
  - Explains that the blockage is in the customer's lateral and the City does not have legal authority to maintain or perform work on privately owned laterals.
  - Recommends to the customer that they hire a contractor to clear their line.
  - Gives the customer the Sewer Spill Reference Guide pamphlet.

If it is possible that the overflow/backup is due to a failure in the City-owned/maintained sewer lines the Maintenance Crew:

- Follows the instructions in the Sanitary Sewer Overflow/Backup Workbook.
- Notifies Sewer Supervisor of the incident.
- Relieves blockage and cleans impacted areas.
- Forwards the completed Sanitary Sewer Overflow Workbook to the Sewer Supervisor.

The Sewer Supervisor or Public Works Superintendent performs required regulatory reporting in accordance with the Sanitary Sewer Overflow/Backup Workbook's Regulatory Reporting section.

If the overflow has impacted private property, the Maintenance Crew:

- Follows the instructions in the Sanitary Sewer Overflow/Backup Workbook.
- Provides the customer with forms and information as indicated in the Sanitary Sewer Overflow/Backup Workbook.
- Forwards the completed Sanitary Sewer Overflow/Backup Workbook to the Sewer Supervisor.

The Sewer Supervisor notifies the Risk Manager or designee of incident.

The City Attorney or designee:

- Reviews incident reports, claim form and other incident information and forwards, as appropriate, to:
  - York Risk Services Group
  - Attn: PLAN JPA Claims Team
  - 475 14th Street, Suite 600
  - Oakland, CA 94612
  - Tiffany Roudit, Claims Adjuster
  - Tiffany.Roudit@YorkRisk.com
  - (925) 349-3878 office
  - (925) 808-5072 cell
- Communicates with claimant as appropriate.
- Communicates with ABAG Plan to adjust and administer the claim to closure.

## 7.2 First Responder Priorities

The first responder's priorities are:

- To follow safe work practices.
- To respond promptly with the appropriate and necessary equipment.
- To contain the spill wherever feasible.
- To restore the flow as soon as practicable.
- To minimize public access to and/or contact with the spilled sewage.
- To promptly notify the Sewer Supervisor in event of major SSO.
- To return the spilled sewage to the sewer system.
- To restore the area to its original condition (or as close as possible).

### **7.3 Safety**

The first responder is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work. There may be times when City personnel responding to a sewer system event are not familiar with potential safety hazards peculiar to sewer work. In such cases it is appropriate to take the time to discuss safety issues, consider the order of work, and check safety equipment before starting the job.

### **7.4 Initial Response**

The first responder must respond to the reporting party/problem site and visually check for potential sewer stoppages or overflows.

The first responder will:

- Note arrival time at the site of the overflow/backup.
- Verify the existence of a public sewer system spill or backup.
- Take photos of overflowing manhole(s)/cleanout(s).
- Determine if the overflow or blockage is from a public or private sewer.
- Identify and assess the affected area and extent of spill.
- Contact caller if time permits.
- Document conditions upon arrival with photographs. Decide whether to proceed with clearing the blockage to restore the flow or to initiate containment measures. The guidance for this decision is:
  - Small spills (i.e., spills that are easily contained) – proceed with clearing the blockage.
  - Moderate or large spill where containment is anticipated to be simple – proceed with the containment measures.
  - Moderate or large spills where containment is anticipated to be difficult – proceed with clearing the blockage; however, whenever deemed necessary, call for additional assistance and implement containment measures.
- Take steps to contain the SSO. For procedures refer to the Sanitary Sewer Overflow/Backup Response Workbook.

### **7.5 Initiate Spill Containment Measures**

The first responder will attempt to contain as much of the spilled sewage as possible using the following steps:

- Determine the immediate destination of the overflowing sewage.
- Plug storm drains using air plugs, sandbags, and/or plastic mats to contain the spill, whenever appropriate. If spilled sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging downstream storm drainage facilities.
- Contain/direct the spilled sewage using dike/dam or sandbags.
- Pump around the blockage/pipe failure.

For procedures refer to the Sanitary Sewer Overflow/Backup Response Workbook.

## 7.6 Restore Flow

Using the appropriate cleaning equipment, set up downstream of the blockage and hydro-clean upstream from a clear manhole. Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not reoccur downstream. If the blockage cannot be cleared within a reasonable time from arrival, or sewer requires construction repairs to restore flow, then initiate containment and/or bypass pumping. If other assistance is required, immediately contact the Sewer Supervisor. For procedures refer to the Sanitary Sewer Overflow/Backup Response Workbook.

## 7.7 Equipment

This section provides a list of specialized equipment that is required to support this Overflow Emergency Response Plan.

- *Closed Circuit Television (CCTV) Inspection Unit* – A CCTV Inspection Unit is required to determine the root cause for all SSOs from gravity sewers.
- *Camera* -- A digital or disposable camera is required to record the conditions upon arrival, during clean up, and upon departure.
- *Emergency Response Trucks* -- A utility body pickup truck, or open bed is required to store and transport the equipment needed to effectively respond to sewer emergencies. The equipment and tools will include containment and clean up materials.
- *Portable Generators, Portable Pumps, Piping, and Hoses* – Equipment used to bypass pump, divert, or power equipment to mitigate an SSO.
- *Combination Sewer Cleaning Trucks* -- Combination high velocity sewer cleaning trucks with vacuum tanks are required to clear blockages in gravity sewers, vacuum spilled sewage, and wash down the impacted area following the SSO event.
- *Air plugs, sandbags and plastic mats*
- *SSO Sampling Kits*
- *Portable Lights*

Standard operating procedures for equipment that may be necessary in the event of a sanitary sewer overflow or backup can be found in the Corp Yard.

## 8. Recovery and Cleanup

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(e)

The recovery and cleanup phase begins immediately after the flow has been restored and the spilled sewage has been contained to the extent possible. The SSO recovery and cleanup procedures are:

### 8.1 Estimate the Flow and Volume of Spilled Sewage

To estimate the flow rate, crew members will use the SSCSC Manhole Overflow Gauge if the same style of manhole cover is observed overflowing. A variety of approaches exist for estimating the volume of a sanitary sewer spill. Crew members should use the method most appropriate to the sewer overflow in question and reference the Sanitary Sewer Overflow/Backup Response Workbook which provides three (3) methods:

- Eyeball Estimation Method
- Duration and Flow Rate Calculation Method
- Area/Volume Method

In addition, wherever and whenever possible, document the estimate using photos and/or video of the SSO site before and during the recovery operation.

### 8.2 Recovery of Spilled Sewage

Vacuum up and/or pump the spilled sewage and rinse water and discharge it back into the sanitary sewer system.

### 8.3 Clean-up and Disinfection

Clean up and disinfection procedures will be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and will be modified as required for wet weather conditions. Where cleanup is beyond the capabilities of City staff, a cleanup contractor will be used.

#### *Private Property*

City crews are responsible for the cleanup when the property damage is minor in nature and is outside of private building dwellings, such as in front, side and backyards, easements, etc. In all other cases, affected property owners can call a water damage restoration contractor to complete the cleanup and restoration. If the overflow into property is the definite cause of City system failure, the property owner can call out a water damage restoration contractor to complete the cleanup and restoration. In both cases, property owners may submit a City claim forms to the Risk Manager.

#### *Hard Surface Areas*

Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water and/or deozyme or similar non-toxic biodegradable surface disinfectant until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Take reasonable steps to contain and vacuum up the wastewater. Allow area to dry. Repeat the process if additional cleaning is required.

#### *Landscaped and Unimproved Natural Vegetation*

Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Either contain or vacuum up the wash water so that none is released. Allow the area to dry. Repeat the process if additional cleaning is required.

#### *Natural Waterways*

The Department of Fish and Wildlife will be notified by CalOES for SSOs greater than or equal to 1,000 gallons.

#### *Wet Weather Modifications*

Omit flushing and sampling during heavy storm events (i.e., sheet of rainwater across paved surfaces) with heavy runoff where flushing is not required and sampling would not provide meaningful results.

### **8.4 Public Notification**

Signs will be posted and barricades put in place to keep vehicles and pedestrians away from contact with spilled sewage. County Environmental Health instructions and directions regarding placement and language of public warnings will be followed. Additionally, the Sewer Supervisor will use their best judgment regarding supplemental sign placement in order to protect the public and local environment. Signs will not be removed until directed by County Environmental Health or the Sewer Supervisor.

Creeks, streams and beaches that have been contaminated as a result of an SSO will be posted at visible access locations until the risk of contamination has subsided to acceptable background bacteria levels. The area and warning signs, once posted, will be checked every day to ensure that they are still in place. Photographs of sign placement will be taken.

In the event that an overflow occurs at night, the location will be inspected first thing the following day. The field crew will look for any signs of sewage solids and sewage-related material that may warrant additional cleanup activities.

When contact with the local media is deemed necessary, the Public Works Director or the City Manager will provide the media with all relevant information.

## **9. Water Quality**

*ref. SWRCB Order No. 2006-0003-DWQ D.13vi(f)*

### **9.1 Water Quality Sampling and Testing**

Water quality sampling and testing will be performed for Category 1 SSOs whenever there is a major spill to determine the extent and impact of the SSO. The water quality sampling procedures must be implemented within 48 hours and include the following:

- The first responders will collect samples as soon as possible after the discovery and mitigation of the SSO event.

- The water quality samples will be collected from upstream of the spill, from the spill area, and downstream of the spill in flowing water (e.g. creeks). The water quality samples will be collected near the point of entry of the spilled sewage.
- The samples shall then be brought to CalTest Labs in Napa, California.

## 9.2 Water Quality Monitoring Plan

The City Water Quality Monitoring Plan will be implemented immediately upon discovery of any Category 1 SSO whenever there is a major spill in order to assess impacts from SSOs to surface waters. The SSO Water Quality Monitoring Program will:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, legal right to access, etc.)
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the City becoming aware of the SSO, require water quality sampling for fecal coliform, E. Coli, biochemical oxygen demand (BOD), and ammonia.
6. Observe proper chain of custody procedures.
7. If the City's current standard operating procedures (SOP's) cannot fully mitigate an SSO and if it is determined that the SSO may pose an imminent and substantial endangerment to public health or the environment, the City shall consult a qualified biologist, health care specialist or equivalent professional to assist.

## 9.3 SSO Technical Report

The City will submit an SSO Technical Report to the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any major SSO spilled to surface waters. The Sewer Supervisor will supervise the preparation of this report and will certify this report. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

### Causes and Circumstances of the SSO:

- Complete and detailed explanation of how and when the SSO was discovered.
- Diagram showing the SSO failure point, appearance point(s), and final destination(s).
- Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
- Detailed description of the cause(s) of the SSO.
- Copies of original field crew records used to document the SSO.
- Historical maintenance records for the failure location.

### City's Response to SSO:

- Chronological narrative description of all actions taken by the City to terminate the spill.
- Explanation of how the SSMP Overflow Emergency Response Plan was implemented to

respond to and mitigate the SSO.

- Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

Water Quality Monitoring:

- Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
- Detailed location map illustrating all water quality sampling points.

## **10. Sewer Backup Into/Onto Private Property Claims Handling Policy**

It is the policy of the City that a claim form shall be offered to anyone wishing to file a claim. The following procedures will be observed for all sewer overflows/backups into/onto private property:

- City staff will offer a City claim form irrespective of fault whenever it is possible that the sanitary sewer backup may have resulted from an apparent blockage in the City-owned sewer lines or whenever a City customer requests a claim form. The claim may later be rejected if subsequent investigations into the cause of the loss indicate the City was not at fault.
- It is the responsibility of the Maintenance Crew to gather information regarding the incident and notify the Sewer Supervisor or his/her designee.
- It is the responsibility of the Risk Manager or their designee to review all claims and to oversee the adjustment and administration of the claim to closure.

## **11. Notification, Reporting, Monitoring and Recordkeeping Requirements**

*ref. SWRCB Order No. 2006-0003-DWQ D.13vi(c)*

In accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS GWDRs), the City of American Canyon maintains records for each sanitary sewer overflow. Records include:

- Documentation of response steps and/or remedial actions
- Photographic evidence to document the extent of the SSO, field crew response operations, and site conditions after field crew SSO response operations have been completed. The date, time, location, and direction of photographs taken will be documented.
- Documentation of how any estimations of the volume of discharged and/or recovered volumes were calculated including all assumptions made.
- Regulator required notifications are outlined in Section 11.1 on the following page.

## 11.1 Regulator Required Notifications

ELEMENT	REQUIREMENT	METHOD
<b>NOTIFICATION</b>	Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, the City will notify the California Office of Emergency Services (CalOES) and obtain a notification control number.	Call Cal OES at: <b>(800) 852-7550</b>
<b>REPORTING</b>	<ul style="list-style-type: none"> <li>• Category 1 SSO: The City will submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.</li> <li>• Category 2 SSO: The City will submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.</li> <li>• Category 3 SSO: The City will submit certified report within 30 calendar days of the end of month in which SSO the occurred.</li> <li>• SSO Technical Report: The City will submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters.</li> <li>• “No Spill” Certification: The City will certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.</li> <li>• Collection System Questionnaire: The City will update and certify every 12 months</li> </ul>	Enter data into the CIWQS Online SSO Database <sup>1</sup> ( <a href="http://ciwqs.waterboards.ca.gov/">http://ciwqs.waterboards.ca.gov/</a> ) certified by the Legally Responsible Official(s) <sup>2</sup> . All information required by CIWQS will be captured in the Sanitary Sewer Overflow Report. Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the State SSO Program Manager must be contacted to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days.
<b>WATER QUALITY MONITORING</b>	The City will conduct water quality sampling within 48 hours after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results will be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
<b>RECORD KEEPING</b>	The City will maintain the following records: <ul style="list-style-type: none"> <li>• SSO event records.</li> <li>• Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP.</li> <li>• Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters.</li> <li>• Collection system telemetry records if relied upon to document and/or estimate SSO Volume.</li> </ul>	Self-maintained records shall be available during inspections or upon request.

<sup>1</sup> In the event that the CIWQS online SSO database is not available, the Sewer Supervisor will notify SWRCB by phone and will fax or e-mail all required information to the RWQCB office at (510) 622-2460 in accordance with the time schedules identified above. In such an event, the City will submit the appropriate reports using the CIWQS online SSO database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the SSO file.

<sup>2</sup> The City always has at least one LRO. Any change in the LRO(s) including deactivation or a change to contact information, will be submitted to the SWRCB within 30 days of the change by calling (866) 792-4977 or emailing [help@ciwqs.waterboards.ca.gov](mailto:help@ciwqs.waterboards.ca.gov).

For reporting purposes, if one SSO event of whatever category results in multiple appearance points in a sewer system, a single SSO report is required in CIWQS that includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that cause the SSO, and descriptions of the locations of all other discharge points associated with the single SSO event.

## **11.2 Complaint Records**

The City maintains records of all complaints received whether or not they result in sanitary sewer overflows. These complaint records include:

- Date, time, and method of notification
- Date and time the complainant or informant first noticed the SSO or occurrence related to the call
- Narrative description describing the complaint
- A statement from the complainant or informant, if they know, of whether or not the potential SSO may have reached waters of the state
- Name, address, and contact telephone number of the complainant or informant reporting the potential SSO (if not reported anonymously)
- Follow-up return contact information for each complaint received (if not reported anonymously)
- Final resolution of the complaint with the original complainant
- Work service request information used to document all feasible and remedial actions taken

All complaint records will be maintained for a minimum of five years whether or not they result in an SSO. SSO records are stored at the Corp Yard.

## **12. Post SSO Event Debriefing**

*ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)*

Every SSO event is an opportunity to evaluate the City response and reporting procedures. Each overflow event is unique, with its own elements and challenges including volume, cause, location, terrain, climate, and other parameters.

As soon as possible after Category 1 and Category 2 SSO events all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss what worked and where improvements could be made in preventing or responding to and mitigating future SSO events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

## **13. Failure Analysis Investigation**

*ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)*

The objective of the failure analysis investigation is to determine the “root cause” of the SSO and to identify corrective action(s) needed that will reduce or eliminate future potential for the SSO to recur or for other SSOs to occur.

The investigation will include reviewing all relevant data to determine appropriate corrective action(s) for the line segment. The investigation will include:

- Reviewing and completing the Sanitary Sewer Overflow Report and any other documents related to the incident
- Reviewing the incident timeline and other documentation regarding the incident
- Reviewing communications with the reporting party and witness
- Reviewing volume estimate, volume recovered estimate, volume estimation assumptions and associated drawings
- Reviewing available photographs
- Interviewing staff that responded to the spill
- Reviewing past maintenance records
- Reviewing past CCTV records,
- Conducting a CCTV inspection to determine the condition of all line segments immediately following the SSO and reviewing the video and logs,
- Reviewing any Fats, Oils and Grease (FOG) related information or results
- Post SSO debrief records
- Interviews with the public at the SSO location

The product of the failure analysis investigation will be the determination of the root cause and the identification and scheduling of the corrective actions. The Collection System Failure Analysis Form (in Sanitary Sewer Overflow/Backup Response Workbook) will be used to document the investigation.

## 14. SSO Response Training

*ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)*

This section provides information on the training that is required to support this Overflow Emergency Response Plan.

### 14.1 Initial and Annual Refresher Training

All City personnel who may have a role in responding to, reporting, and/or mitigating a sewer system overflow will receive training on the contents of this OERP. All new employees will receive training before they are placed in a position where they may have to respond. Current employees will receive annual refresher training on this plan and the procedures to be followed. The City will document all training.

Affected employees will receive annual training on the following topics by knowledgeable trainers:

- The City's Overflow Emergency Response Plan and Sanitary Sewer Management Plan
- Sanitary Sewer Overflow Volume Estimation Techniques
- Researching and documenting Sanitary Sewer Overflow Start Times
- Impacted Surface Waters: Response Procedures
- State Water Resources Control Board Employee Knowledge Expectations
- Employee Core Competency Evaluations on Sanitary Sewer Operations
- Water Quality Sampling Plan

The City will verify that annual safety training requirements are current for each employee, and that employees are competent in the performance of all core competencies. This will be verified through electronic testing, interviews and observations. The City will address, through additional training/instruction, any identified gaps in required core competencies.

Through SWRCB Employee Knowledge Expectations training the employee will be able to answer the following:

1. Please briefly describe your name and job title.

2. Please describe for us approximately when you started in this field and how long you have worked for your agency.
3. Please expand on your current position duties and role in responding in the field to any SSO complaints.
4. Please describe your SOPs used to respond/mitigate SSOs when they occur.
5. Describe any training your agency provides or sends you to for conducting spill volume estimates.
6. We are interested in learning more about how your historical SSO response activities have worked in the field. We understand from discussions with management earlier that you use the OERP from the SSMP. Please elaborate on how you implement and utilize the procedures in the plan.
7. Historically, before any recent changes, can you please walk us through how you would typically receive and respond to any SSO complaints in the field?
8. Can you tell us who is responsible for estimating SSO volumes discharged? If it is you, please describe how you go about estimating the SSO volume that you record on the work order/service request forms?
9. What other information do you collect or record other than what is written on the work order form?
10. Describe if and when you ever talk with people that call in SSOs (either onsite or via telephone) to further check out when the SSO might have occurred based on what they or others know? If you do this, can you tell us where this information is recorded?
11. We understand you may be instructed to take pictures of some sewer spills/backups into structures. Other than these SSOs, when else would you typically take any pictures of an SSO?
12. Please walk us through anything else you'd like to add to help us better understand how your field crews respond and mitigate SSO complaints.

#### **14.2 SSO Response Drills**

Periodic training drills or field exercises will be held to ensure that employees are up to date on these procedures, equipment is in working order, and the required materials are readily available. The training drills will cover scenarios typically observed during sewer related emergencies (e.g. mainline blockage, mainline failure, and lateral blockage). The results and the observations during the drills will be recorded and action items will be tracked to ensure completion.

#### **14.3 SSO Training Record Keeping**

Records will be kept of all training that is provided in support of this plan. The records for all scheduled training courses and for each overflow emergency response training event will include date, time, place, content, name of trainer(s), and names and titles of attendees.

#### **14.4 Contractors Working On City Sewer Facilities**

All construction contractors working on City sewer facilities will be required to develop a project-specific OERP, will provide project personnel with training regarding the content of the contractor's OERP and their role in the event of an SSO, and to follow that OERP in the event that they cause or observe an SSO. Emergency response procedures shall be discussed at project pre-construction meetings, regular project meetings and after any contractor involved incidents.

All service contractors will be provided, and required to observe contractor procedures.

## **15. Authority**

- Health & Safety Code Sections 5410-5416
- CA Water Code Section 13271
- Fish & Wildlife Code Sections 5650-5656
- State Water Resources Control Board Order No. 2006-0003-DWQ
- State Water Resources Control Board Order No. WQ 2013-0058-EXEC effective September 9, 2013

## **16. Appendices**

- Appendix A: Receiving A Sanitary Sewer Service Call Report
- Appendix B: Private Lateral Sewage Discharge Information (Pamphlet)
- Appendix C: Door Hanger
- Appendix D: Sanitary Sewer Overflow/Backup Response Workbook

APPENDIX A:  
Sanitary Sewer Service Call Report

## Sanitary Sewer Service Call Report

Sewer     Storm     Street

**EMERGENCY RESPONSE NEEDED?**    YES    NO     Residence    Commercial    Industrial

### NOTIFICATION:

Date: \_\_\_\_\_

Time: \_\_\_\_\_  AM    PM

Method:    Telephone    Email    Other: \_\_\_\_\_

Call Taken By: \_\_\_\_\_

On-Call Person Notified: \_\_\_\_\_ Time Called: \_\_\_\_\_:\_\_\_\_\_

### REPORTING PARTY (check here if reported anonymously )

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

### REPORTED COMPLAINT

When did the complainant first notice the SSO? Date: \_\_\_\_\_ Time: \_\_\_\_\_  AM    PM

Did the SSO reach Waters of the State?  Yes    No    Unknown

Did the SSO Backup into a structure?  Yes    No    Unknown

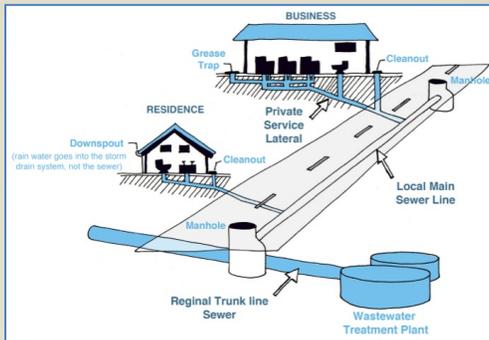
Description of the complaint:

### RESOLUTION OF THE COMPLAINT:

APPENDIX B:  
Private Lateral Sewage Discharge Information

## How a Sewer System Works

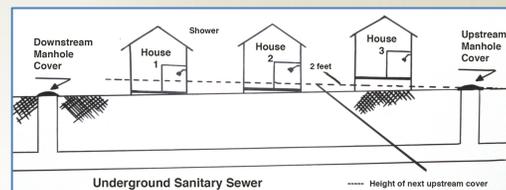
A property owner's sewer pipes are called **service laterals** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.



## Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: "Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping **shall** be protected from backflow of sewage by installing an approved type of backwater valve." The intent of Section 710.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 710.6 states: "Backwater valves **shall** be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover."



**If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:**

**City of American Canyon  
(707) 647-4550**

**Discharge of untreated or partially treated sewage is prohibited by law. If you would like more information on this prohibition, please contact any of the following:**

**Napa County Health Department  
(707) 253-4471**

California Health and Safety Code, Sections 5410-5416 requires:

- No person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or a nuisance.
- Any person who causes or permits a sewage discharge to any state waters:
  - Must immediately notify the local health agency of the discharge.
  - Shall reimburse the local health agency for services that protect the public's health and safety.
  - Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by a fine (between \$500-\$1,000) and/or imprisonment for less than one year.

**San Francisco Regional  
Water Quality Control Board:  
(510) 622-2300**

Requires the prevention, mitigation, response to, and reporting of sewage spills.

**California Governor's Office of Emergency  
Services (CalOES): (800) 852-7550**

California Water Code, Article 4, Chapter 4, Sections 13268-13271 & California Code of Regulations, Title 23, Division 3, Chapter 9.2, Article 2, Sections 2250-2260 require:

- Any person who causes or permits sewage in excess of 1,000 gallons to be discharged to state waters shall immediately notify the Office of Emergency Services.
- Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine (less than \$20,000) and/or imprisonment for not more than one year.

## Sewer Spill Reference Guide



## Your Responsibilities as a Private Property Owner

Provided to you by:

### City of American Canyon

205 Wetlands Edge Road  
American Canyon CA 94503  
(707) 647-4550

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### How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches.

### CAUTION!

**When trying to locate a sewer problem, never open manholes or other public sewer structures. Only our crews are allowed to open & inspect these structures.**

**Call for assistance: (707) 647-4550**

### Common causes of sewage spills

- Grease build-up
- Tree roots
- Broken/cracked pipes
- Missing or broken cleanout caps
- Undersized sewers
- Groundwater/rainwater entering the sewer system through pipe defects and illegal connections

### Prevent most sewage backups with a Backflow Prevention Device

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

### Protect the environment!

If you let sewage from your property discharge to a gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. A property owner may be charged for costs incurred by agencies responding to spills from private properties.

### What to look for:

Sewage spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don't dismiss unaccounted-for wet areas. Look for:

- Drain backups inside the building.
- Wet ground and/or water leaking around manhole lids onto your street.
- Leaking water from cleanouts or outside drains
- Unusual odorous wet areas: sidewalks, external walls, ground/landscape around a building.

The following are indicators of a possible obstruction in your sewer line:

- Water comes up in floor drains, showers or toilets.
- Toilets, showers or floor drains below ground level drain very slowly.

### What to do if there is a spill:

Immediately notify the City of American Canyon. Our crews locate the blockage and determine if it is in the public sewer; if it is the crew removes the blockage and arranges for cleanup.

If the backup is in your private internal plumbing or in the private service laterals, you are required to immediately:

- Control and minimize the spill by shutting off or not using the water
- Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
- Call a plumbing professional to clear blockages and make repairs as needed. Look in the yellow pages under "Plumbing Drain & Sewer Cleaning" or "Sewer Contractors."
- Always notify your sewer/public works department or public sewer district of sewage spills.

### Spill cleanup inside the home:

For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas. If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean up.

### Other Tips:

- Keep children and pets out of the affected area until cleanup has been completed.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.

- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured or ill.

### Spill cleanup outside the home:

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solution, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured/ill.

APPENDIX C:  
Door Hanger

**City of American Canyon**

On (date) \_\_\_\_\_, at (location) \_\_\_\_\_,

we responded to a reported blockage of the sanitary sewer service to your property.

We discovered a blockage in:

- The sanitary sewer main and cleared the line
- Your sanitary sewer lateral, which is your responsibility to maintain.

If you require assistance to clear your portion of the lateral you can search for "Sewer Contractors" or "Plumbing Drains & Sewer Cleaning". If you plan to hire a contractor, we recommend getting estimates from more than one company.

American Canyon representative notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

American Canyon representative: \_\_\_\_\_  
\_\_\_\_\_

**For questions or comments, please call**

**City of American Canyon  
(707) 647-4550**

**City of American Canyon**

On (date) \_\_\_\_\_, at (location) \_\_\_\_\_,

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We discovered a blockage in:

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- Your sanitary sewer lateral, which is your responsibility to maintain.

If you require assistance to clear your portion of the lateral you can search for "Sewer Contractors" or "Plumbing Drains & Sewer Cleaning". If you plan to hire a contractor, we recommend getting estimates from more than one company.

American Canyon representative notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

American Canyon representative: \_\_\_\_\_  
\_\_\_\_\_

**For questions or comments, please call**

**City of American Canyon  
(707) 647-4550**

APPENDIX D:  
Sanitary Sewer Overflow/Backup Response Workbook



## Overflow Emergency Response Plan

# Sanitary Sewer Overflow and Backup Response Workbook

**Sanitary Sewer Overflow/Backup Response Workbook**

- If this is a Category 1 SSO greater than or equal to 1,000 gallons, **immediately contact the Sewer Supervisor at (707) 647-5330 or the Public Works Superintendent** to make the 2-hour notification to CalOES.
- Refer to the Regulatory Reporting Guide** for additional reporting requirements.
- If there is a backup into a residence or business:** Immediately contact Tiffany Roduit, Claims Specialist at York Risk Services Group/PLAN JPA Claims Team at (925) 349-3878 telephone or (925) 808-5072 cell. If you do not receive a call back within 30 minutes, call Alex Davis, Claims Supervisor at (925) 349-3890 telephone or (925) 349-3890 cell
- To have water samples analyzed:** CalTest Labs, 1885 N. Kelly Road, Capa CA 94558 (707) 258-4000
- For any media inquiries/requests:** City Manager (707) 647-5323 or Public Works Director (707) 647-4558



Don't forget to take photos!

<p><b>Maintenance Crew:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Follow the instructions on the Overflow/Backup Response Flowchart and complete forms in this workbook as indicated.</li> <li><input type="checkbox"/> Complete the chain of custody record (to the right) and deliver this workbook to the Sewer Supervisor.</li> </ul>	<p>Print Name: _____</p> <p>Initial: _____</p> <p>Date: _____</p> <p>Time: _____</p>
---	--

<p><b>Sewer Supervisor:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Review the SSO Event Checklist and the forms in this booklet. Contact the Maintenance Crew for additional information if necessary.</li> <li><input type="checkbox"/> Complete the Collection System Failure Analysis Form.</li> <li><input type="checkbox"/> Enter data into CIWQS.</li> <li><input type="checkbox"/> Complete the Chain of Custody record (right) and file this booklet</li> </ul>	<p>Print Name: _____</p> <p>Initial: _____</p> <p>Date: _____</p> <p>Time: _____</p>
--	--

City of American Canyon Overflow Emergency Response Plan  
**SSO Event Checklist**

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Date of SSO: \_\_\_\_\_ SSO Location/Name: \_\_\_\_\_

CIWQS Event ID #: \_\_\_\_\_ Category?  1  2  3 OES#: \_\_\_\_\_

Property Damage?  Yes  No Service Request #: \_\_\_\_\_

- Effort made to contain and return a portion/all to the sanitary sewer
- Pictures/video taken of overflow
- Pictures taken of affected/unaffected area
- If property damage, start that process
- Pictures taken of containment efforts
- If Cat 1 > 1000 gals:  
OES Control # \_\_\_\_\_
- Impacted waters identified?
- No impacted waters?
- SSO Report Form Complete (includes fields for all required fields in CIWQS, and a sketch of SSO)
- Volume Estimation Worksheet(s) done
- Start Time Determination Form done
- Initial review of forms is complete (ensure consistency with dates, times, volumes, and other data)
- Review of photos and videos (label/date)
- Start Folder for all documentation for this SSO event. Put everything in it (SR, Field Reports, Worksheets/Forms, follow-up work orders, notes, pics, drawings, etc. CIWQS print outs and emails)
- Failure Analysis
  - TV to determine cause
  - Review Asset History
- Determine next steps to prevent recurrence
- Document findings and next steps on SSO Report
- Submit Draft in CIWQS w/in 3 business days (for Categories 1 and 2 only)
- Print CIWQS Draft hard copy and email
- Review CIWQS, SSO Report, Worksheets, CMMS, and any other documentation to ensure data is consistent (e.g. dates, times, volumes, cause, follow-up action, etc.)
- Attach photos, forms etc. to CIWQS
- Submit Ready to Certify in CIWQS (with sufficient time for LRO review)
- Print CIWQS Ready to Certify and email
- Hand folder to LRO
- LRO review folder and CIWQS verify accurate and consistent data
- Certify in CIWQS (within 15 calendar days for Categories 1 & 2, 30 days after the month for Category 3)
- Print Certified CIWQS and email
- Any changes? Change in CIWQS and hard copies and explain changes, print our current version
- Move completed folder to SSO Binder
- For 50, 000 gallons or larger
- Follow Water Quality Monitoring and Sampling procedures
- Map of where samples were taken
- Sampling results
- Write Technical Report
- Attach to CIWQS
- Add to SSO Folder/Binder
- If any changes are made to SSMP
- Update SSMP and link on CIWQS to SSMP
- Add change to SSMP Change Log
- If change is substantive, re-certify SSMP

INSERT TAB:  
Regulatory Reporting

Deadline	Category 1 SSO	Category 2 SSO	Category 3 SSO
2 hours after awareness of SSO	If the spill is greater than or equal to 1,000 gallons, call CalOES.	-	-
As soon as possible	If SSO impacts private property that may be a failure of the sewer main and/or if a claim for damages may be submitted against the city, notify PLAN JPA.		
48 Hours after awareness of SSO	If 50,000 gal or more were not recovered, begin water quality sampling.	-	-
3 Business Days after awareness of SSO	Submit Draft Spill Report in the CIWQS database.	Submit Draft Spill Report in the CIWQS database.	-
15 Days after response conclusion	Certify Spill Report in CIWQS. Update as needed until 120 days after SSO end date.	Certify Spill Report in the CIWQS database. Update as needed until 120 days after SSO end time.	-
30 Days after end of calendar month in which SSO occurred	-	-	Certify Spill Report in CIWQS. Update as needed until 120 days after SSO end date.
45 days after SSO end date	If 50,000 gal or more were not recovered, submit SSO Technical Report in CIWQS.	-	-

**Note:** For reporting purposes, if one SSO event results in multiple appearance points, complete one SSO report in the CIWQS SSO Online Database, and report the location of the SSO failure point, blockage or location of the flow condition that caused the SSO, including all the discharge points associated with the SSO event.

Category	Definition
1	Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that: <ul style="list-style-type: none"> <li>- Reach surface water and/or reach a drainage channel tributary to a surface water; or</li> <li>- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly.</li> </ul> Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
2	Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.
Private Lateral Sewage Discharge (PLSD)	Discharges of untreated or partially treated wastewater resulting from blockages or other problems <b>within a privately-owned sewer lateral</b> connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be <b>voluntarily</b> reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

**Authorized Personnel:**

The following are authorized to perform regulatory reporting of SSOs:

- Public Works Superintendent
- Public Works Supervisors

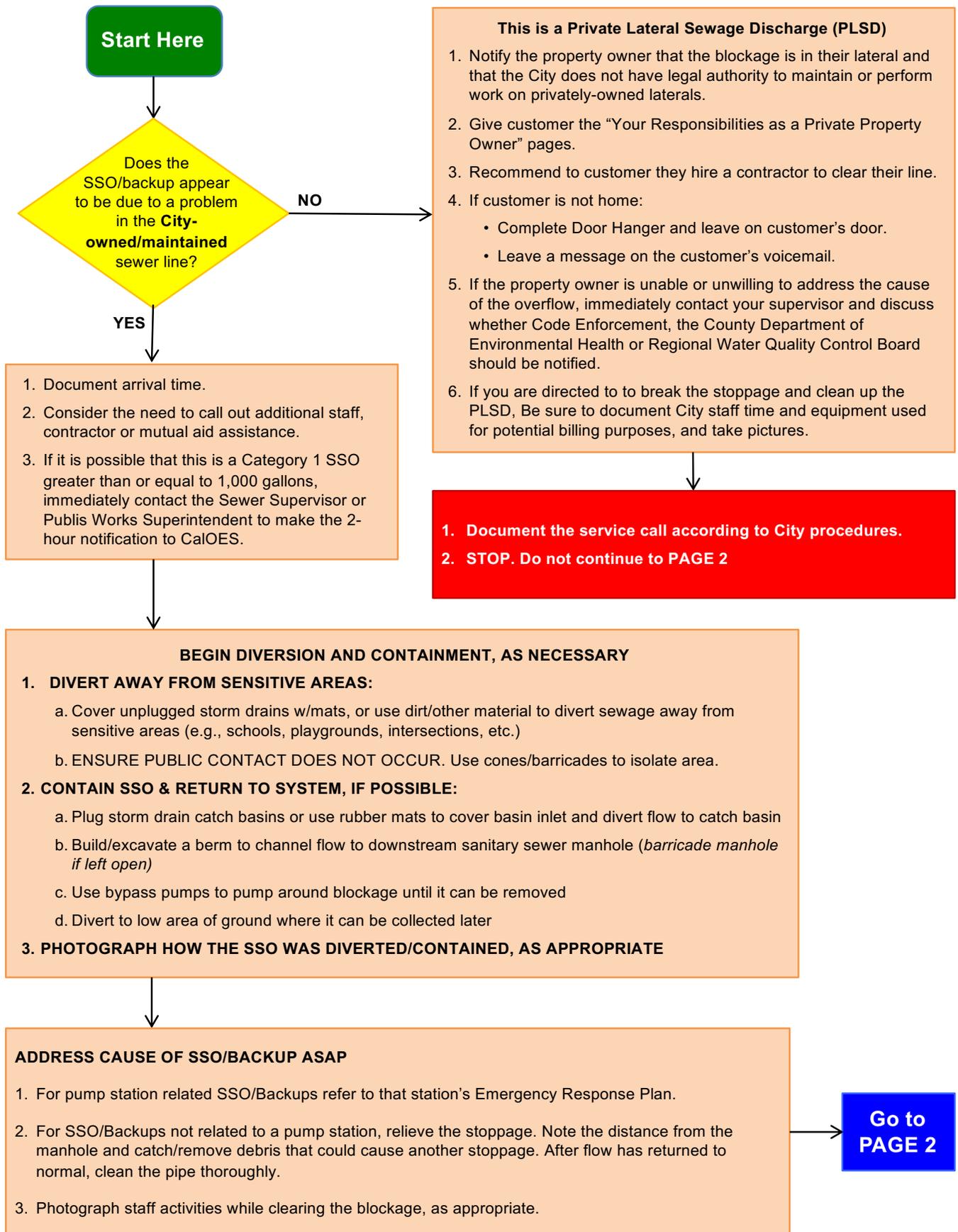
The City’s Legally Responsible Officials (LROs) are authorized to electronically sign and certify SSO reports in CIWQS.

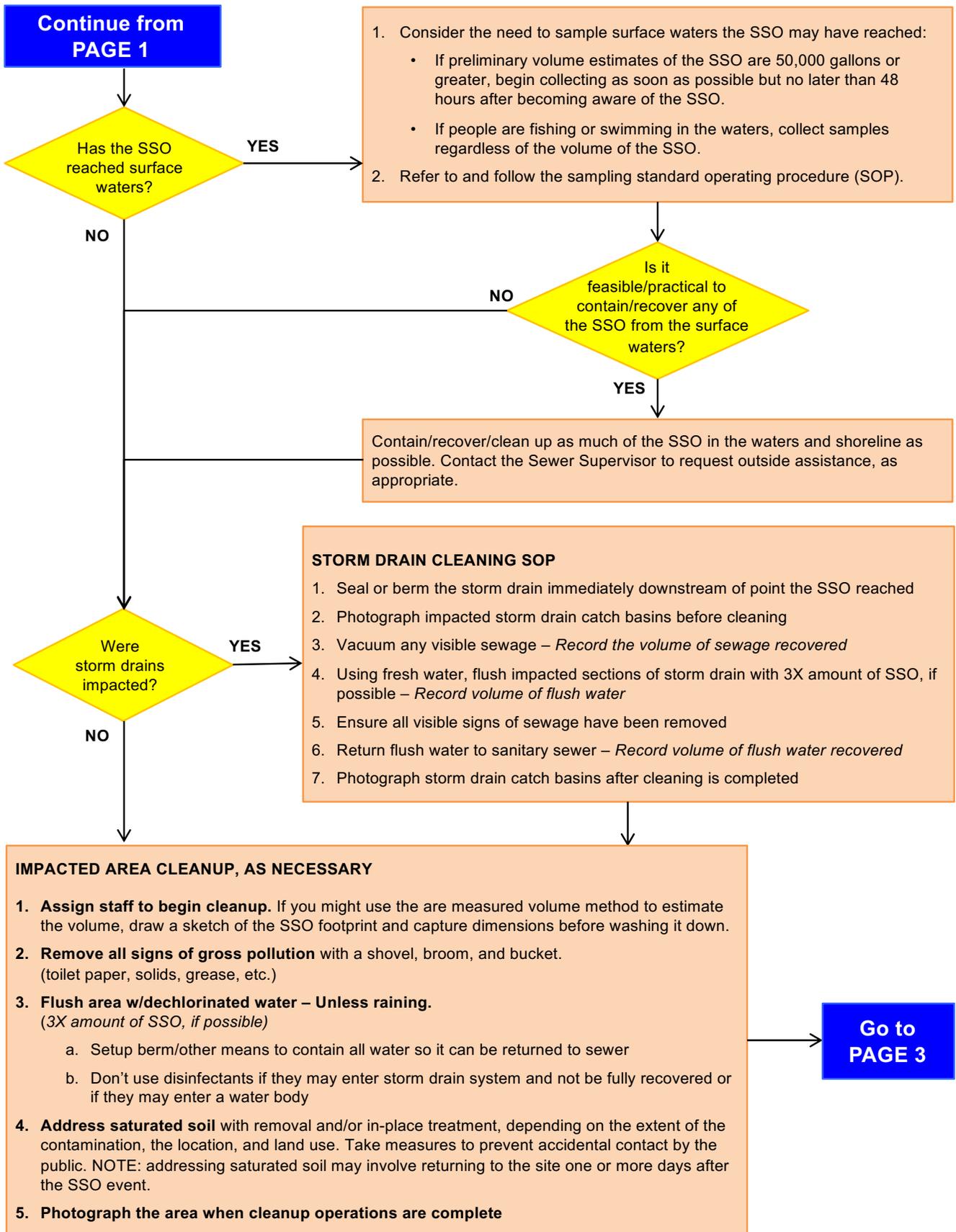
- Primary LRO: Public Works Director
- Secondary LRO: Jason Holley, City Manager

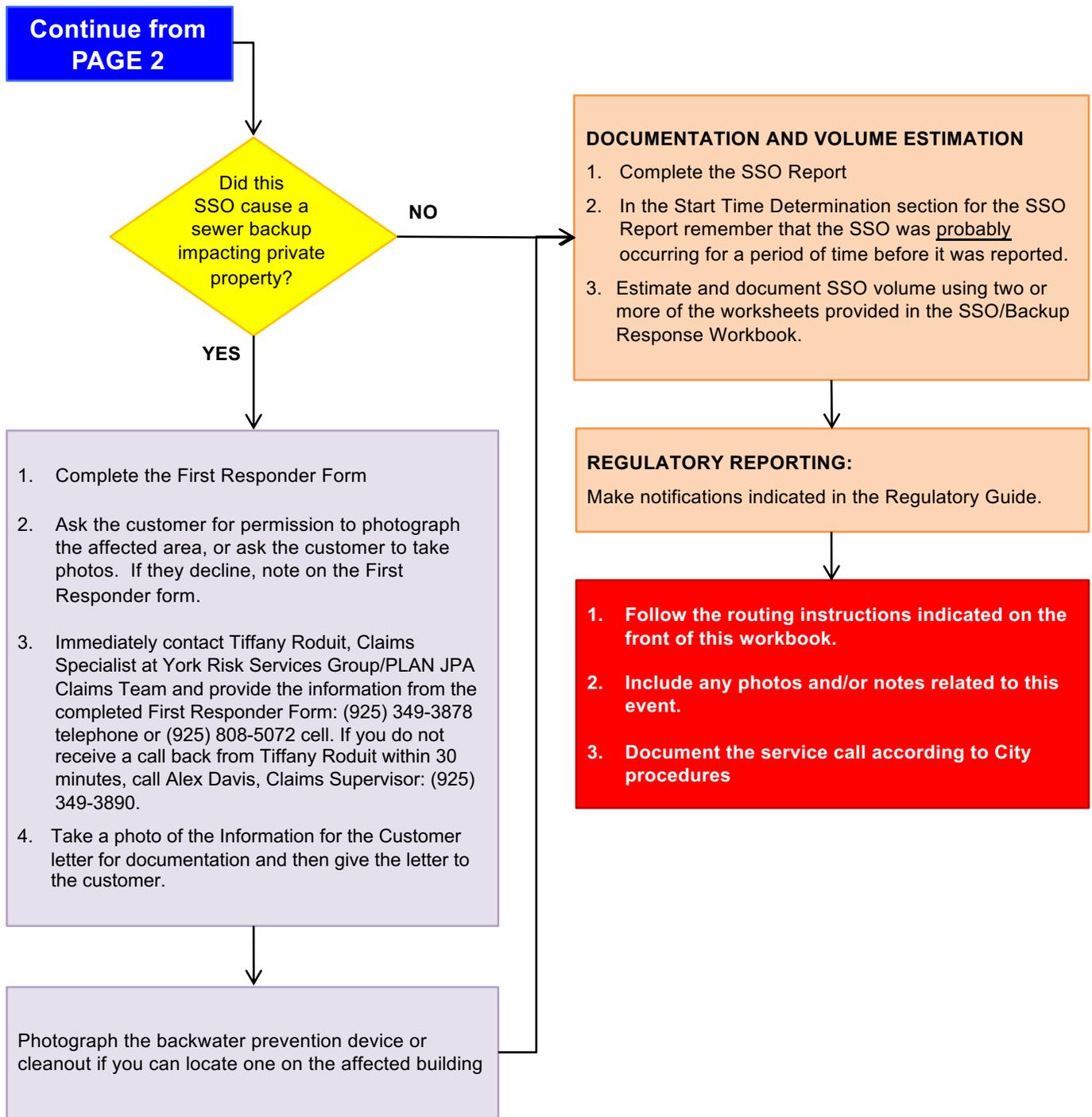
Contact	Telephone/Email
<b>CAL OES</b>	<b>(800) 852-7550</b>
<b>York Risk Services Group/PLAN JPA Claims Team</b>	<b>Tiffany Roudit, Claims Specialist</b> <b>Office: (925) 349-3878</b> <b>Cell: (925) 808-5072 cell</b>  <b>Alex Davis, Claims Supervisor</b> <b>(925) 349-3890</b>
<b>CalTest Labs</b>	<b>Phone: (707) 258-4000</b> <b>Address: 1885 N Kelly Road, Napa, CA 94558</b>
<b>San Francisco Regional Water Quality Control Board</b>	<b>Phone: (510) 622-2300</b> <b>Fax: (510) 622-2460</b>
<b>State Water Resources Control Board Armando Martinez</b>	<b>(916) 341-5586</b> <b>Armando.Martinez@waterboards.ca.gov</b>

<b>NOTIFICATIONS</b>	
<b>CAL OES (800) 852-7550</b>	
Notification Date/Time:	
Name of Who You Spoke To:	
OES Control Number:	
<b>Napa County Health Department (707) 253-4471</b>	
Notification Date/Time:	
Name of Who You Spoke To:	
Left Message: <input type="checkbox"/>	
<b>CalTest Labs (707) 258-4000</b>	
Notification Date/Time:	
Name of Who You Spoke To:	
Left Message: <input type="checkbox"/>	
<b>York Risk Services Group/PLAN JPA Claims Team</b>	
<ul style="list-style-type: none"> <li>• Tiffany Roduit, Claims Specialist (925) 349-3878 or (925) 808-5072 cell</li> <li>• Alex Davis, Claims Supervisor: (925) 349-3890</li> </ul>	
Notification Date/Time:	
Name of Who You Spoke To:	
Left Message: <input type="checkbox"/>	

INSERT TAB:  
Flowchart







INSERT TAB:  
SSO Report

<b>PHYSICAL LOCATION DETAILS</b>		
Spill location name		
Latitude of spill location		
Longitude of spill location		
County		
Regional Water Quality Control Board		
<b>VOLUMES BY DESTINATION</b>	<b>Volume Spilled (Gallons)</b>	<b>Volume Recovered (Gallons)</b>
2.a/2.b Estimated spill volume that reached a separate storm drain that flows to a surface body of water? (If not all recovered, this is a Category 1)		
2.c/2d Estimated spill volume that directly reached a drainage channel that flows to a surface water body? (Any volume spilled is a Category 1)		
2.e/2.f Estimated spill volume discharged directly to a surface water body? (Any volume spilled is a Category 1)		
2.g/2.h Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location. Also, includes backups to building structures).		
	<b>Volume Spilled</b>	<b>Volume Recovered</b>
Total Volume Spilled (Verify this matches the table in between 2.h and 3 in CIWQS)		

DATE/TIME DETERMINATIONS		
	DATE	TIME
Start of SSO		
Agency Notified		
Collection System Operator Dispatched		
Collection System Operator Arrived		
End of SSO		
End of Spill Response		

**Start Time Determination/Notes**



Caller Interview: Where did you see sewage spill from?

Manhole       Inside Building       Vent/Clean Out       Catch Basin       Wet Well/Lift Station

Other: \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_

Last Time Caller Observed **NO Spill** occurring: \_\_\_\_\_ AM / PM Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_

If the volume of the SSO and rate of flow are known, divide volume by rate of flow to get duration of SSO event.

\_\_\_\_\_ Gallons ÷ \_\_\_\_\_ GPM = Minutes (SSO Duration).

Subtract the Duration from the SSO End Date/Time to establish the SSO Start Date/Time.

Other Efforts to Determine Start Time: \_\_\_\_\_  
 \_\_\_\_\_

Other Comments Regarding Spill Start Time: \_\_\_\_\_  
 \_\_\_\_\_

Estimated SSO Start Time: \_\_\_\_\_ AM / PM      Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

SSO End Time: \_\_\_\_\_ AM / PM      Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

<b>SSO FIELD REPORT</b>
Spill location description:
Number of appearance points:
Spill appearance points: (Circle all that apply)    Backflow Prevention Device Force Main    Gravity Mainline    Inside Building/Structure    Lateral Clean Out (Private / Public) Lower Lateral (Private / Public)    Manhole    Pump Station    Upper Lateral (Private / Public) Other Sewer System Structure
Spill appearance point explanation. (Enter information here if "Other" or multiple appearance points were selected):
Final spill destination: (Circle all that apply) Final spill destination. (Circle all that apply). Beach    Building/Structure    Combined Storm Drain    Drainage Channel Other (Specify Below)    Paved Surface    Separate Storm Drain    Street/Curb and Gutter Surface Water    Unpaved Surface
Explanation of final spill destination. (Enter information if "Other" was selected.

<b>SSO FIELD REPORT</b>	
<p>Spill cause: (Circle One)</p> <p>Air Relief Valve (ARV)/Blow Off Valve (BOV) Failure</p> <p>Construction Diversion Failure</p> <p>CS Maintenance Caused Spill/Damage</p> <p>Damage by Others Not Related to CS Construction/Maintenance (Specify Below)</p> <p>Debris from Construction</p> <p>Debris from Lateral</p> <p>Debris-General</p> <p>Debris-Rags</p> <p>Debris Wipes/Non-Dispersible</p> <p>Flow Exceeded Capacity (Separate CS Only)</p> <p>Grease Deposition (FOG)</p> <p>Inappropriate Discharge to CS</p> <p>Natural Disaster</p> <p>Operator Error</p> <p>Other (Specify Below)</p> <p>Pipe Structural Problem/Failure</p> <p>Pipe Structural Problem/Failure – Installation</p> <p>Pump Station Failure – Controls</p> <p>Pump Station Failure – Mechanical</p> <p>Pump Station Failure – Power</p> <p>Rainfall Exceeded Design, I and I (Separate CS Only)</p> <p>Root Intrusion</p> <p>Siphon Failure</p> <p>Surcharged Pipe (Combined CS Only)</p> <p>Vandalism</p>	
<p>Spill cause explanation: (Required if Spill Cause is "Other")</p>	

<b>SSO FIELD REPORT</b>		
Where did failure occur? Air Relief Valve (ARV)/Blow Off Valve (BOV) Failure    Force Main    Gravity Mainline Lower Lateral (Public)    Manhole    Other (Specify Below)    Pump Station Failure – Controls Pump Station Failure – Mechanical    Pump Station Failure – Power Siphon    Upper Lateral (Public)		
Explanation of where failure occurred: (Required if Where Failure Occurred is “Other”)		
Was spill associated with a storm event?	YES	NO
Diameter of sewer pipe at the point of blockage or failure:	inches	
Material of sewer pipe at the point of blockage or failure:		
Estimated age of sewer asset at the point of blockage or failure (if applicable):	years	
Spill Response Activities. (Circle all that apply)    Cleaned-Up    Mitigated Effects of Spill Contained All or Portion of Spill    Other (Specify Below)    Restored Flow Returned All Spoil to Sanitary Sewer System    Property Owner Notified Other Enforcement Agency Notified		
Explanation of spill response activities: (Required if spill response activities is “Other”):		

<b>SSO FIELD REPORT</b>		
Spill corrective action taken: (Circle all that apply) Added Sewer to Preventive Maintenance Program Adjusted Schedule/Method of Preventive Maintenance Enforcement Action Against FOG Source Inspected Sewer Using CCTV to Determine Cause Other (Specify Below) Plan Rehabilitation or Replacement of Sewer Repaired Facilities or Replaced Defect		
Explanation of corrective action taken: (Required if spill corrective action is "Other")		
Is there an ongoing investigation?	YES	NO
Health warnings posted?	YES	NO
Did spill result in beach closure?	YES	NO
Name of Impacted Beach(es): (Enter N/A if none)		
Name of impacted surface waters:		

<b>SSO FIELD REPORT</b>	
<p>Water quality samples analyzed for: (Circle all that apply)</p> <p>Dissolved Oxygen                      Other Chemical Indicators(s) – Specify Below                      Biological Indicator(s) – Specify Below                      No Water Quality Samples Taken                      Not Applicable to the Spill                      Other (Specify Below)</p>	
<p>Explanation of water quality samples analyzed for: (Required if water quality samples analyzed for is "Other chemical indicator(s)", "Biological indicator(s)", or "Other")</p>     	
<p>Water quality sample results reported to: (Circle all that apply)</p> <p>County Health Agency    Regional Water Quality Control Board    Other (Specify below)                      No Water Quality Samples Taken    Not Applicable to this Spill</p>	
<p>Explanation of water quality sample results reported to: (Required if water quality sample results reported to is "Other")</p>     	
<p>Method and explanation of volume estimation methods used: (Circle all that apply)</p> <p>Eyeball Estimate    Measured Volume    Duration and Flow Rate                      Other (Explain):</p>          	

INSERT TAB:  
Volume Estimation

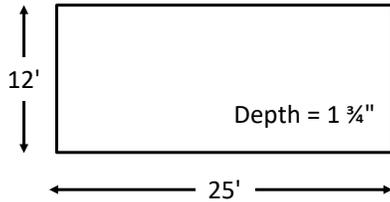
**Miscellaneous Computations & Examples**

To convert inches to feet (NOTE: for the purposes of this worksheet, the unit of measurement will be in feet for formula examples)	Divide the inches by 12 or use the chart on the right.  <b>Example 1:</b> $27" \div 12 = 2.25'$  <b>Example 2:</b> $1\frac{3}{4}" = ?'$  $1" (0.08') + \frac{3}{4}" (0.06') = 0.14'$	<b>Convert Inches to Feet</b>	
		<b>Inches</b>	<b>Feet</b>
Volume of one cubic foot	7.48 gallons of liquid	1/8"	0.01'
		1/4"	0.02'
<b>Area:</b> Two-dimensional measurement represented in square feet (SQ/FT or ft <sup>2</sup> )	Square/rectangle: Area = Length x Width  Circle: Area = $\pi \times r^2$ (where $\pi \approx 3.14$ and $r = \text{radius} = \frac{1}{2} \text{ diameter}$ )  Triangle: Area = $\frac{1}{2} (\text{Base} \times \text{Height})$	3/8"	0.03'
		1/2"	0.04'
		5/8"	0.05'
		3/4"	0.06'
		7/8"	0.07'
		1"	0.08'
		2"	0.17'
		3"	0.25'
		4"	0.33'
		5"	0.42'
		6"	0.50'
		7"	0.58'
<b>Volume:</b> Three-dimensional measurement represented in cubic feet (CU/FT or ft <sup>3</sup> )	Rectangle/square footprint: Volume = Length x Width x Depth  Circle footprint (cylinder): Volume = $\pi \times r^2 \times \text{Depth}$ (where $\pi \approx 3.14$ and $r = \text{radius} = \frac{1}{2} \text{ diameter}$ )  Triangle footprint: Volume = $\frac{1}{2} (\text{Base} \times \text{Height}) \times \text{Depth}$	8"	0.67'
		9"	0.75'
<b>Depth:</b> Wet Stain on Concrete or asphalt surface	If the depth is not measurable because it is only a wet stain, use the following estimated depths: Depth of a wet stain on concrete surface: 0.0026' (1/32") Depth of a wet stain on asphalt surface: 0.0013' (1/64")  These were determined to be a reasonable depth to use on the respective surfaces through a process of trial and error. One gallon of water was poured onto both asphalt and concrete surfaces. Once the area was determined as accurately as possible, different depths were used to determine the volume of the wetted footprint until the formula produced a result that (closely) matched the one gallon spilled. This process was repeated several times.	10"	0.83'
		11"	0.92'
<b>Depth:</b> Contained or "Ponded" sewage	Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. Use that number in your formula to determine volume.	12"	1.00'

**Miscellaneous Computations & Examples (continued)**

**Area/Volume of a Rectangle or Square**

Formula: Length x Width x Depth = Volume in **cubic feet**



$$\frac{25'}{\text{Length}} \times \frac{12'}{\text{Width}} \times \frac{0.14'}{\text{Depth}} = \underline{\underline{42 \text{ Cubic Feet}}}$$

Volume

Multiply the volume by 7.48 gallons to determine the volume in **gallons**:

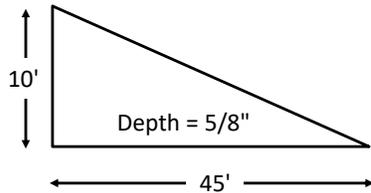
$$\frac{42 \text{ ft}^3}{\text{Volume}} \times \frac{7.48}{\text{gal/ft}^3} = \underline{\underline{314.16 \text{ gallons}}}$$

Volume

Convert Inches to Feet	
Inches	Feet
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

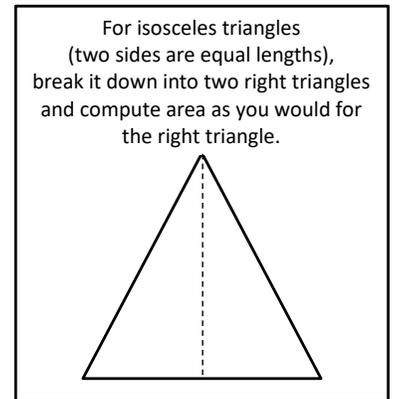
**Area/Volume of a Right Triangle**

Formula: Base x Height x Depth = Volume in **cubic feet**



$$\frac{45'}{\text{Base}} \times \frac{10'}{\text{Height}} \times 0.5 \times \frac{0.05'}{\text{Depth}} \times \frac{7.48}{\text{gal/ft}^3} = \underline{\underline{84.15 \text{ gallons}}}$$

Volume



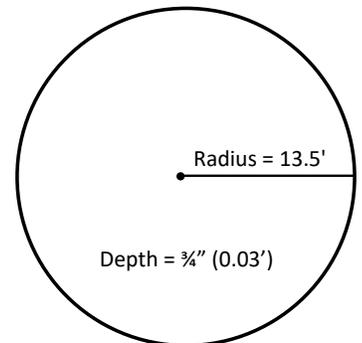
**Area/Volume of a Circle**

Formula:  $\pi \times r^2 \times 0.785 \times \text{Depth} = \text{Volume in cubic feet}$

The diameter is a straight line passing from side to side through the center of a circle.

$$\frac{13.5'}{\text{Radius}} \times \frac{13.5'}{\text{Radius}} \times \frac{3.14}{\pi} \times \frac{0.03'}{\text{Depth}} \times \frac{7.48}{\text{gal/ft}^3} = \underline{\underline{128.42 \text{ gallons}}}$$

Volume



STEP 1: Position yourself so that you have a vantage point where you can see the entire SSO.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

	A	B	C
Size of bucket(s) or barrel(s)	How many of this size?	Multiplier	Estimated SSO Volume (gallons)
1 gallon water jug		x 1 gallons	
5 gallon bucket		x 5 gallons	
32 gallon trash can		x 32 gallons	
55 gallon drum		x 55 gallons	
Other: _____ gallons		x _____ gallons	
<b>Estimated Total SSO Volume:</b>			

STEP 5: Is rainfall a factor in the SSO?  Yes  No

If yes, what volume of the observed spill volume do you estimate is rainfall? \_\_\_\_\_ gallons

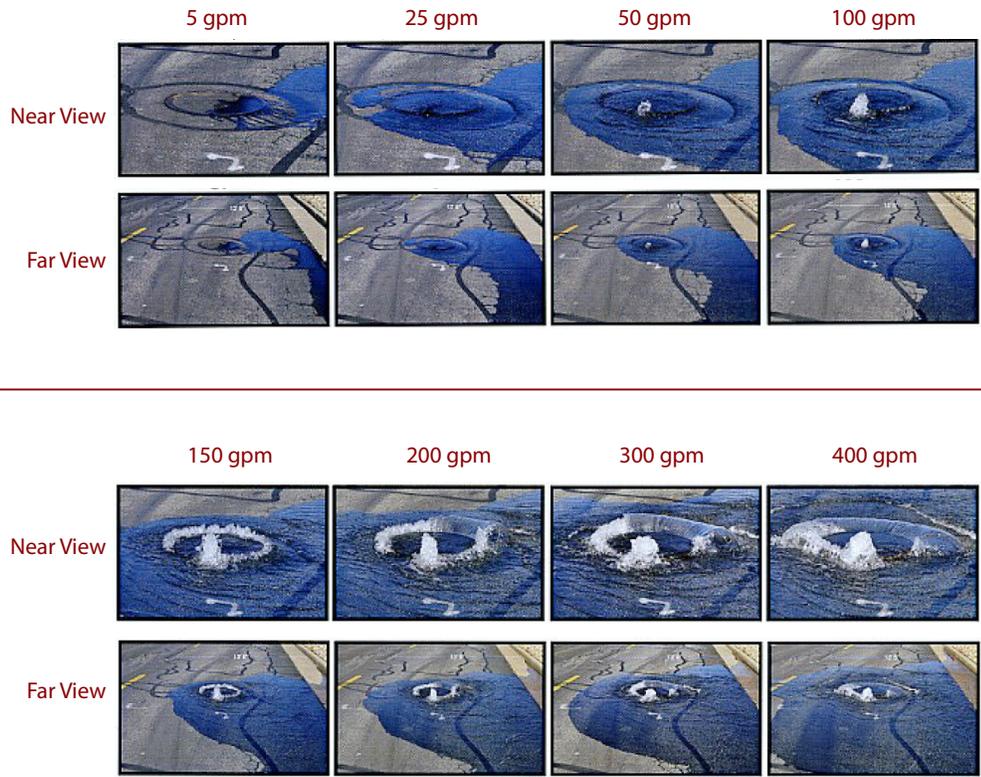
If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:

$$\frac{\text{_____ gallons}}{\text{Estimated SSO Volume}} - \frac{\text{_____ gallons}}{\text{Rainfall}} = \frac{\text{_____ gallons}}{\text{Total Estimated SSO Volume}}$$

Compare the SSO to reference images below to estimate flow rate of the current overflow. **NOTE: If the manhole cover in your picture has vent holes or more than one pry hole, do not use these pictures for comparison.**

Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual SSO:



SSCSC Manhole Overflow Gauge: CWEA Southern Section Collections Systems Committee  
Overflow Simulation courtesy of Eastern Municipal Water District

Flow Rate Based on Photo Comparison: \_\_\_\_\_ gallons per minute (gpm)

Start Date and Time	1.
End Date and Time	2.
SSO Event Total Time Elapsed (subtract Line 1 from Line 2. Show in minutes.)	3.
Average Flow Rate GPM (Account for diurnal flow pattern)	4.
Total Volume Estimated Using Duration and Flow Method (Line 3 x Line 4)	5.

SSO Date: \_\_\_\_\_ Location: \_\_\_\_\_

STEP 1: Describe spill area surface:  Asphalt  Concrete  Dirt  Landscape  Inside Building

Other: \_\_\_\_\_

STEP 2: Draw/sketch the outline (footprint) of the spill. Then break the footprint down into recognizable shapes. See example below.

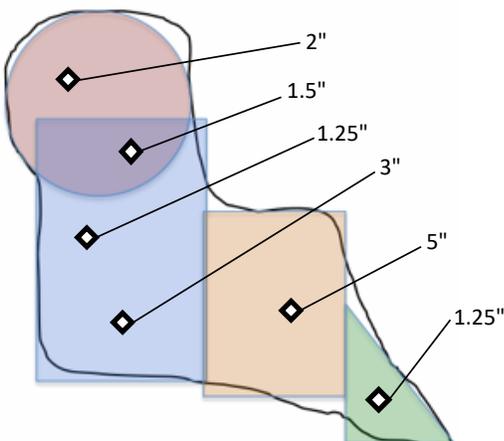
1. Sketch the outline of the spill (black line)

2. Break the sketch down into recognizable shapes (circles, squares, etc.) as well as you can.

3. Determine the volume of each shape. (note: in this example, after the volume of the circle is determined, multiply it by approximately 65% so that the overlap area won't be counted twice.)

4. If the spill is of varying depths, take several measurements at different depths and find the average. If the spill affects a dry unimproved area such as a field or dirt parking lot, determine the aread of the wetted ground in the same manner as you would on a hard surface. Using a round-point shovel, dig down into the soil until you find dry soil. Do this in several locations within the wetted area and measure the depth of the wet soil. Average the measurement/thicknes of the wet soil and determine the average depth of the wet soil.

Example (right):  $2'' + 1.5'' + 1.25'' + 3'' + 5'' + 1.25'' = 14.0''$   
 $14.0'' \div 6 \text{ measurements} = 2.33''$   
Average Depth = 2.33" (0.194')



STEP 3: Calculate the area of the footprint by completing the table below for each shape in Step 2.

If two shapes overlap, select one of the two shapes and estimate the percentage of that shape that does not overlap. Enter that percentage in the % Not Overlapping column. This will ensure that the overlap area is only counted once. Refer to the example on the previous page.

Rectangles	Length	X	Width	X	% Not Overlapping*	=	Area	X	Depth	=	Volume
	ft	X	ft	X	%	=	ft <sup>2</sup>	X	ft	=	ft <sup>3</sup>
	ft	X	ft	X	%	=	ft <sup>2</sup>	X	ft	=	ft <sup>3</sup>
	ft	X	ft	X	%	=	ft <sup>2</sup>	X	ft	=	ft <sup>3</sup>

Triangles	Base	X	Height	÷	X	% Not Overlapping*	=	Area	X	Depth	=	Volume
	ft	X	ft	÷ 2	X	%	=	ft <sup>2</sup>	X	ft	=	ft <sup>3</sup>
	ft	X	ft	÷ 2	X	%	=	ft <sup>2</sup>	X	ft	=	ft <sup>3</sup>
	ft	X	ft	÷ 2	X	%	=	ft <sup>2</sup>	X	ft	=	ft <sup>3</sup>

Circles	π	X	Radius	X	Radius	X	% Not Overlapping*	=	Area	X	Depth	=	Volume
	3.14	X	ft	X	ft	X	%	=	ft <sup>2</sup>	X	ft	=	ft <sup>3</sup>
	3.14	X	ft	X	ft	X	%	=	ft <sup>2</sup>	X	ft	=	ft <sup>3</sup>
	3.14	X	ft	X	ft	X	%	=	ft <sup>2</sup>	X	ft	=	ft <sup>3</sup>

**Total Spill Volume (sum of all three tables above): \_\_\_\_\_ ft<sup>3</sup>**

STEP 4: Convert from cubic feet to gallons by multiplying by 7.48.

\_\_\_\_\_ ft<sup>3</sup> x 7.48 gallons = \_\_\_\_\_ gallons  
 spill volume in cubic feet **Total estimated volume**



INSERT TAB:  
Backup Forms

**Complete this form only if there is a backup into a residence or business.**

**Instructions:**

1. Complete the First Responder Form.
2. Contact York Risk Services Group/PLAN JPA according to the instructions on the Overflow/Backup Response Flowchart.
3. Tear the documents listed below out of this workbook, take photos of them for documentation, and then give them to the customer. *Leave the First Responder Form in this workbook, do not give it to the Customer.*
4. Check each item that was provided to the customer.
5. Have customer sign below.

**Forms/Documents:**

- E-3: Customer Information Letter
- E-4: Restoration/Remediation Firms
- E-5: Your Responsibilities as a Private Property Owner
- E-6: Liability Claim Form

Documents Provided to: \_\_\_\_\_  
Customer Name

\_\_\_\_\_  
Customer Signature

\_\_\_\_\_  
Date

Check here if customer declines to sign:

Forms Provided by: \_\_\_\_\_  
Employee Name

\_\_\_\_\_  
Initial

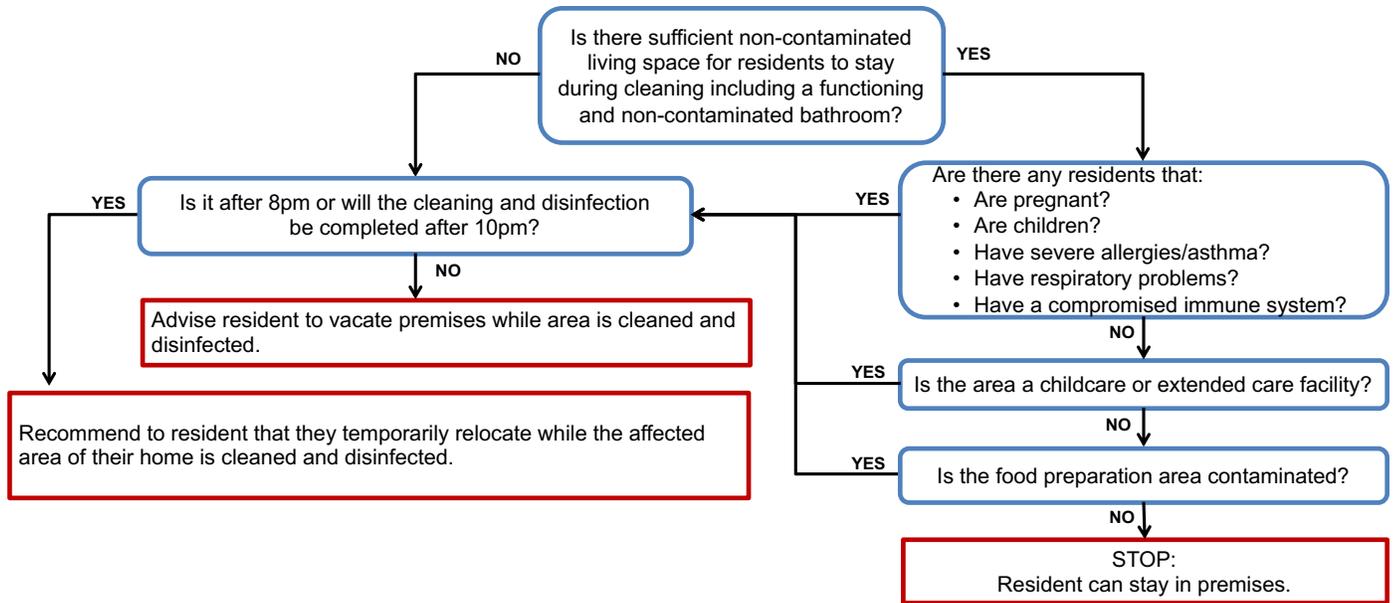
**Complete this form only if there is a backup into a residence or business.**

Fill out this form as completely as possible.

PERSON COMPLETING THIS FORM:		PHONE:
Name: _____		DATE:
Title: _____		TIME:
TIME STAFF ARRIVED ON-SITE:		
DOES THE CUSTOMER WANT THE CITY TO CALL FOR CLEANING SERVICE? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, give the customer the Cleaning Declination Form and have them sign here: _____ If customer called a cleaning contractor, provide name and contact number:		
RESIDENT NAME: <input type="checkbox"/> Owner <input type="checkbox"/> Renter ADDRESS:  PHONE:	IF RENT, PROPERTY MANAGER(S): OWNER:  ADDRESS:  PHONE:	
# OF PEOPLE LIVING AT RESIDENCE:		
Approximate Age of Home:	# of Bathrooms:	# of Rooms Affected:
Ask customer if you may enter the home. If so, take photos of all damaged and undamaged areas. Numbers of Photos/Videos Taken: <input type="checkbox"/> Photos <input type="checkbox"/> Video <input type="checkbox"/> Customer did not provide or allow photos Where are photos/video stored?		
Is nearest upstream manhole visibly higher than the drain/fixture that overflowed? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Does property have a Property Line Cleanout or BPD?		<input type="checkbox"/> Cleanout <input type="checkbox"/> BPD <input type="checkbox"/> Neither <input type="checkbox"/> Unknown
If yes, was the Property Line Cleanout/BPD operational at the time of the overflow? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
Have there ever been any previous spills at this location?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Has the resident had any plumbing work done recently?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
<i>If YES, please describe:</i>		

**GO TO Page 2**

**LIVABILITY ASESMENT**



**SANITARY SEWER LINE BLOCKAGE LOCATION**

**PLEASE CHECK THE BOXES THAT DESCRIBE YOUR OBSERVATIONS:**

<b>Customer Cleanout Was:</b> <input type="checkbox"/> Non-Existent <input type="checkbox"/> Full <input type="checkbox"/> Empty	<b>Agency Owned/Maintained Cleanout was:</b> <input type="checkbox"/> Non-Existent <input type="checkbox"/> Full <input type="checkbox"/> Empty
---	--

On the diagram below, indicate the location of the sewer line and where the problem occurred.



**Recommended Follow-Up Action(s):**

Did sewage go under buildings?  Yes  No  Unsure

Dear Property Owner:

We recognize that sewer back flow incidents can be stressful. The City has prepared this brief set of instructions to help you minimize the impact of the loss by responding promptly to the situation.

The City is not responsible for cleanup charges or damages caused by blockages in the property owner's sewer line or caused by code violations. At this time, the City is investigating the cause of the loss and does not assume liability for damages. However, if our investigation determines the City is responsible for this incident, the costs you incur for reasonable and necessary cleanup will be included in the settlement of your claim. Regardless of whether you or the City is responsible for the loss, it is up to you to arrange for the repair of your property and to present a claim for consideration.

You or the property owner should immediately contact a firm for clean-up of the affected areas. If you do not know of a company to call for service, refer to the Restoration/Remediation Firms list for 24-hour emergency restoration companies.

Sincerely,

The City of American Canyon

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### **What you need to do now:**

---

- Contact a restoration company for clean-up and removal of affected surfaces.
- Do not attempt to clean the area yourself, let the company you hire handle this.
- Keep people and pets away from the affected area(s).
- Turn off heating/air conditioning systems.
- Turn off any appliances that use water.
- Prevent any material from reaching floor vents to prevent contamination.
- Do not remove items from the area –the company you hire will handle these contents.
- If you had recent plumbing work, contact your plumber or contractor.
- Contact your homeowner's insurance carrier to report a claim.
- File your claim with the City Risk Manager at 4381 Broadway, Suite 201, American Canyon CA 94503, (707-647-4361) as soon as practical. The California Government Code, Sections 900 -960, requires filing a written claim and outlines specific time lines and notice procedures that must be used. It is suggested that the claimant refer to claims law and be fully advised with respect to the exceptions and further provisions contained therein.
- Call the City's Claims Administrator and provide a number where you can be reached: York Risk Services Group/PLAN JPA, Tiffany Roduit (925) 349-3878.

**Important Legal Notice:** For your protection, read carefully, obtain a reliable translation, and/or consult your attorney.

**Noticia Legal Importante:** Para su proteccion lea usted con cuidado debe de obtener una translacion que sea puntual y de confianza o consulte con su abogado.

Estimado propietario:

Reconocemos que los incidentes de flujo de retorno de alcantarillado pueden ser estresantes. La Ciudad ha preparado este breve conjunto de instrucciones para ayudarlo a minimizar el impacto de la pérdida respondiendo rápidamente a la situación.

La Ciudad no es responsable de los cargos de limpieza o daños causados por los bloqueos en la línea de alcantarillado del propietario de la propiedad o causados por violaciones al código. En este momento, la Ciudad está investigando la causa de la pérdida y no asume ninguna responsabilidad por daños y perjuicios. Sin embargo, si nuestra investigación determina que la Ciudad es responsable de este incidente, los costos en los que incurra para una limpieza razonable y necesaria se incluirán en el acuerdo de su reclamo. Independientemente de si usted o la Ciudad son responsables de la pérdida, depende de usted arreglar la reparación de su propiedad y presentar un reclamo para su consideración.

Usted o el dueño de la propiedad deben ponerse en contacto de inmediato con una empresa para la limpieza de las áreas afectadas. Si no sabe de una compañía a la que llamar para solicitar servicio, consulte la lista de empresas de restauración / remediación para compañías de restauración de emergencia las 24 horas.

Sinceramente,  
La Ciudad de American Canyon

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### **Lo que necesitas hacer ahora:**

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- Póngase en contacto con una empresa de restauración para la limpieza y eliminación de las superficies afectadas.
- No intente limpiar el área usted mismo, deje que la empresa que contrate se encargue de esto.
- Mantenga a las personas y mascotas alejadas de las áreas afectadas.
- Apague los sistemas de calefacción / aire acondicionado.
- Apague cualquier aparato que use agua.
- Evite que cualquier material llegue a los respiraderos del piso para evitar la contaminación.
- No elimine elementos del área: la empresa que contrate se encargará de estos contenidos.
- Si tuvo trabajos de plomería recientes, comuníquese con su plomero o contratista.
- Comuníquese con la compañía de seguros de su propietario para reportar un reclamo.
- Presente su reclamo ante el Gerente de Riesgos de la Ciudad en 4381 Broadway, Suite 201, American Canyon CA 94503, (707-647-4361, tan pronto como sea posible. El Código del Gobierno de California, Secciones 900 -960, requiere presentar un reclamo por escrito y describe el tiempo específico) líneas y procedimientos de notificación que se deben utilizar. Se sugiere que el reclamante se refiera a la ley de reclamaciones y sea totalmente informado con respecto a las excepciones y otras disposiciones contenidas en la misma.
- Llame al Administrador de Reclamaciones de la Ciudad y proporcione un número donde se lo pueda contactar: Grupo de Servicios de Riesgo de York / PLAN JPA, Tiffany Roduit (925) 349-3878.

**Important Legal Notice:** For your protection, read carefully, obtain a reliable translation, and/or consult your attorney.

**Aviso Legal Importante:** Para su protección, lea atentamente, obtenga una traducción confiable y / o consulte a su abogado.

**Restoration/Remediation Firms (Backup Only)**

This list is provided as a **resource only** and is not to be construed as exclusive, comprehensive or limiting in any way. PLAN JPA does not require or mandate the use of any of the listed firms. Qualified remediation contractors can be found on the Internet by searching “Water Damage Restoration” or “Fire & Water Damage Restoration.”

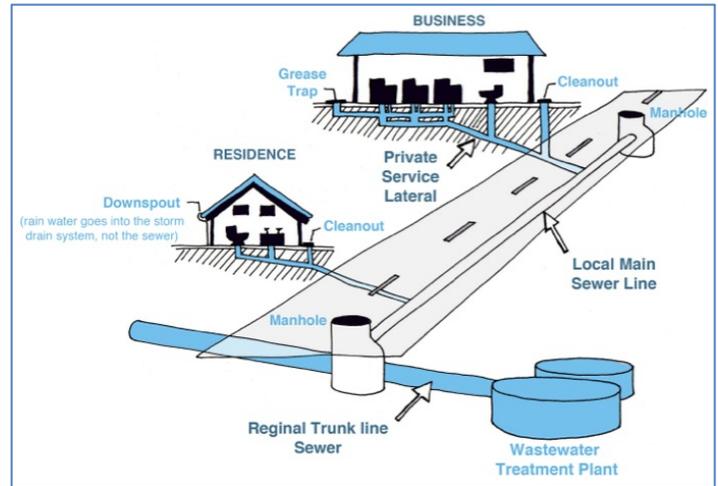
<b>Restoration Company</b>	<b>Location</b>	<b>Contact</b>
American Technologies, Inc (ATI)	25000 Industrial Boulevard Hayward, CA 94545	(510) 429-5000
Complete Drying	751 Laurel Street #538 San Carlos, CA 94070	(650) 591-1599 (925) 525-7262
Ideal Drying	1499 Evans Avenue San Francisco, CA 94124	(800) 379-6881
Restoration Management	535 Getty Court, Suite A Benicia, CA 94510	(800) 400-5058 (707) 750-6320
Restoration Management	32550 Central Avenue Union City, CA 94587	(800) 400-5058 (510) 315-5400
Montgomery Sansom Ltd	305 Adrian Road Millbrae, CA 94030	(650) 777-9010
Britannia Cal Pacific	255 S Maple Avenue South San Francisco CA 94080	(650) 742-6490
Four Star Cleaning & Restoration	4302 Solar Way Fremont, CA 94538	(800) 255-3333 (510) 796-5900
Servpro	809 Laurel Street, #422 San Carlos, CA 94070	(800) 737-8776 (650) 591-4137
Vital Restoration 9-1-1	6 South Linden Avenue Unit #9 South San Francisco, CA 94080	(650) 262-4545 (650) 873-7867
Service Master	Ryon Howard, ServiceMaster National Account Manager, can dispatch teams nearest to the incident location.	Cell (925) 330-3360
Service Master	2731 Fair Oaks Avenue Redwood City, CA 94063	(650) 299-9080
Service Master	439 Eccles Avenue South San Francisco, CA 94080	(415) 584-6100
Service Master	2220 W Winton Avenue Hayward, CA 94545	(800) 480-8439 (510) 300-2990

How a Sewer System Works

A property owner's sewer pipes are called **service laterals** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.

How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches. Common causes of sewage spills include grease build-up, tree roots, broken/cracked pipes, missing or broken cleanout caps, undersized sewers, and groundwater/rainwater entering the sewer system through pipe defects and illegal connections.



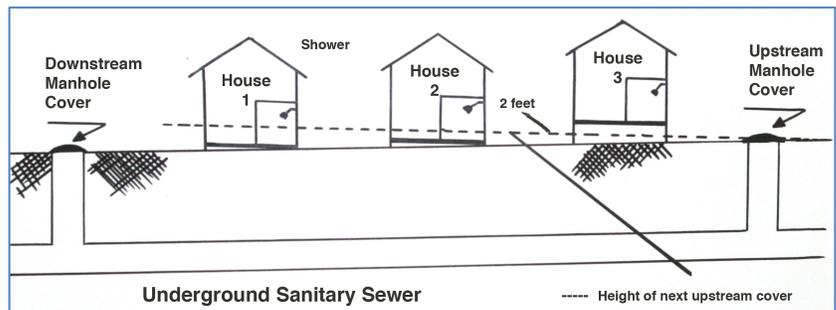
Prevent most sewage backups with a Backflow Prevention Device

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: "Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping **shall** be protected from backflow of sewage by installing an approved type of backwater valve." The intent of Section 710.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 710.6 states: "Backwater valves **shall** be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover."



**Spill cleanup inside the home:**

For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas. If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean up.

**Other Tips:**

**Seek immediate attention if you become injured or ill during or after the cleanup process.**

- Keep children and pets out of the affected area.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water & detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.

**Spill cleanup outside the home:**

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solution, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a laundromat until your onsite wastewater system has been professionally inspected and serviced.



**City Manager's Office**  
4381 Broadway St., Suite 201  
American Canyon, CA 94503  
707-647-4361 Fax 707-638-0492

**LIABILITY CLAIM FORM**

**INSTRUCTIONS: Please complete the form below, attaching additional sheets as needed.**

Type or print legibly in ink. Return to Front Counter at City Hall (Risk Manager), or mail to the address at the bottom of this form. Call (707) 647-4361 if you have any questions. Any person who, with the intent to defraud, presents any false or fraudulent claim may be punished by imprisonment or fine or both. **NOTE: You must file a claim in compliance with Government Code Section 911.2**

1. CLAIMANT'S NAME (print): \_\_\_\_\_
2. Claimant's Address: \_\_\_\_\_
3. Amount of Claim (attach copies of all invoices or estimates): \_\_\_\_\_
4. Home Phone: \_\_\_\_\_ 5. Work Phone: \_\_\_\_\_
6. Location of Incident: \_\_\_\_\_
7. Date/Time of Incident: \_\_\_\_\_
8. Describe the incident/accident. Include your reason for believing that the City is liable for your damages:
  
9. Describe all damages which you believe are a result of the incident/accident:
  
10. Witness(es) (Including City employees):  
Name: \_\_\_\_\_ Address \_\_\_\_\_ Phone # \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. If amount claimed is over \$10,000, indicate where jurisdiction rests:  Limited Civil Case  Unlimited Civil Case

12. Address to which notices are sent, if different from above:

Name: \_\_\_\_\_ Phone #: \_\_\_\_\_

Address: \_\_\_\_\_

13. Signature of Claimant: \_\_\_\_\_ Date: \_\_\_\_\_

**RETURN THIS FORM TO:**                    **CITY OF AMERICAN CANYON**  
**Attention: RISK MANAGEMENT**  
**4381 Broadway St., Suite 201**  
**AMERICAN CANYON, CA 94503**

LCLAIMFORM2017

INSERT TAB:  
Failure Analysis

**OFFICE USE ONLY**

Incident Report #		Prepared By	
<b>SSO/Backup Information</b>			
Cause			
<b>Summary of Historical SSOs/Backups/Service Calls/Other Problems</b>			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	
<b>Summary of CCTV Information</b>			
CCTV Inspection Date		Tape Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			

Go to Side B

Recommendations					
✓	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Overflow Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Sewer Supervisor Review Date:			PW Superintendent Review Date:		



## Appendix 7.0 – Industrial Waste Permits





## WASTEWATER DISCHARGE PERMIT COMMERCIAL

In accordance with the provisions of the City of American Canyon  
Sewer Use Ordinance:

**Facility/Business Name:**  
**Facility/Business Address:**

**Authorized Representative:**  
**Authorized Representative Telephone:**  
**Primary Contact Individual:**  
**Primary Contact Telephone:**  
**Primary Contact Address:**

**After Hours Contact:**  
**After Hours Telephone:**  
**SIC:**  
**Permit Number:**

is hereby authorized to discharge commercial wastewater from the above-identified facility and through the outfalls identified herein into the City of American Canyon sewer system in accordance with the conditions set forth in this Permit. Compliance with this Permit does not relieve the Permittee of its obligation to comply with any or all applicable pretreatment regulations, standards or requirements under local, State, and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the terms of this Permit. Non-compliance with any term or condition of this Permit shall constitute a violation of the City of American Canyon Sewer Use Ordinance.

This Permit is not renewable. The City reserves the right to revoke this Permit at any time. It shall become effective on \_\_\_\_\_ and expires at midnight on \_\_\_\_\_.

**SECTION A: SEWER SERVICE CHARGE DETERMINATION**

Sewer service charges are calculated in accordance with provisions of the City of American Canyon Comprehensive User Fee Schedule. This Permit requires a permit fee to be paid annually.

**SECTION B: PERMIT REQUIRED**

Every Significant Industrial User (SIU) and any other Industrial User (IU) or Commercial User deemed necessary by the City, including this facility, must possess a Wastewater Discharge Permit. The Permittee must keep this Permit and other required materials and documents posted at all times in a conspicuous place. This information must be made available to all employees and other environmental departments. Other environmental permits must be made available to the appropriate City personnel upon request. Terms and conditions of this Permit are subject to modification by the City of American Canyon Public Works Director.

**SECTION C: PERMIT CONDITIONS**

- 1) Permittee shall follow all current and applicable "Best management Practices (BMPs).
- 2) Safety Data Sheets (SDS) for all chemicals and materials must be kept at the Facility, be updated regularly and available for review upon the City Inspector's request.
- 3) Monitoring Analysis and Frequency: The City may collect samples and have them analyzed for any constituents deemed necessary. The Permittee will pay all costs associated with all sampling events and the analysis.
- 4) Facility Records: All records of any events where waste was off-hauled or disposed of by the Permittee, or any company contracted by the Permittee, must be kept on file and available for audit for a minimum of three years. Copies of these records may be requested for submittal on a regular basis by City staff, if deemed necessary.
- 5) Duty to Comply: The Permittee must comply with all conditions of this Permit per the City's Sewer Use Ordinance and the City's Enforcement Response Plan. Failure to comply with the requirements of this Permit may be grounds for administrative action or enforcement proceedings, including civil or criminal penalties, injunctive relief, and summary abatements, including shut-off of discharge. Please review the Sewer Use Ordinance and the City's Municipal Code for Local Limits and Specific Prohibitions applicable to all Users. Both documents can be found on the City's website.
- 6) Duty to Mitigate: The Permittee shall take all reasonable steps to minimize or correct any adverse impact to the public treatment plant, the collection system or the environment resulting from non-compliance with this Permit.
- 7) This Permit may be terminated for the following reasons:
  - a) Tampering with monitoring equipment.
  - b) Refusing to allow timely access to the facility premises and records.
  - c) Falsifying submittals to the City.

- d) Failure to pay fines.
- e) Failure to pay sewer charges.
- f) Failure to meet compliance with any part or subpart of this Wastewater Discharge Permit.
- g) Failure to meet compliance with any part or subpart of the City Sewer Ordinance.
- h) Failures to pay City for Permit fees.
- i) Closure of the business or facility.

8) **Property Rights:** The issuance of this Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of Federal, State, or local laws or regulations.

9) **Non-transferability of Permits:** This Permit and its conditions apply only to holder of the Permit and cannot be transferred.

#### 10) Definitions

The terms used in this Permit shall have the same meanings as defined in the City's Municipal Code, Sewer Use Ordinance and Enforcement Response Plan.

#### 11) Prohibitive Standards

The Permittee shall comply with all discharge standards in the City's Sewer Use Ordinance and Sewer User Ordinance.

#### 12) Compliance with Applicable Pretreatment Standards and Requirements

Compliance with this Permit does not relieve the Permittee from its obligations regarding compliance with any and all applicable local, State, and Federal pretreatment standards and requirements, including any such standards or requirements that may become effective during the term of this Permit.

#### 13) Right of Entry

A representative of the City, bearing proper credentials and identification, shall be permitted to enter all properties served by the City for the purpose of inspection, surveillance, observance, and monitoring procedures (including measuring, sampling and testing). This includes authority to enter any Industrial or Commercial User's discharge source, treatment or record keeping location with authority to copy records.

#### 14) Removed Substances

All hazardous and non-sewer waste, including solids, sludge, filter backwash, septic tank and oil-grease trap wastes or other pollutants removed in the course of treatment or control of wastewater's shall be disposed of in accordance with Section 405 of the Clean Water Act and Subtitles C and D of the Resource conservation and Recovery Act. The required "Waste Haulers Report" and manifests must be completed and kept on file at the facility and retained for at least three years.

**SECTION D. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS****1. Proper Operation and Maintenance**

The Permittee shall at all times properly operate and maintain all facilities, systems of treatment and control and monitoring devices, which are installed or used by the Permittee to achieve or monitor compliance with the conditions of this Permit. This maintenance will be conducted at the owner's expense and to the satisfaction of the City and accessible at all times to City personnel.

**SECTION E: ADDITIONAL REPORTING REQUIREMENTS****1. Planned Changes**

The Permittee shall give notice to the City 30 days prior to any facility expansion, production increase, or process modifications that result in new or substantially increased discharges or a change in the nature of the discharge.

**2. Duty to Provide Information**

The Permittee shall furnish the City within five days any information the City may request to determine whether cause exists for modifying, revoking and re-issuing or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also, upon request, furnish to the City within 10 days any records required by this Permit.

**SECTION F: ENFORCEMENT**

All Users are subject to all the provisions for the City's Enforcement Response Plan. This plan details specific violations, circumstances, and enforcement responses.

## **Appendix 7.1 – Industrial Waste Inspection Schedule**



<b>Restaurant Inspection Schedule</b>	<b>INSPECTION YEAR</b>
Java Detour	New
Wal-Mart Supercenter #1651/Deli	2016
Canyon Café	2018
Crave Café	2018
Double Tree by Hilton Gaia Restaurant	2018
Dunkin Donuts	2018
Peking Express	2018
Safeway Inc. #1883	2018
South Kelly Grill	2018
Jack In The Box	2019
Junction Brewery & Grill	2019
K&B Food and Liquor, Parry's Market	2019
Le Paris Artisan Gourmet Café	2019
Mi Zacatecas Mexican Restaurant	2019
Round Table Pizza	2019
Starbucks Coffee #6465	2019
Starbucks Coffee #9901	2019
Taco Bell #31850 (DBA for Golden Gate Bell, LLC)	2019
Tacos Michoacan 2	2019
Wingstop Restaurant	2019
Ristorante La Strada	2020
McDonalds #31541	2020
Laso	2020
Mountain Mikes Pizza	2020
Del Monte Meat Co, Inc.	2020
Hilo Hawaiian BBQ	2020
Jamba Juice #769	2020
Los Cantaros Taqueria	2020
Papa Murphy's (Kashdev Inc.)	2020
Thai Kitchen	2020
Subway #28240	2020
Sonic (DBA for Norcal American Canyon, LLC)	2020
Panda Express #1383	2020



## Appendix 7.2 – FOG Inspection Report





## Fog Inspection Report for Food Services

Inspector: \_\_\_\_\_

Time Inspection Started: \_\_\_\_\_

Date: \_\_\_\_\_

Time Inspection Completed: \_\_\_\_\_

Inspection Type: \_\_\_\_\_

### Facility Information

Facility Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Facility Correspondent: \_\_\_\_\_ Address: \_\_\_\_\_

### Type of Facility

Fast food    Dinner    Grocery    Bakery    Deli    Meat Market    Donut Shop    Ice Cream

Other: \_\_\_\_\_

### Grease Removal System

Type:    Interceptor    Trap    Manual    Automatic    None    N/A    Other: \_\_\_\_\_

Size: \_\_\_\_\_ gal    Location: \_\_\_\_\_

Condition:    Good (grease is being trapped)    Poor (grease is passing on into the sewer)

Grease system Depth: \_\_\_\_\_ in    Solid Depth: \_\_\_\_\_ in    % of Solid in System (max 25%): \_\_\_\_\_

### Maintenance Records

Cleaning Firm or Hauler: \_\_\_\_\_

Phone: \_\_\_\_\_

Grease removal on a schedule:    Yes    No    Explain: \_\_\_\_\_

Date of last service: \_\_\_\_\_

Maintenance Records are available for review:    Yes    No

Maintenance Records available for review	Dates of Records



## Appendix 7.3 – Public Awareness Materials



# NO GREASE DOWN THE DRAIN!

## KEEP DRAINS FLOWING

**WIPE FOOD AND GREASE OUT OF POTS BEFORE WASHING AND DISCARD WASTE INTO THE TRASH**



**COLLECT AND RECYCLE USED COOKING OIL**

**HAVE GREASE INTERCEPTORS AND TRAPS CLEANED ON A ROUTINE SCHEDULE**



**USE ABSORBENTS TO CLEAN UP GREASY SPILLS BEFORE MOPPING**



**WHEN KITCHEN DRAINS ARE FLOWING, BUSINESS KEEPS FLOWING TOO.**





City of American Canyon

November 23 at 9:33 AM · 🌐



Fill your plate... Not your pipes!!

It's NEVER recommended to put fats, oils, or grease down your drain!!

Fats, oils, and grease damage and clog pipes, which in turn causes sewer overflows and backups. It also brings harmful bacteria into contact with people and water.

Visit <https://bit.ly/3kY45Cf> for recycling centers near you.



6

2 Shares

👍 Like

💬 Comment

➦ Share



Write a comment...



261





## City of American Canyon

December 20 at 9:59 PM · 🌐

Stuff your stockings, not your drain!

Do not pour cooking Fats, Oil, or Grease (FOG) down the drain!

When washed down the sink, FOG eventually cools and solidifies and can block your pipes and the City sewer. Please help prevent raw sewage backups into your home, your streets, and the Bay.

Place your FOG in a glass jar or recycled can and let it cool before discarding in the trash or at a recycling center.



👍 4

4 Shares

👍 Like

💬 Comment

➦ Share

263



## Appendix 8.0 – Sewer System Master Plan





# **Sewer Master Plan**

**City of American Canyon**

May 2016

**CITY OF AMERICAN CANYON  
SEWER MASTER PLAN  
AMERICAN CANYON, CALIFORNIA**

Project No. 02536 - 8411338

**Prepared for:**

Mr. Jason Holley, Public Works Director



City of American Canyon  
4381 Broadway, Suite 201  
American Canyon, CA 94503

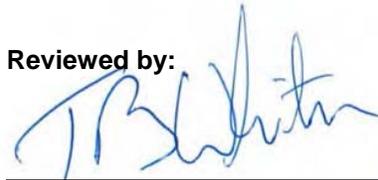
**Prepared by:**



Matthew J. Winkelman, P.E.  
Project Engineer



**Reviewed by:**



Ted Whiton, P.E.  
QA/QC



2235 Mercury Way, Suite 150  
Santa Rosa, CA 95407  
(707) 523-1010

May, 2016

## Statement of Limitations

*This report has been prepared by GHD for the City of American Canyon (the City) and may only be used and relied on by the City for the purpose agreed between GHD and the City.*

*GHD otherwise disclaims responsibility to any person other than the City arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.*

*The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.*

*The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.*

*The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.*

*GHD has prepared this report on the basis of information provided by the City and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.*

*GHD has prepared the preliminary cost estimate set out in this report ("Cost Estimates") using information reasonably available to the GHD employee(s) who prepared this report; and based on assumptions and judgments made by GHD.*

*The Cost Estimates have been prepared for the purpose of establishing budgets and must not be used for any other purpose.*

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# 1. Executive Summary

This 2016 Sewer Master Plan (SMP) provides the City with an evaluation of the collection system capacity under existing and buildout conditions, and provides recommendations to address hydraulic deficiencies and to accommodate planned growth. The SMP is based on the latest planning information as of December 2015 for land use and known development projects in the planning and approval stages. The master plan was also prepared in collaboration with the City's 2016 Potable Water Master Plan (PWMP), with the purpose of correlating indoor potable water demands to sewer flows for future development.

Hydraulic evaluation of the sewer collection system was based on flow metering data recorded in early 2014 within the sewer service area (SSA), which includes the City limits and sphere of influence. Measured flows were prepared for use in a hydraulic model to assess the performance of the collection system under various flow conditions including average dry weather flow (ADWF), peak dry weather flow (PDWF), and peak wet weather flow (PWWF). ADWF is the average flow rate over a 24-hour period during dry weather months, and PDWF is the peak flow rate occurring within that same 24-hour period. The PWWF is the peak dry weather flow plus the peak infiltration and inflow rate resulting from a 24-hour, 10-year return frequency design storm. Table 1 provides a summary of sewer collection system flows for each primary sewer basin in the City's collection system. Figure 1 depicts the sewer basins within the collection system.

Table 1 Existing Condition Sewer Flow Rates <sup>1</sup>

Sewer Basin	ADWF (mgd)	PDWF (mgd)	Peak I/I (mgd)	PWWF (mgd)	PWWF / ADWF
Main Basin 1	0.030	0.040	0.390	0.430	14.3
Main Basin 2	0.120	0.210	0.260	0.470	3.9
Main Basin 3	0.100	0.160	0.980	1.140	11.4
Main Basin 4	0.410	0.710	2.410	3.120	7.6
Sunset Meadows 1	0.220	0.370	4.270	4.640	21.1
Sunset Meadows 2	0.073	0.121	0.433	0.554	7.6
Industrial	0.197	0.325	1.507	1.832	9.3
Totals	1.150	1.936	10.25	12.19	-

1. Flows recorded by V&A from Jan 15 to Mar 6, 2014. I/I rates normalized to 24-hour, 10-year design storm.

Wet weather has the greatest influence on peak flows within the Main Basins 1 and 3, and in the Sunset Meadows Basin, particularly in the Rio Del Mar area. Pipelines in the Rio Del Mar area are some of the oldest pipelines in the collection system and were installed at a time with lesser performance standards for water tightness compared to today's industry standards. Addressing infiltration and inflow (I/I) in this basin would reduce peak capacity requirements in local sewers, as well as all downstream conveyance infrastructure. Other sewer basins having lower I/I rates do not have the same potential for eliminating capacity upgrades because removal of I/I can be a difficult and expensive undertaking, and there is a point of diminishing returns where capacity upgrades become the more cost-effective option.

The primary goal of having adequate conveyance capacity in the collection system is to minimize the chance of having sanitary sewer overflows (SSO) during peak flow events. This can be achieved using two approaches: 1) minimize I/I entering the collection system; and 2) eliminating flow restrictions by replacing undersized pipes and pumps with larger facilities that can handle the

peak flows. The recommended projects addressing hydraulic deficiencies are a combination of both approaches.

The recommended capital improvements plan (CIP) for the sewer collection system addresses current deficiencies and needed improvements to accommodate planned growth. Table 2 lists the CIP projects recommended for the near term (0 to 10 years). These near-term projects are prioritized based on need and benefits to the City. Projects that will reduce I/I entering the collection system are given top priority. The project drivers, funding sources, and estimated cost are provided for each project.

Table 2 Sewer Collection System Near-Term Capital Improvements (0 – 10 Yrs)

CIP Project	Driver	Funding Source	Estimated Cost
SS1 Rio Del Mar Basin	Reduce I/I and reduce peak flow in local sewers and Main Basin PS	Wastewater Operations	\$7,170,000
SS2 Napa Logistics and Green Island Pump Station	Increase capacity of Green Island PS, abandon Tower Road PS, and serve airport area development	Wastewater Operations and Wastewater Capacity	\$18,800,000
SS3 Huntington Way	Bypass peak flows away from Sunset Meadows PS to the Main Basin PS, and upgrade capacity of bypass sewer	Wastewater Operations	\$4,580,000
SS4 Broadway, north of American Canyon Rd	Reduce I/I and peak flows to Main Basin PS, and serve Watson Ranch	Wastewater Operations and Wastewater Capacity	\$2,540,000
SS5 Summerfield Project	Improve collection system hydraulics and access	Wastewater Operations	\$370,000
SS6 Theresa Ave and Los Altos Dr	Reduce I/I and peak flows to Main Basin PS, and replace/rehabilitate sewers in poor condition	Wastewater Operations	\$2,050,000
<b>Total Near-Term CIP</b>			<b>\$35,510,000</b>

Project SS1 includes I/I reduction in the Rio Del Mar basin by rehabilitating existing sewer mains, manholes and laterals to create a more watertight collection system. This project consists of wet weather reconnaissance to identify the pipes contributing the highest levels of I/I, as well as pre- and post-construction flow monitoring to measure effectiveness of peak flow reductions. The project is budgeted to rehabilitate 50 percent of the sewers, manholes and laterals in the basin.

Projects SS3, SS4, SS5, and SS6 are budgeted for capacity upgrades and by replacing sewers that are currently leaking, some level of I/I reduction would occur. However, it is recommended that these basins also be investigated as potential targets for I/I reduction projects at the same time investigations are performed in the Rio Del Mar basin. Based on the findings during this wet weather reconnaissance, the City may determine that more extensive I/I reduction could result in cost savings over the capacity upgrade approach. This could have the added benefit of further reducing peak flows at the Main Basin Pump Station (MBPS). Timing is also a consideration because project SS4 serves the Watson Ranch development.

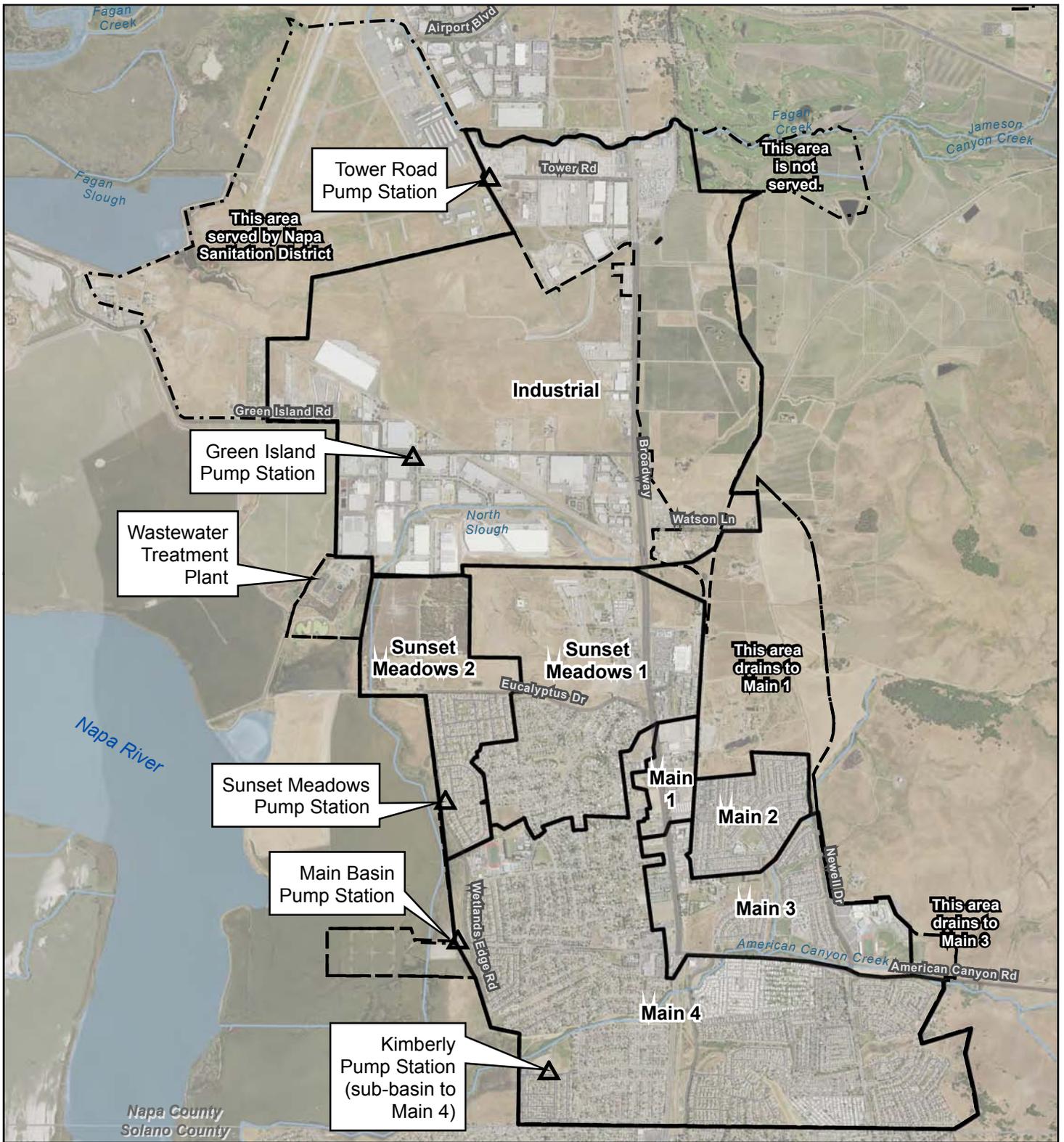
Capital improvement projects that can be implemented over the long-term (11 to 20 years) are also needed to address existing deficiencies and accommodate planned growth, but are not as urgent as the near-term projects. Project SS7, the MBPS, is the highest priority because it serves Watson

Ranch. However, the capacity needed is related to the amount of I/I reduction achieved with the near-term CIP projects. The timing of the Watson Ranch development will impact when project SS7 is completed. Further, an alternative project may be selected for improvements at MBPS, wherein an existing pond could be used to temporarily store peak flow volumes and/or upstream flows could be diverted to the Sunset Meadows Pump Station (which would require upgrade of that pump station). The recommended long-term CIP projects are listed in Table 3, and represent capacity upgrades without factoring for I/I reduction in upstream sewers. The project drivers, funding sources, and estimated cost are provided for each project. The CIP project locations are shown in Figure 2 and detailed summaries are provided in Appendix F.

Table 3 Sewer Collection System Long-Term Capital Improvements (11 – 20 Yrs)

CIP Project	Driver	Funding Source	Estimated Cost
SS7 Main Basin Pump Station	Upgrade capacity to meet peak flows and serve Watson Ranch	Wastewater Operations and Wastewater Capacity	\$12,860,000
SS8 Broadway, Cartagena Way to Mobile Home Park Entrance	Address hydraulic deficiency	Wastewater Operations	\$680,000
SS9 Elliott Drive south of Northampton	Address hydraulic deficiency	Wastewater Operations	\$1,090,000
SS10 Broadway north of Rio Del Mar	Address hydraulic deficiency	Wastewater Operations	\$1,030,000
<b>Total Long-Term CIP</b>			<b>\$15,660,000</b>

Projects SS8, SS9, and SS10 are all capacity upgrade projects that replace existing sewers with larger diameter pipelines. Although targeted I/I reduction projects could be an option, it is unlikely that the I/I reduction could be done more cost-effectively and there is risk that the I/I reduction would not achieve targeted results. Therefore, it is recommended that the City move forward with capacity upgrades for these three projects.



- City Limits
- Sanitary Sewer Service Area
- Sewer Basins
- Pump Station

Paper Size 8.5" x 11" (ANSI A)  
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 Feet  
 Map Projection: Lambert Conformal Conic  
 Horizontal Datum: North American 1983  
 Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

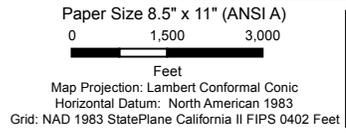
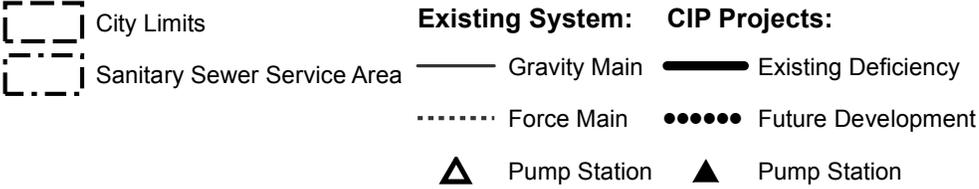
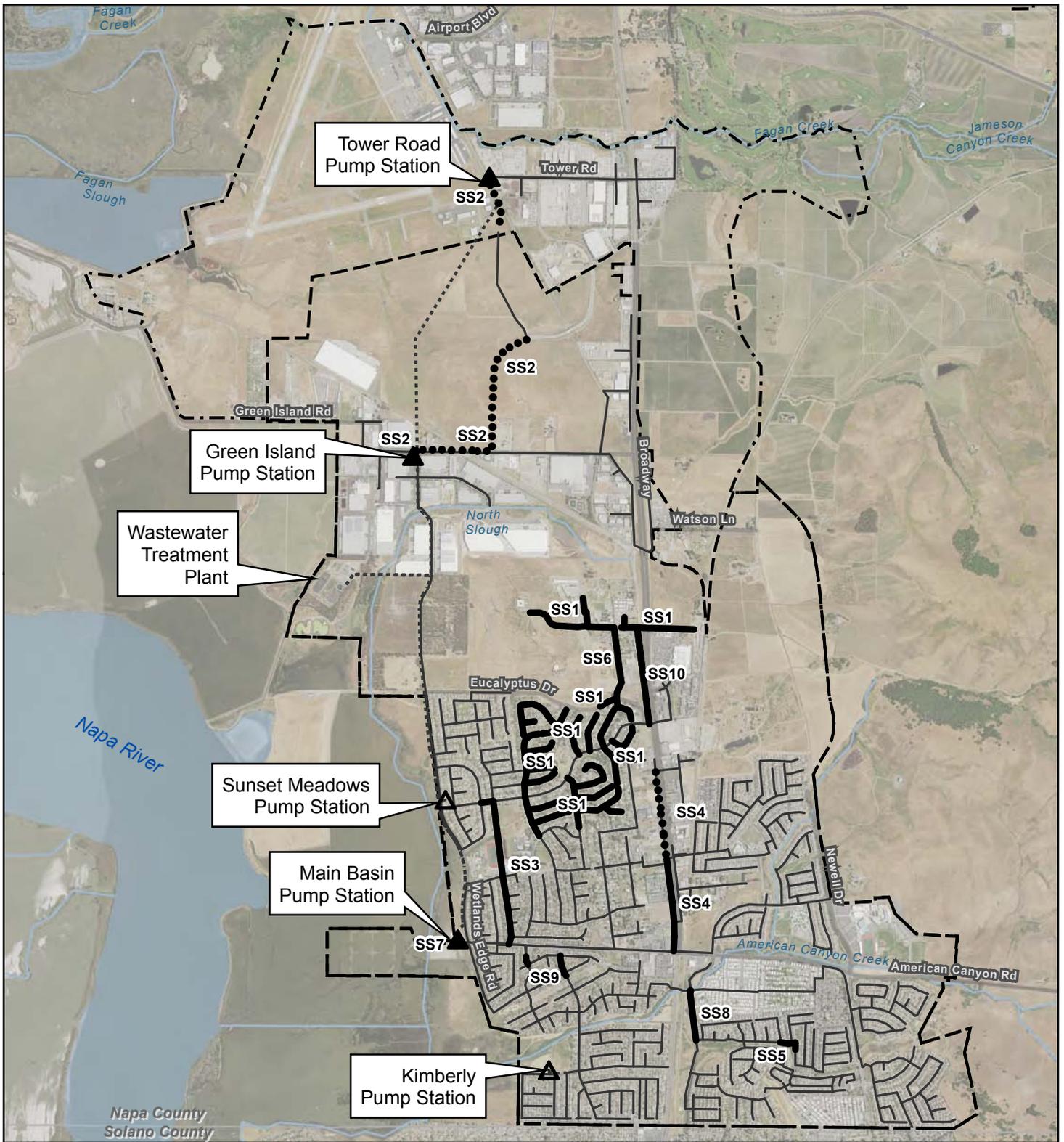


City of American Canyon  
 Sewer Master Plan

Job Number 8411338  
 Revision 0  
 Date 05 May 2016

Sewer Basins

Figure 1



City of American Canyon  
 Sewer Master Plan

Job Number | 8411338  
 Revision | 2  
 Date | 05 May 2016

**Recommended Sewer  
 Capital Improvement Projects**

**Figure 2**

## 2. Introduction

### 2.1 Background

The City of American Canyon (the City) is located in Napa County between the City of Vallejo and City of Napa. Prior to incorporation as a City in 1992, sewer collection and wastewater treatment for the area was provided by the American Canyon County Water District, wherein sewer flows for the area were treated at a facility located at the current Main Basin Pump Station location. In 1975, the City began sending its treated and untreated wastewater to the Napa Sanitation District's wastewater treatment plant. In 2002, the City completed construction of a new water reclamation facility to treat all sewer flows from the City's sewer service area, which is the same basic system layout as today.

The City's sewer collection system serves residential, commercial, and industrial customers and encompasses the City limits and its sphere of influence, which includes a portion of the Airport Industrial Area to the north of the City. The service area also extends east of Highway 29 between Watson Lane to the south and Fagan Creek to the north in unincorporated Napa County. The current area served is approximately 6.3 square miles with an overall potential service area of over 8.5 square miles.

Over time, the sewer collection system has been modified primarily to serve growth. During that time, the collection system has aged and deteriorated, such that peak flows have increased due to the influence of infiltration and inflow (I/I) caused by rainwater and groundwater. Increased flows have caused a reduction in available hydraulic capacity within the collection system, resulting in a higher potential for sanitary sewer overflow (SSO) and reduced capacity to accommodate growth.

The sewer collection system has been studied at various points in time to evaluate system performance, including studies in 1987, 1996, and 2001. These studies are now outdated, as the City's plan for growth has evolved over time. The City is interested in gaining an understanding of system performance that is based on new planning documents, including current growth projections and water demands.

The sewer collection system consists of approximately 53 miles of sewer mains, five pump stations, and 5 miles of sewer force main. The sewer collection system is divided into three primary sewer basins:

- **Main Basin:** Encompasses the southern portion of the City service area and conveys primarily residential flows to the Main Basin Pump Station (a.k.a., Building E);
- **Sunset Meadows:** Encompasses the middle portion of the City service area and conveys a combination of residential and commercial flows to the Sunset Meadows Pump Station; and
- **Industrial Area:** Encompasses the northern portion of the City service area and conveys industrial flows to the Tower Road and Green Island Pump Stations.

The sewer collection system includes gravity pipelines that range in size from 4- to 24-inches in diameter and force mains that range in size from 4- to 18-inches in diameter. Pipelines are constructed primarily of PVC, vitrified clay, and asbestos cement. Flows from the sewer collection system are conveyed to the following pump stations:

- **Main Basin Pump Station (MBPS):** Located at the western end of American Canyon Road, the MBPS serves approximately 2.4 square miles. Flow is pumped northerly approximately

10,030 feet via an 18-inch force main located at the western edge of the City to the WRF. The capacity of the existing pump station is 3,000 gallons per minute (gpm);

- Sunset Meadows Pump Station (SMPS): Located approximately ½-mile north of the MBPS along Wetlands Edge Road just north of Rio Del Mar. The SMPS serves approximately 1.2 square miles. Flow is pumped approximately 120 feet via an 8-inch force main into the MBPS 18-inch force main. The capacity of the existing pump station is 650 gpm;
- Green Island Pump Station (GIPS): Located at the intersection of Green Island Road and Commerce Boulevard, the GIPS serves approximately 2.3 square miles. Flow is pumped via a 12-inch force main directly into the 18-inch force main located in Commerce Boulevard. The capacity of the existing pump station is 600 gpm;
- Tower Road Pump Station (TRPS): Located at the western end of Tower Road and adjacent to the Napa County Airport, the TRPS serves approximately 0.4 square miles. Flow is pumped directly into the 18-inch force main located adjacent to the railroad. The capacity of the existing pump station is 1,400 gpm; and
- Kimberly Pump Station (KPS): Located in the southwest corner of the City's service area, the KPS serves a small portion of the MBPS (0.06 square miles). Flow is pumped via a 4-inch force main in Kimberly Drive to the gravity sewer system, which flows northerly towards the MBPS. The capacity of the existing pump station is 175 gpm.

Pump stations convey flows to the WRF, which is located at the western edge of the service area adjacent to the Napa River. The WRF treats the wastewater to Title 22 standards and discharges to either the Napa River, via wetlands, or to the City's recycled water distribution system.

## 2.2 Scope

The purpose of this master plan is to create a new hydraulic model that reflects development that has occurred since the last update in 2001, and identifies system improvements needed to eliminate existing system deficiencies and to enhance the system to accommodate planned growth. Specifically this master plan achieves the following objectives:

- Evaluate hydraulic performance of the existing sewer collection system, including pipelines and pump stations;
- Update existing and projected future sewer flows based on the latest information available from the City; and
- Identify and prioritize capital improvement projects that address current system deficiencies and will meet projected buildout demands.

## 2.3 References

The following references were provided by the City and used in preparing this master plan:

- Wastewater Collection System Master Plan, West Yost & Associates (December 1996)
- Sanitary Sewer Analysis, Hydroscience Engineers (December 2001)
- Rio Del Mar Sanitary Sewer Project Technical Memorandum, Hydroscience Engineers (October 8, 2004)
- Bay Rock and Newell Scally Sanitary Sewer Impact Analysis Technical Memorandum, Hydroscience Engineers (June 28, 2005)
- Sanitary Sewer Flow Monitoring and Inflow / Infiltration Study, V&A (August 2014)
- Potable Water Master Plan, GHD (May 2016)

# 3. Utility Land Use Classifications

## 3.1 Utility Service Area

The City currently provides sewer service to customers located within the City limits, as well as the Airport Industrial Area and a few pockets within the unincorporated County area. Figure 3 shows the boundaries for the American Canyon City Limits and Sphere of Influence as published by LAFCO of Napa County.

The SSA covers the City of American Canyon and its sphere of influence, including the area extending north into the Airport Industrial Area to Fagan Creek. The service area also extends east of Highway 29 between Watson Lane to the south and Fagan Creek to the north in unincorporated Napa County. Figure 4 depicts the SSA as published by LAFCO of Napa County.

## 3.2 Utility Land Use Classifications

For the purpose of updating the utility master plans, the twenty land use categories listed under the City and County General Plans were consolidated into ten utility land use classifications in order to simplify the process of generating sewer demands. The ten classifications are described in Table 4. Figure 5 depicts the classifications spatially within the City’s water and sewer service areas and are based on the City of American Canyon’s published Zoning Map (2012) and the County’s Land Use Map from the 2009 General Plan (Figure AG/LU-3).

Table 4 Utility Land Use Classifications

Utility Land Use Classifications	Description
Single-family	Single family dwelling units (RE, RR, RS, SP-1SF)
Multi-family	Multi-family dwelling units (RM, RH, PC, SP-1CR)
Commercial	Sale or rental of goods and the provision of services other than classified as public or quasi-public or industrial (CN, CC)
Industrial	Onsite production of goods by methods not agricultural in nature, distribution, warehousing and storage activities, research and development, and vehicle and equipment services other than those classified as commercial (SP-2, L1, G1)
Institutional/Governmental	Public areas, including churches, schools, lodges, and government or public buildings (P)
Landscape	Parks and streetscapes
Open Space	Open space areas, creek areas, water quality basins and detention basins other than landscape (OS)
Watson Ranch	Designated area within the Watson Ranch SPA
Recreation	Areas designated for recreation other than landscape and open space (REC)
Agricultural	Areas used for agricultural production

### 3.3 Buildout Conditions

Buildout conditions assume that current plans for development projects in the planning and approval stages will be completed and that all other undeveloped land will be developed in accordance with the City Zoning Map and County Land Use Map. Currently identified projects in the planning and approval stages are described below based on information available as of December 2015.

#### 3.3.1 Watson Ranch

This project covers approximately 300 acres in the area shown in Figure 5. The proposed project includes residential neighborhoods with parks and an elementary school, and a mixed use commercial area with a hotel, winery, farmers market and restaurants. Figure 6 shows the Specific Plan Land Use Map from the *Watson Ranch Specific Plan – Administrative Draft* (November 2014) adjusted to the utility land use classifications listed in Table 4. Table 5 provides a breakdown of acres and units by utility land use classification.

Table 5 Proposed Watson Ranch Development Intensity <sup>1</sup>:

Utility Land Use Classification	Acres	Intensity
Single Family	163	1,030 Units
Multi-family	9	223 Units
Commercial	37	200-room Hotel 93.5 ksf Commercial
Landscape	50	Parks
Institutional/Governmental	10	Elementary School 600 Students

1. Acres and intensity from the *Watson Ranch Specific Plan – Administrative Draft* (November 2014).

#### 3.3.2 Highway 29 Priority Development Area (PDA)

The Highway 29 Priority Development Area is about 225 acres along the transportation corridor running north/south through the heart of American Canyon. The City’s Zoning Map is consistent with approved PDA land uses and Table 4 depicts the utility land use classifications for estimating future sewer flows, as based on future water demands.

#### 3.3.3 Miscellaneous Projects

Other proposed development projects that were in the planning and approval process as of July 2015 are listed in Table 6 along with estimated sewer flows. These projects will be incorporated into the buildout condition scenarios for the utility master plans.

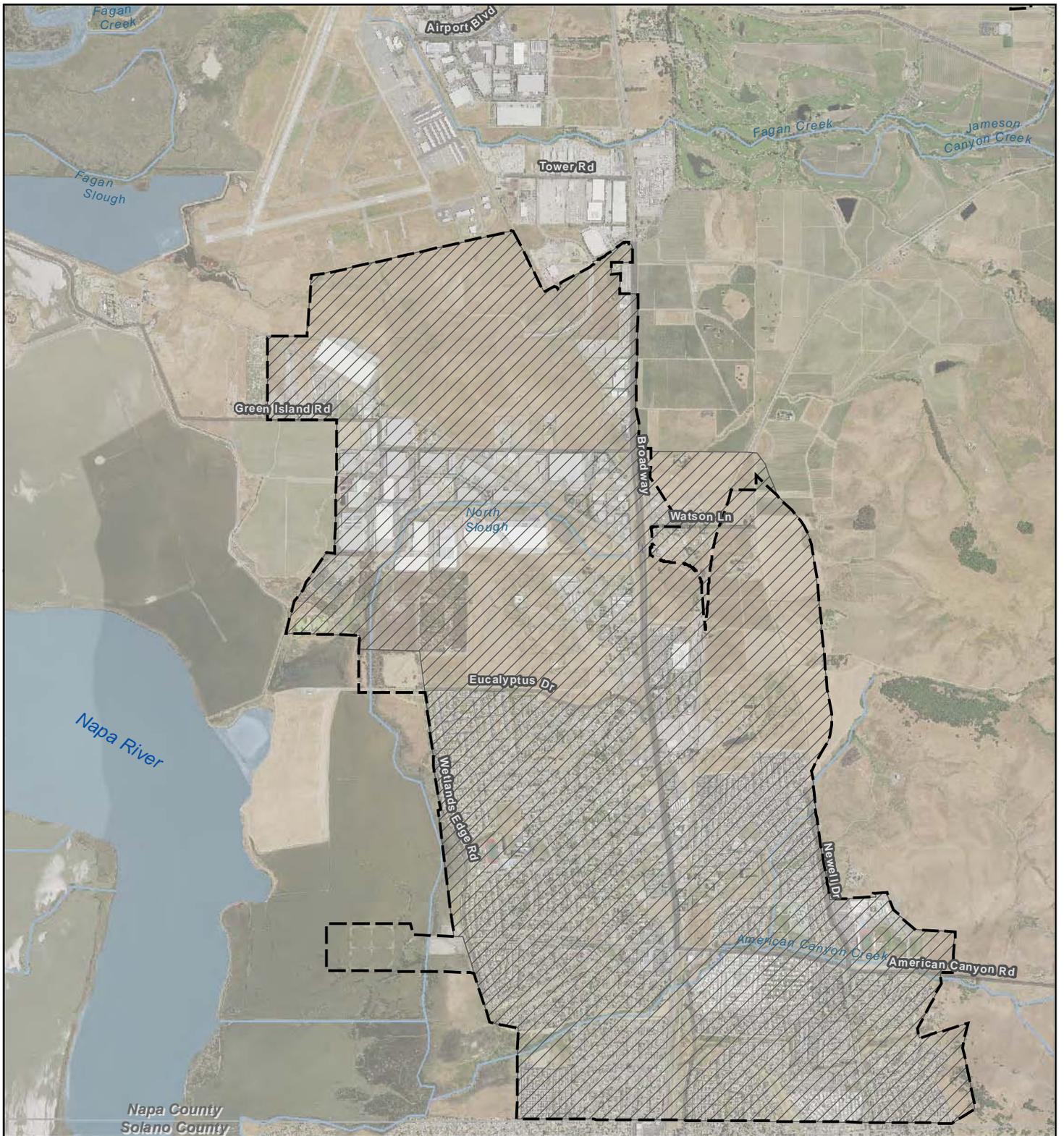
Table 6 Other Proposed Development Projects in Planning and Approval Phase

Project Name	Intensity and Zoning	Estimated Sewer Flow (gpd)
Napa Logistics Park	2,846 ksf Industrial	58,633
Napa Junction III (A-C)	18.5 ksf Commercial	2,544
	148 Apts. Commercial	22,923
	100-room Hotel Commercial	7,500
Village at Vintage Ranch	158 Apts. Multi-family	30,620
Napa Airport Corporate Center	5 Bldgs. Industrial	4,700
Canyon Estates	38 Homes	12,000
	Single Family	
Valley View	Senior Housing	15,300 <sup>1</sup>
	Multi-family	
255/256 Lombard Road	Industrial	1,900

1. Estimated.

### 3.3.4 Other Development

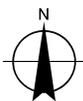
There may be other developments approved between now and General Plan buildout which have not yet been submitted for consideration. For undeveloped property that has the potential for development under the approved General Plans water demands and sewer flows will be estimated using gallons per day per acre based on average demands/flows for developed properties with the same utility land use classification.



-  City Limits
-  Sphere of Influence

**Source:**  
Sphere of Influence and City Limits,  
LAFCO of Napa County, 2013

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Map Projection: Lambert Conformal Conic  
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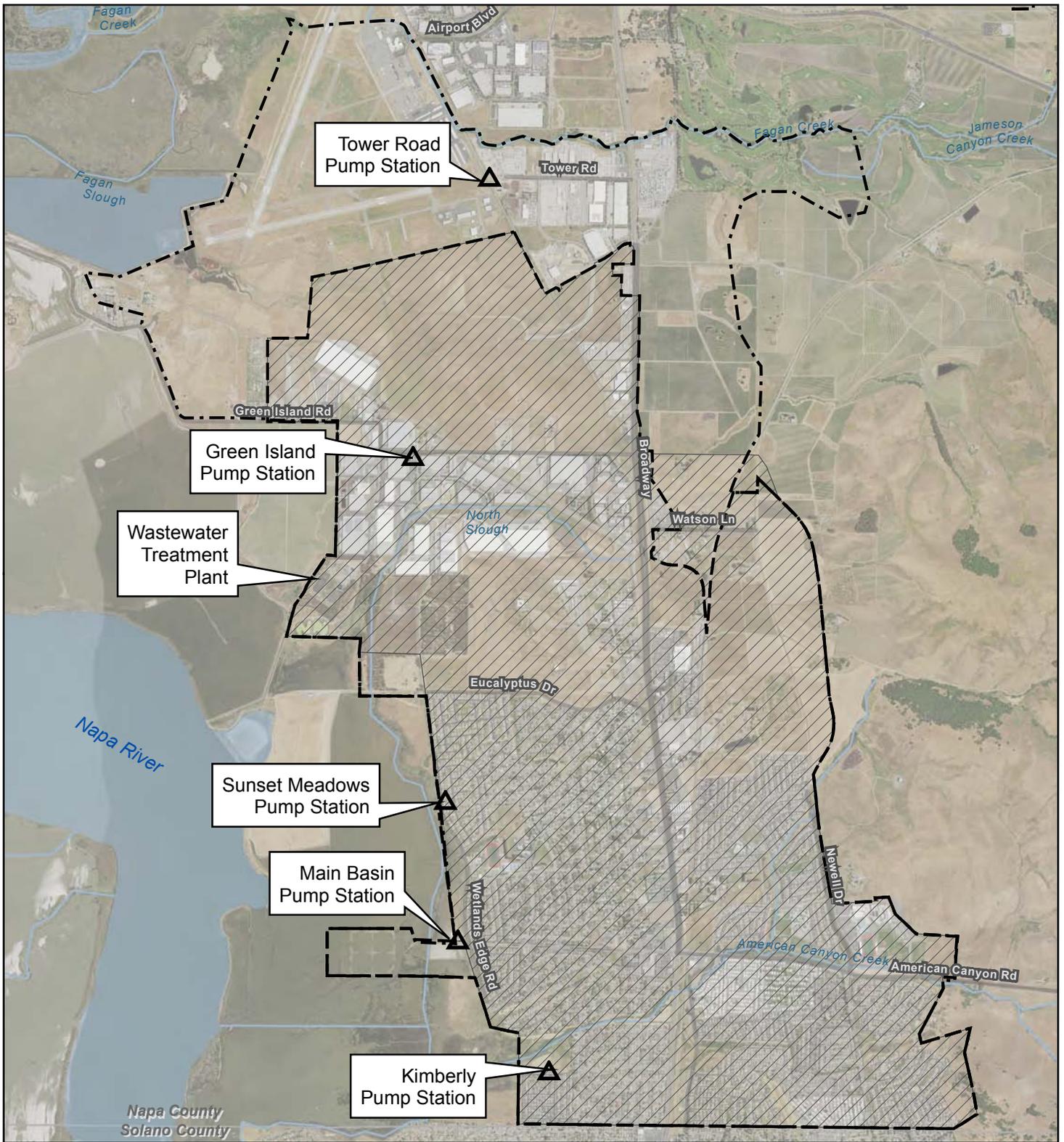


City of American Canyon  
Sewer Master Plan

Job Number | 8411338  
Revision | 2  
Date | 29 Apr 2016

### City Limits and Sphere of Influence

**Figure 3**



- City Limits
- Sanitary Sewer Service Area
- Sphere of Influence

Pump Station

**Source:**  
Sanitary Sewer Service Area,  
LAFCO of Napa County, September, 2014

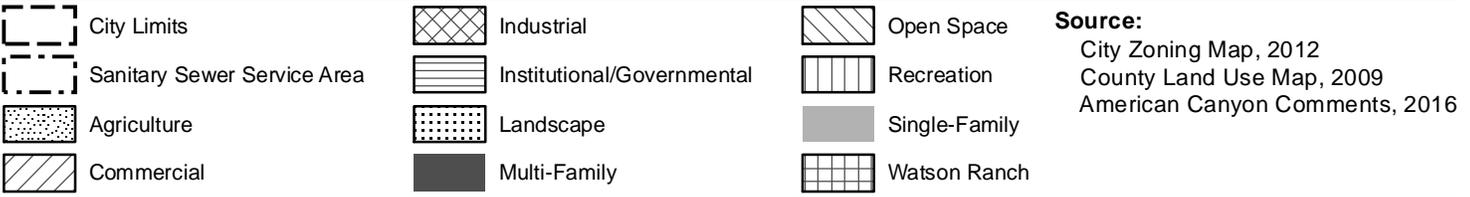
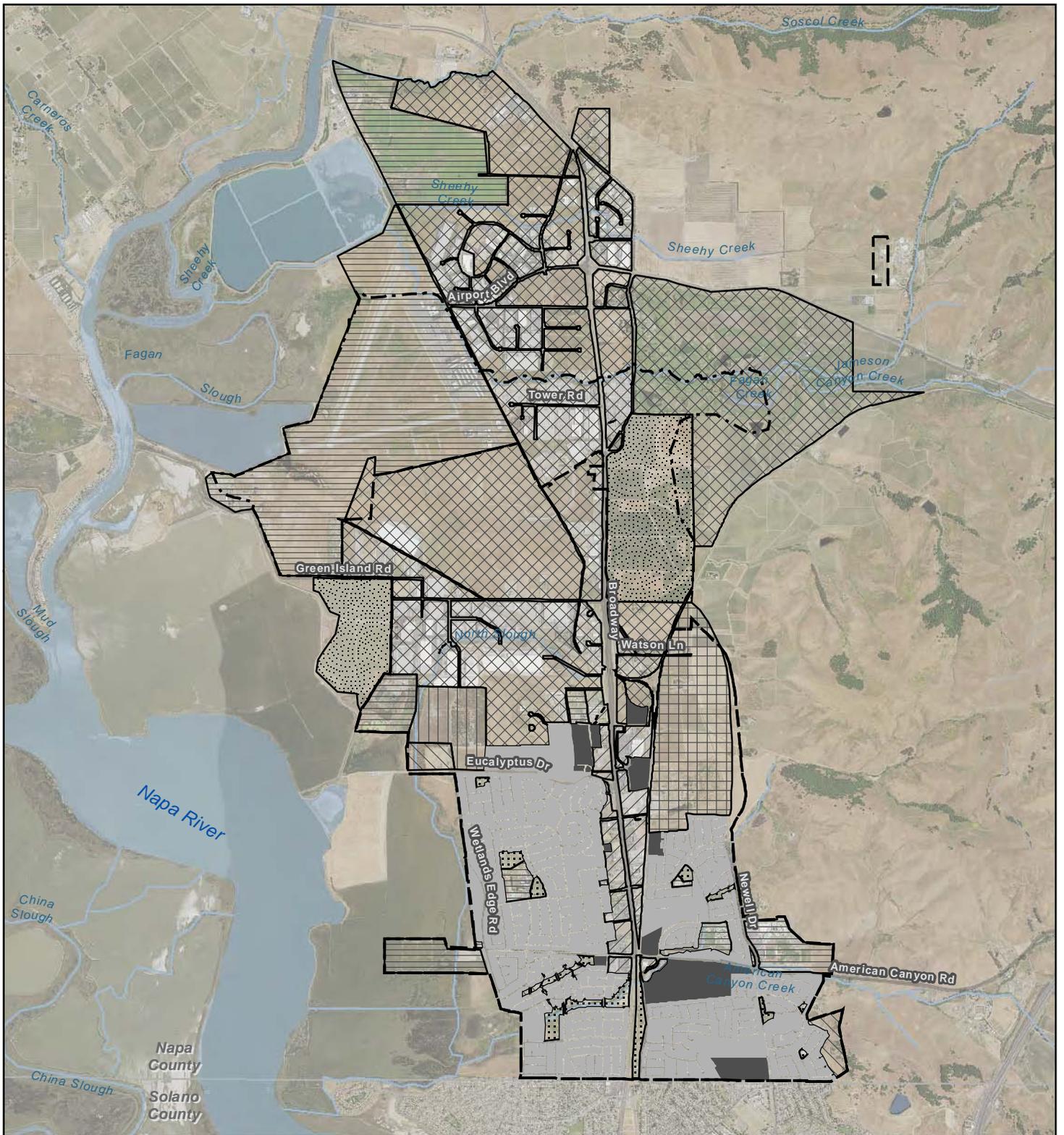
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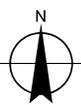
City of American Canyon  
Sewer Master Plan  
**Sewer Service Area**

Job Number | 8411338  
Revision | 2  
Date | 05 May 2016

**Figure 4**



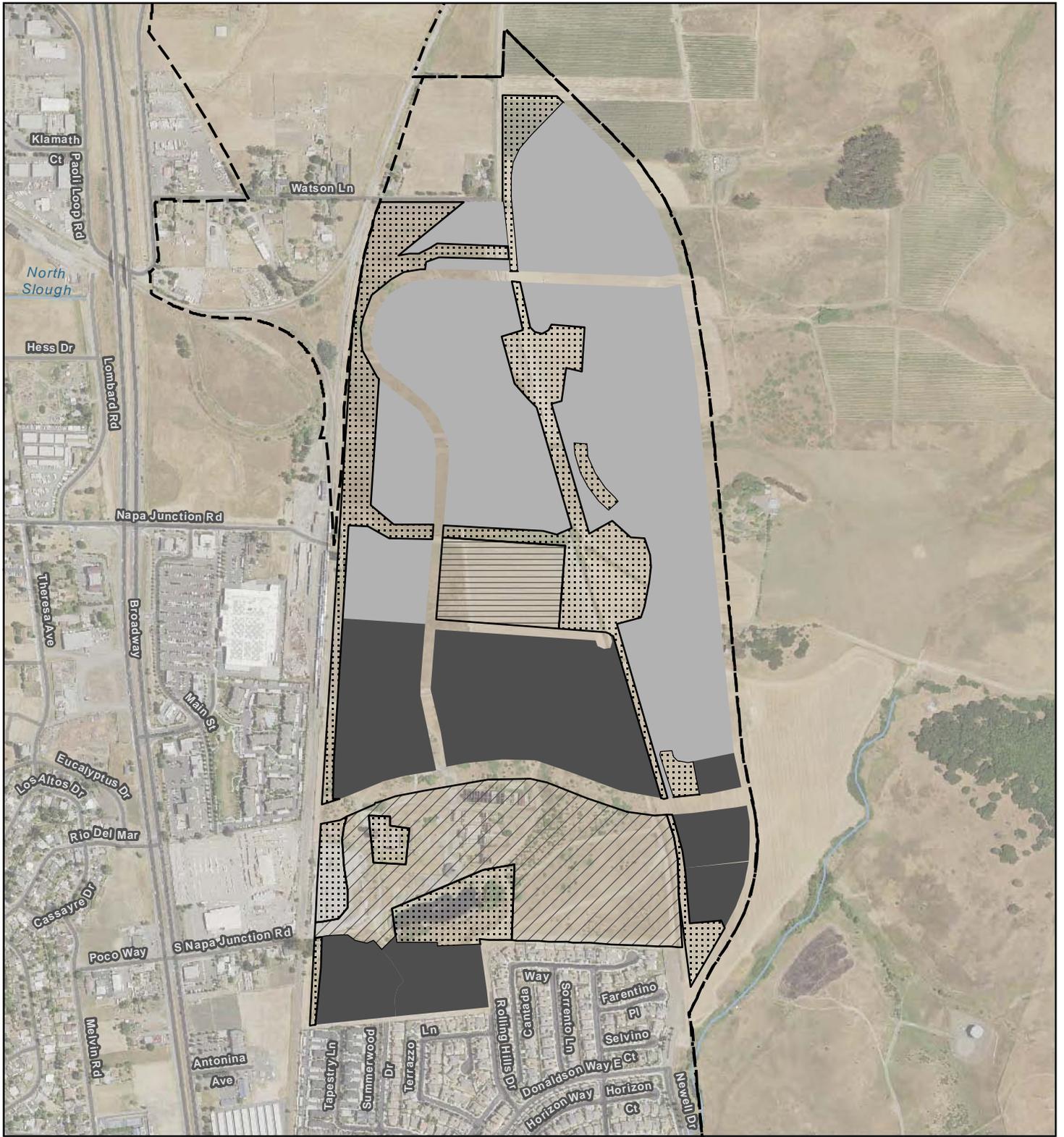
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City of American Canyon  
 Sewer Master Plan  
 Utility Land Use  
 Classifications

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 Date | 29 Apr 2016

**Figure 5**



- City Boundary
- Sanitary Sewer Service Area
- Commercial
- Institutional/Governmental
- Landscape
- Multi-Family
- Single-Family

**Source:**  
 Watson Ranch Specific Plan -  
 Administrative Draft, Nov 2014

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 Map Projection: Lambert Conformal Conic  
 Horizontal Datum: North American 1983  
 Grid: NAD 1983 StatePlane California II FIPS 0402 Feet



City of American Canyon  
 Sewer Master Plan

Job Number | 8411338  
 Revision | 2  
 Date | 29 Apr 2016

**Watson Ranch  
 Utility Land Use Classifications**

**Figure 6**

## 4. Planning and Evaluation Criteria

### 4.1 Background

The City has conducted planning and evaluation of the sewer collection system since its incorporation in 1992. In 1996, the City completed the *Wastewater Collection System Master Plan* (West Yost & Associates), for the purpose of establishing capital improvement projects that would eliminate existing system deficiencies and accommodate the growth projected in the City's General Plan. In 2001, the City completed the *Sanitary Sewer System Analysis* (HydroScience Engineers), which focused primarily on evaluating the system's ability to accommodate a 20-year, 24 hour design storm event as requested in the City's 2000 National Pollutant Discharge Elimination System (NPDES) permit for the WRF. Guidelines used in the planning and design of the sewer collection system were developed in these previous studies and updated as necessary for alignment with current industry norms.

The City's *Public Works Department Engineering Standard Plans and Specifications for Public Improvements (Standards)*, dated May 2005, includes minimum design standards for sewer facilities, particularly sewer mains and their appurtenances, primarily for new development. While the Standards adequately delineate guidelines for construction, they do not specifically address overall evaluation and performance of the collection system.

In addition, existing flow rates for the sewer collection system were documented in the *Sanitary Sewer Flow Monitoring and Inflow / Infiltration Study* (V&A, August 2014) and subsequent analysis. V&A's 2014 study focused on system hydraulics downstream of the proposed Watson Ranch development project and included flow monitoring and analysis for the Main Basin. Subsequent analysis included flow calculations for the City's other sewer collection system basins (i.e., Sunset Meadows and Industrial Area).

In order to perform the required hydraulic evaluation of existing and buildout sewer flow scenarios for the collection system and develop the Capital Improvement Plan (CIP), it is necessary to identify planning and evaluation criteria. Development of these criteria enables identification of deficiencies and to judge the effectiveness of alternative improvements. Planning and evaluation criteria include:

- Sewer flow peaking;
- Pipe flow depth to diameter ratio (d/D);
- Pipe material coefficient;
- Minimum and maximum pipe slope and flow velocity;
- Design rainfall event; and
- System reliability goals.

### 4.2 Planning Criteria

Planning criteria establish the minimum design standards for infrastructure improvements in the sewer collection system. Table 7 lists the planning criteria established for the City's sewer collection system.

Table 7 Sewer Collection System Planning Criteria

Item	Criteria
Flow Scenarios	<ul style="list-style-type: none"> <li>• Average Dry Weather Flow (ADWF) – the average dry weather wastewater flows (base flow)</li> <li>• Peak Dry Weather Flow (PDWF) – the highest diurnal base flow</li> <li>• Peak Wet Weather Flow (PWWF) – the highest rainfall induced wet weather flow</li> </ul>
Wastewater Flow Peaking Factors	<ul style="list-style-type: none"> <li>• Dry weather peaking factor = PDWF/ADWF</li> <li>• Wet weather peaking factor = PWWF/ADWF; also expressed as the infiltration and inflow (I/I) component of wet weather flow</li> </ul>
Pipe Material Coefficient (Manning’s “n” Value)	<ul style="list-style-type: none"> <li>• n = 0.013 for new and existing pipes</li> </ul>
Design Rainfall Event	<ul style="list-style-type: none"> <li>• 10-year, 24 hour recurrence event</li> </ul>

#### 4.2.1 Flow Scenarios and Sewer Flow Peaking Factors

Sewer flows were developed by V&A in its August 2014 report and subsequent analysis for the collection system. This included the development of ADWF, PDWF, and PWWF, which were used to develop flow rates for the hydraulic model. Peaking factors were then determined as the ratio between the ADWF, PDWF, and PWWF prepared in V&A’s work. These peaking factors were used in lieu of reference standards as they are based on actual City sewer collection system performance as measured between January and March 2014.

Hydraulic modeling for existing conditions used the flows and corresponding peaking factors determined by V&A. The peaking factors were then used to determine PDWF and PWWF for modeling of future conditions, wherein ADWF was determined through analysis of land use water demand converted to sewer flow and that base flow was adjusted using the peaking factors.

A description of each flow rate presented in V&A’s analysis and that was used in hydraulic modeling for this master plan is provided below.

##### ***Average Dry Weather Flow (ADWF)***

ADWF is the normal anticipated dry weather sewer flow. ADWF was determined for each sewer basin by V&A through its flow monitoring analysis of the sewer system.

##### ***Peak Dry Weather Flow (PDWF)***

PDWF is the peak base flow that occurs during a typical diurnal variation. PDWF was determined by V&A through its flow monitoring analysis of the sewer collection system. The range of dry weather peaking factors for the City that resulted from V&A’s flow analysis was 1.33 to 1.75.

##### ***Peak Wet Weather Flow (PWWF)***

PWWF is the sum of the PDWF and peak I/I flow. PWWF was determined by V&A through its flow monitoring analysis of the sewer collection system.

Per City Standards, I/I is assumed at a rate of 4,000 gallons per day per inch-diameter-mile (GPDIDM) for sewer mains and laterals, which converts to approximately 2.8 gallons per minute per inch-diameter mile (GPMIDM). V&A’s analysis estimated I/I distribution at 6 to 55 GPMIDM. The

large range can be attributed to differences between portions of the sewer collection system, including factors such as system age and pipe material.

The 1996 master plan used historical I/I rates to estimate an I/I rate of 600 gallons per day per acre (GPDA). For comparison of this I/I rate to GPMIDM, the I/I rate for the 1,534-acre Main Basin would be 2.0 GPMIDM. Based on flow monitoring, V&A estimated I/I distribution in the Main Basin at 13.9 GPMIDM, which is substantially higher than the 1996 estimate.

#### 4.2.2 Pipe Material Coefficient (Manning's "n" Value)

Pipe capacity depends on many factors, including slope, pipe roughness, and the pipe shape. The Continuity Equation and the Manning Equation for steady-state flow are used to calculate flow in a sewer pipe. The Manning coefficient "n" is a friction coefficient and varies with respect to pipe material, size of pipe, depth of flow, smoothness of pipe and joints, and extent of root intrusion. For sewer pipes, the Manning coefficient "n" typically ranges between 0.011 and 0.017.

City Standards specify a Manning's "n" value of 0.015 for existing sewer mains and 0.013 for new mains. The 1996 master plan used a 0.013 "n" value.

The typical Manning's "n" factor found during research was  $n=0.013$ . This factor is relatively conservative for new sewers and accepted by general engineering practice for evaluation of existing sewers. The following sewer agencies use a Manning's "n" of 0.013 for existing and new mains: Napa Sanitation District, Dublin San Ramon Services District, Union Sanitary District, City of Vacaville, City of Santa Rosa, City of Rohnert Park, City of Healdsburg, and Town of Windsor.

Use of the City's Standard of 0.015 for existing sewer mains, together with the d/D standard presented in Section 4.3 may present overly conservative estimates of hydraulic deficiency in the sewer collection system.

Manning's "n" value of 0.013 is used in this master plan for evaluation existing and new sewer mains.

#### 4.2.3 Design Rainfall Event

Modeling analyses are based on a design rainfall event, defined as the rainfall associated with a specific return frequency rain event. Design rainfall events typically are 10-year events (a storm event likely to occur once in ten years), although some sewer agencies consider a 20-year event for large trunk sewers. The duration of the event used for modeling purposes can vary from 4 to 24 hours, or longer, as based on review of the contribution of I/I to the collection system. For example, a collection system with a high contribution of infiltration is best represented by a longer duration, typically 24 hours.

The 1996 master plan (West Yost) used a 5-year, 4 hour design storm event, as that was the design storm used by the City for prior master planning analyses (CH<sub>2</sub>Mhill 1996 I/I Reduction Analysis). That storm event was selected based on correlation with the peak I/I rate for the Main Basin between the 1996 I/I Reduction Analysis and estimated peak I/I rates prepared by West Yost using circular chart records from the Parshall Flume at the Main Basin Pump Station.

V&A's synthetic hydrograph analysis, which was based on flow monitoring data collected in 2014, produced a good correlation with a 10-year, 24 hour design storm event per the NOAA Precipitation-Frequency Atlas of the Western United States (NOAA Atlas). V&A's report also notes a good fit for the 10-year, 24 hour design storm event with NOAA Atlas 2-hour and 6-hour durations.

#### 4.2.4 Pump Stations and Force Mains

The following criterion applies to the City’s sewer pump stations and force mains:

- Firm Capacity: PWWF served with largest pump out of service and primary power down
- No. of pumps: duty pumps as needed for range of flows, two minimum; one standby
- Force Main Flow Velocity: Maximum velocity at 7 fps

### 4.3 Evaluation Criteria

Evaluation criteria set the minimum conditions that must be met for the sewer collection system include pipe capacity and flow velocity. Table 8 lists the evaluation criteria established for the City’s sewer collection system.

Table 8 Sewer Collection System Evaluation Criteria

Item	Criteria
Pipe Capacity (d/D Ratio)	<ul style="list-style-type: none"> <li>• Capacity of gravity sewers calculated by the Manning Equation</li> <li>• d/D = 0.75 for sewer mains 10-inch diameter and smaller</li> <li>• d/D = 0.5 for sewer mains 12-inch diameter and greater</li> </ul>
Minimum and Maximum Pipe Slopes and Flow Velocities	<ul style="list-style-type: none"> <li>• Minimum velocity = 2.5 feet per second (fps) for gravity mains flowing full</li> <li>• Minimum slope = 0.5% for 8” gravity mains</li> <li>• Maximum slope = 15% for gravity mains</li> <li>• Maximum velocity = 7 fps for force mains</li> </ul>

#### 4.3.1 Pipe Capacity (d/D Ratio)

- The design capacity of a pipeline is often determined by a set ratio of the design flow depth “d” to the pipeline diameter “D”, or “d/D”. When designing gravity sewer pipelines, it is common practice to set flow depth criteria by the size of the pipeline. Design d/D ratios typically range from 0.5 to 0.9. The maximum capacity of gravity sewers occurs at a d/D ratio of about 0.9, but using something less provides a safety factor for the potential build-up of solids before scheduled maintenance can occur, regardless of the pipe diameter.
- City Standards conform to this typical range and are used in this master plan. Standards include a d/D ratio of 0.75 for new sewer mains 10-inch diameter and smaller and 0.5 for sewer mains 12-inch diameter and greater.

#### 4.3.2 Minimum and Maximum Pipe Slopes and Flow Velocities

Per City Standards, and as used for this master plan, the minimum slope for 8-inch sewers is 0.5%, or 0.5 feet per 100 feet. The minimum design slope for larger diameter sewers is based on achieving a minimum flow velocity of 2 fps when the pipe is flowing full. Hydraulic evaluation of the existing sewer collection system uses PDWF velocity to identify areas with low velocity which require additional cleaning or maintenance. The maximum slope for gravity sewers is 15%, or 15 feet per 100 feet. The minimum slope for sewer laterals is 2.0%, or 0.25 feet per foot.

City Standards do not specifically address maximum velocity in sewer pipelines. Maximum velocity is typically not recommended to exceed 7 fps for gravity and force mains due to the potential for liquids and solids to separate in the flow.

# 5. Sewer Flows

## 5.1 Methodology

Estimated flows for the City's sewer collection system are based on various data including water billing records, flow monitoring data collected by V&A Consulting Engineers (V&A) in 2014, WRF flow data, and land use information for planned developments provide by the City.

For hydraulic evaluation of the wastewater collection system, PDWF and PWWF are loaded into model scenarios for existing and future conditions. The PDWF and PWWF for existing conditions are based on the flow monitoring work performed by V&A with the PWWF normalized to the design storm. The PDWF for each basin is then distributed throughout each basin based on the distribution of indoor potable water demand established from water billing records. Estimated I/I is distributed by inch-diameter-mile of pipe in each basin. Having the base and peak flows established for existing conditions, estimated base flows for future development are then added to simulate the buildout conditions.

The sewer collection system is split into three primary sewer basins shown in Figure 7. Sewer flow patterns vary in each sewer basin, with the base and peak flows varying depending on several factors including land use type (i.e., industrial vs. residential customers) for base flows and the condition of the existing sewer mains for peak flows. Therefore each basin has its own unique base flows and peaking factors that are established from measured flows.

### 5.1.1 Flow Meter Data

Flow meter data provides the basis for the cumulative base and peak flows in each collection system sewer basin. V&A prepared estimates for base flow (ADWF), PDWF, and PWWF for the Main Basin and Sunset Meadows Basin following the flow monitoring effort that was conducted between January 15 and March 6, 2014. The flow meter data recorded by V&A correlates to the City's WRF influent meter data for the same time period. For the Industrial sewer basin V&A used the City's flow meter at the WRF to determine ADWF, PDWF and PWWF in that basin. V&A's *Sanitary Sewer Flow Monitoring and Inflow / Infiltration Study (2014)* and subsequent analysis for the Industrial Basin are provided in Appendix A.

The V&A flow meter data captures one major storm event that occurred from February 6 to 9, 2014 that generated significant I/I flows. With the diurnal base flows already established, the I/I component could be isolated for each basin. I/I flow is based on a synthetic hydrograph analysis for a 10-year return frequency, 24-hour duration design storm event, with NOAA data providing the basis for the 10-year, 24-hour rainfall total. Having established the normal dry weather diurnal flow patterns in each basin the peak wet weather I/I component for the design storm is added to the PDWF to establish the PWWF.

### 5.1.2 Water Billing Records

Water billing records provide the basis for distributing ADWF within each sewer basin. Records for the period August 2013 through July 2014 are used to establish recent water demand patterns and additional analysis is performed to differentiate between winter demands (December through February) and summer demands (July through September). From this analysis and discussions with City staff to identify process water demands for industrial customers, estimated indoor water demands are estimated for each account. Estimated indoor water demands for each customer are used as the basis for distributing ADWF sewer flows within each basin.

Commercial and industrial customers utilizing process water are generally located in the northern portion of the City's sewer service area, within the Industrial sewer basin. Process water accounts for approximate forty-five percent of the water demand in this basin. Process water was subtracted from potable water demands when determining indoor water use and sewer flows.

### 5.1.3 Hydraulic Model Flow Distribution

Distribution of flows within the collection system for hydraulic modeling is based on two factors:

1. Measured base flows for each sewer basin were distributed based on indoor water use determined from evaluation of water billing data.
2. I/I flows are distributed within each sewer basin based on inch-diameter-mile of pipe. This methodology is modified in some locations where specific information was provided by the City that would scale I/I flows up or down (i.e., areas of known high wet weather flow).

Base flows are aggregated into model nodes by associating nodes (i.e., manholes) with contributing parcels. The PDWF is calculated by using the peaking factors measured by V&A in each basin and applied to ADWF for the node. The I/I component is added to the pipelines.

### 5.1.4 Future Conditions

For the General Plan buildout scenario the existing wastewater flows are updated to account for planned development projects and buildout of undeveloped parcels in accordance with the City's zoning map. Development projects in the planning and approval phase as of December 2015 were identified by the City including estimated wastewater flows for each project. Wastewater flows for undeveloped parcels are projected based on unit demand factors estimated from indoor water demands by utility land use category. In aggregate, these modified demands represent the buildout scenario.

Peaking factors for dry weather flow are based on existing conditions peaking factors. I/I flows are assumed to remain constant within each sewer basin, even though the number of pipelines and potential sources for I/I increases with development. This assumption is based on increases in I/I from new development and elsewhere in the collection system being countered by decrease in I/I from repair and rehabilitation of the wastewater collection system. It is assumed that over time the City will manage the system such that I/I does not increase.

## 5.2 Existing Sewer Flows

The following section provides a summary of existing sewer flows for each sewer basin. Flows are presented in ADWF, PDWF, and PWWF. Various factors are also provided to give context to these base and peak flows, including the estimated quantity of wet weather flow contribution (Peak I/I) and the ratio between PWWF and ADWF. Sewer flow unit demands are also provided for each utility land use classification to provide a basis for determining future condition flows.

### 5.2.1 Summary of Existing Sewer Flows

Sewer flow rates for each sewer basin are presented in Table 9. An estimation of I/I flow was determined by V&A through the evaluation of metered flows and the preparation of 10-year, 24-hour design storm synthetic hydrograph for each basin. The ratio between PWWF and ADWF provides insight regarding general collection system capacity within a sewer basin, wherein the higher the ratio, the higher the likelihood for capacity deficiencies.

Table 9 Existing Condition Sewer Flow Rates <sup>1</sup>

Sewer Basin	ADWF (mgd)	PDWF (mgd)	Peak I/I (mgd)	PWWF (mgd)	PWWF / ADWF
Main Basin 1	0.030	0.040	0.390	0.430	14.3
Main Basin 2	0.120	0.210	0.260	0.470	3.9
Main Basin 3	0.100	0.160	0.980	1.140	11.4
Main Basin 4	0.410	0.710	2.410	3.120	7.6
Sunset Meadows 1	0.220	0.370	4.270	4.640	21.1
Sunset Meadows 2	0.073	0.121	0.433	0.554	7.6
Industrial	0.197	0.325	1.507	1.832	9.3
Totals	1.150	1.936	10.25	12.19	-

1. Flows recorded by V&A from Jan 15 to Mar 6, 2014. I/I rates normalized to 24-hour, 10-year design storm.

Approximately 40 percent of the total sewer collection system I/I is found in the Main Basin, or 80 percent when including wet weather overflow into the Main Basin from Sunset Meadows 1 Basin. The ratio of PWWF to ADWF, or wet weather peaking factor, is highest in Sunset Meadows 1 Basin, which makes that basin a high priority for identifying potential capacity deficiencies and I/I rehabilitation projects.

### 5.2.2 Evaluation of Sewer Flows

Existing base sewer flow rates (ADWF) by utility land use category are provided in Table 10 on a “per acre” basis. They represent the average of the ADWF per acre for each parcel served within the utility land use category.

Table 10 Existing ADWF by Utility Land Use Classification

Utility Land Use Classification	Total Parcels Served (acres)	ADWF (gpd/acre)
Single-family	834	1,008
Multi-family	89	657
Commercial	132	1,283
Industrial	566	247
Institutional/Governmental	100	179
Landscape	0	0
Open Space	0	0
Watson Ranch <sup>1</sup>	11	50
Commercial	0	0
Agricultural <sup>2</sup>	241	<1

1. Includes existing residence on two of the Watson Ranch parcels.

2. Includes existing residence on the Green Island Vineyard parcel.

### 5.3 Future Sewer Flows

Future flows are based on planned development projects and buildout of undeveloped parcels in accordance with the City’s zoning map. Anticipated development includes completion of the Watson Ranch and Napa Valley Ruins & Gardens project, buildout of the Highway 29 Priority Development Area, completion of known development projects currently in the planning and approval process, and buildout of undeveloped parcels. Future ADWF for known projects utilized estimated flows provided by the City. For all other undeveloped parcels where future flows are unknown, future

ADWF is estimated by using projected potable water indoor use by utility land use classification from the PWMP. Figures 8 through 10 show the locations of the projects and parcels contributing to future sewer flows. ADWF unit flows are converted to PDWF based on peaking factors determined by V&A for existing conditions.

Peak I/I flows for the design storm are assumed to remain constant within each sewer basin, where potential increases are offset by system rehabilitation projects completed by the City to remove I/I. The City may even reduce I/I in Sunset Meadows 1 Basin or Main Basin 4 over time, but since development could occur faster than I/I reduction it is assumed that it will remain unchanged for modeling hydraulic conditions.

### 5.3.1 ADWF Unit Flows by Utility Land Use Classification

- ADWF unit flows for future development are presented in Table 12. These unit flows are applied in all cases of new development except for development projects in the planning and approval stages, where projected flows have already been established with the City. They are equivalent to the potable water indoor use factors stated in the City's PWMP.

Table 11 ADWF Unit Flow Factors for Future Development

Utility Land Use Classification	ADWF <sup>1</sup> (gpd/acre)
Single-Family	1,415
Multi-Family	2,800
Commercial	900
Industrial	370
Institutional/Governmental	170
Watson Ranch	-

1. ADWF unit flow factors are based on indoor potable water use as presented in the City's PWMP, Table 12.

- Unit flows are typically applied on a per acre basis to undeveloped parcels based on utility land use classifications. Unit flows are not established for landscape, open space, recreation, and agricultural land use classifications.

### 5.3.2 Watson Ranch

Watson Ranch is a mixed-use project which consists of approximately 300 acres east of the railroad tracks, north of Vintage Ranch and south of Watson Lane, as shown in Figure 8. Future sewer flows for Watson Ranch were estimated using information provided by the City for the *Watson Ranch Specific Plan – Administrative Draft, Table 2-3* (November 2014) as a guideline. Table 13 provides a summary of the estimated sewer ADWF by utility land use classification. Estimated ADWF was assigned to parcels based on percent of total area for the project.

Table 12 Estimated Sewer ADWF for Watson Ranch

Utility Land Use Classification	Units	Acres	ADWF (gpd)	ADWF (gpd/acre)
Single-Family	1,030	163	273,980	1,680
Multi-Family	223	9	35,680	3,965
Commercial	-	37	22,821	617
Institutional/Governmental	-	10	3,600	360
<b>Total</b>			<b>336,081</b>	

### 5.3.3 Highway 29 Priority Development Area (PDA)

The Highway 29 Priority Development Area (PDA) consists of development along the Highway 29 Commercial Corridor, as shown in Figure 8. Future development within the PDA was estimated by identifying undeveloped parcels and then calculating ADWF for those parcels based on utility land use classification and corresponding unit flow factors from Table 12. A summary of existing and buildout flows for the PDA is provided in Table 14.

Table 13 Estimated Sewer Flow ADWF for Highway 29 PDA

Utility Land Use Classification	Existing Conditions		Buildout Conditions	
	Acres	ADWF (gpd)	Acres	ADWF (gpd)
Multi-Family	8	3,306	18	29,810
Commercial	104	66,654	143	101,205
Industrial	14	51	144	4,097
Institutional/Governmental	7	264	8	1,739
<b>Total</b>	<b>133</b>	<b>70,275</b>	<b>313</b>	<b>136,851</b>

### 5.3.4 Other Known Development Projects

The City provided estimated future flows for several known development projects currently in the planning and approval stage. These projects are shown in Figure 9 and the estimated ADWF as of December 2014 is presented in Table 15.

Table 14 Estimated Sewer Flow ADWF for Other Known Projects

Other Known Development Projects	Acres	ADWF (gpd)
Napa Logistics I & II	218	35,178
Napa Junction III (A-C)	17	32,967
Village at Vintage Ranch	8	30,620
Napa Airport Corporate Center	37	4,700
Canyon Estates	70	12,000
Valley View Senior Housing <sup>1</sup> :	3	8,400
255 Lombard	3	275
265 Lombard	3	305
<b>Total</b>	<b>359</b>	<b>124,445</b>

1. Estimated based on 3 acres of Multi-Family demand.

The City is considering building a winery waste receiving station at the location of the Tower Road Lift Station. The waste would be hauled from interested wineries to the City's facility in tanker trucks, and then pumped into the collection system for conveyance to the WRF for treatment. The City would control the number of vehicles received on any given day, and the timing of when they would be received. The hydraulic model assumes a 250 gpm future loading rate for the facility.

### 5.3.5 Undeveloped Parcels

Undeveloped parcels as of July 2014 that are not otherwise included in another development project were assumed to be developed for the buildout scenario. For these parcels, the acreage was multiplied by the unit demand factor for the appropriate utility land use classification in order to estimate the ADWF. Table 16 presents the estimated ADWF for undeveloped parcels by utility land use classification.

Table 15 Estimated Sewer Flow ADWF for Undeveloped Parcels

Undeveloped Parcels	Acres	ADWF (gpd)
Single Family	54	76,679
Industrial	393	141,608
Watson Lane Annexation <sup>1</sup>	11	12,427
<b>Total</b>	<b>458</b>	<b>239,114</b>

1. Two parcels at north end of Watson Ranch are not included in the Specific Plan.

## 5.4 Summary of Sewer Flows

A summary of the existing and buildout sewer flows is presented in Table 17. According to the *Final Urban Water Management Plan, 2010* the population of the City under buildout conditions will be 30,426. This equates to a per capita ADWF of 62 gpd. Table 18 provides flow rates for buildout conditions by sewer basin.

Table 16 Summary of Sewer Flows

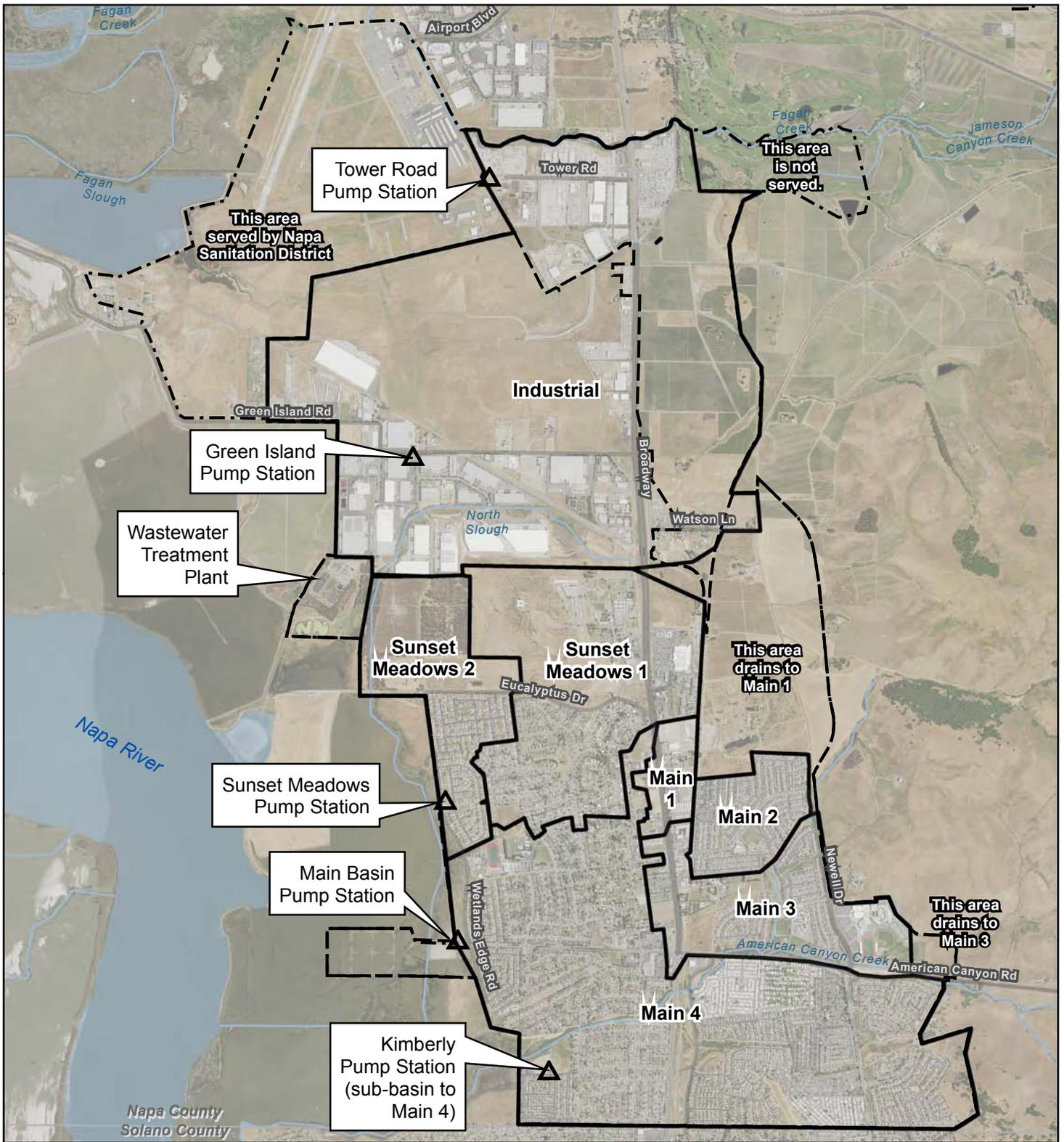
Utility Land Use Classification	Existing Conditions		Buildout Conditions	
	Acres Served	ADWF (gpd)	Acres Served	ADWF (gpd)
Single-Family	827	750,130	951	838,809
Multi-Family	96	73,221	132	171,711
Commercial	132	116,134	171	150,685
Industrial	566	191,540	1,243	381,215
Institutional/Governmental	100	12,585	109	14,061
Landscape	0	0	0	0
Open Space	0	0	0	0
Watson Ranch	11	267	302	336,114
Recreation	0	0	0	0
Agricultural	241	62	241	62
<b>Total</b>	<b>1,973</b>	<b>1,143,939</b>	<b>3,149</b>	<b>1,892,658</b>

Table 17 Buildout Conditions Sewer Flow Rates

Sewer Basin	ADWF (mgd)	PDWF (mgd)	Peak I/I (mgd)	PWWF (mgd)	PWWF / ADWF
Main Basin 1	0.378	0.504	0.390	0.894	2.4
Main Basin 2	0.132	0.231	0.260	0.491	3.7
Main Basin 3	0.140	0.225	0.212	0.437	3.1
Main Basin 4	0.414	0.717	2.410	3.127	7.6
Sunset Meadows 1	0.372	0.626	4.270	4.896	13.2
Sunset Meadows 2	0.102	0.169	0.433	0.602	5.9
Industrial	0.575	0.948	1.507	2.455	4.3
Totals	2.113	3.420	9.48	12.90	-

With I/I assumed to remain constant from existing to buildout conditions, the wet weather peaking factor (PWWF/ADWF) is lower for each basin (i.e., Main Basin 1 reduced from 14.3 to 2.4).

Maintaining I/I levels within the sewer collection system allows for growth (increase in ADWF). I/I contribution for the hydraulic model remains the highest in the Sunset Meadows 1 Basin (Rio Del Mar area).



- City Limits
- Sanitary Sewer Service Area
- Sewer Basins
- Pump Station

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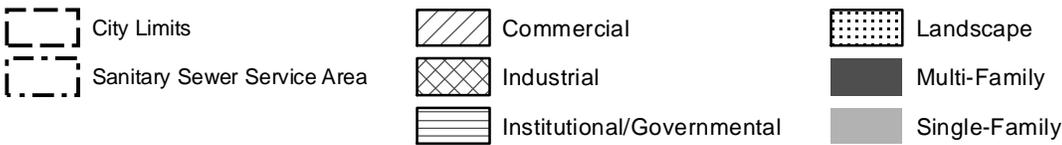
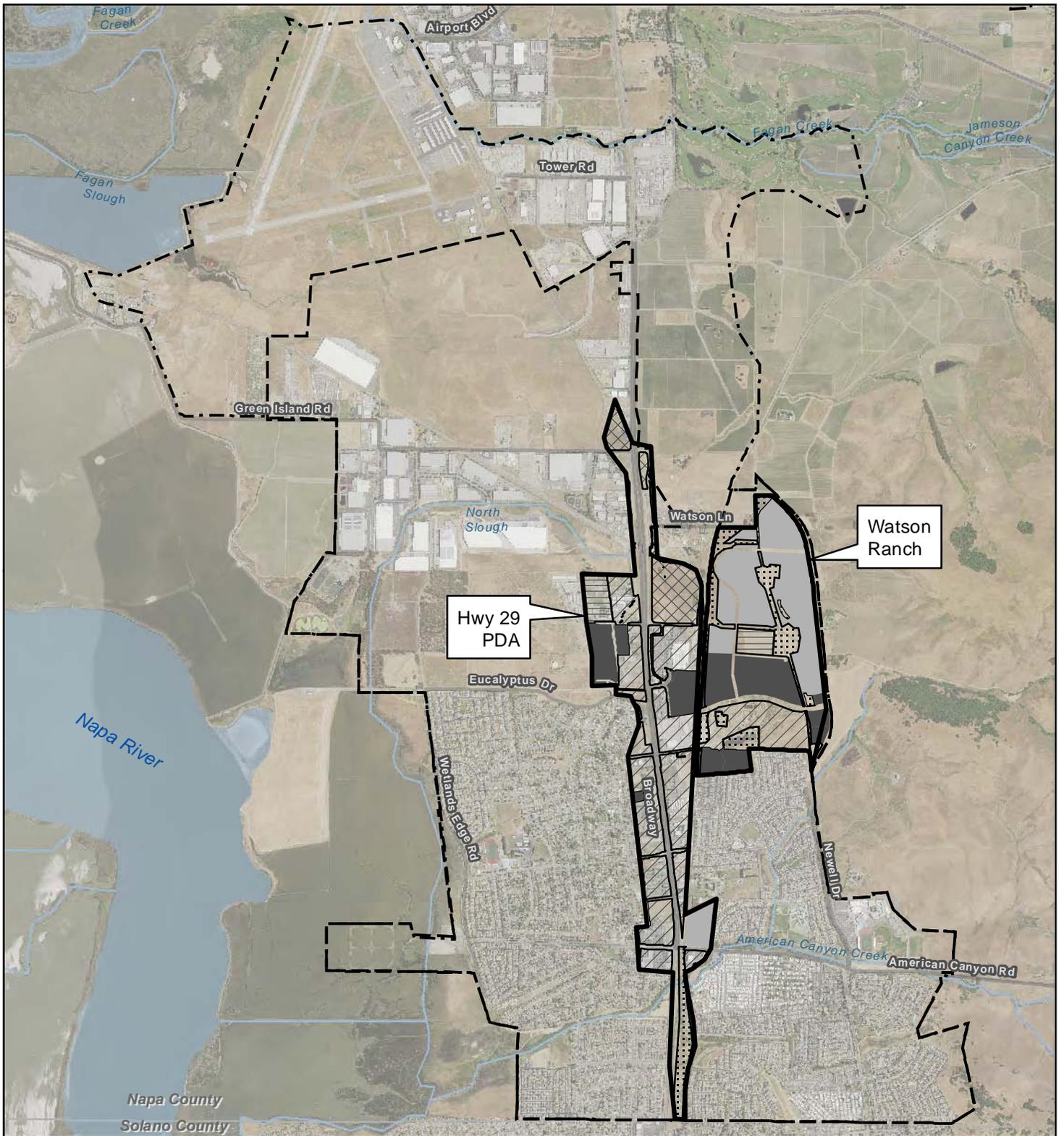


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Sewer Basins

Figure 7



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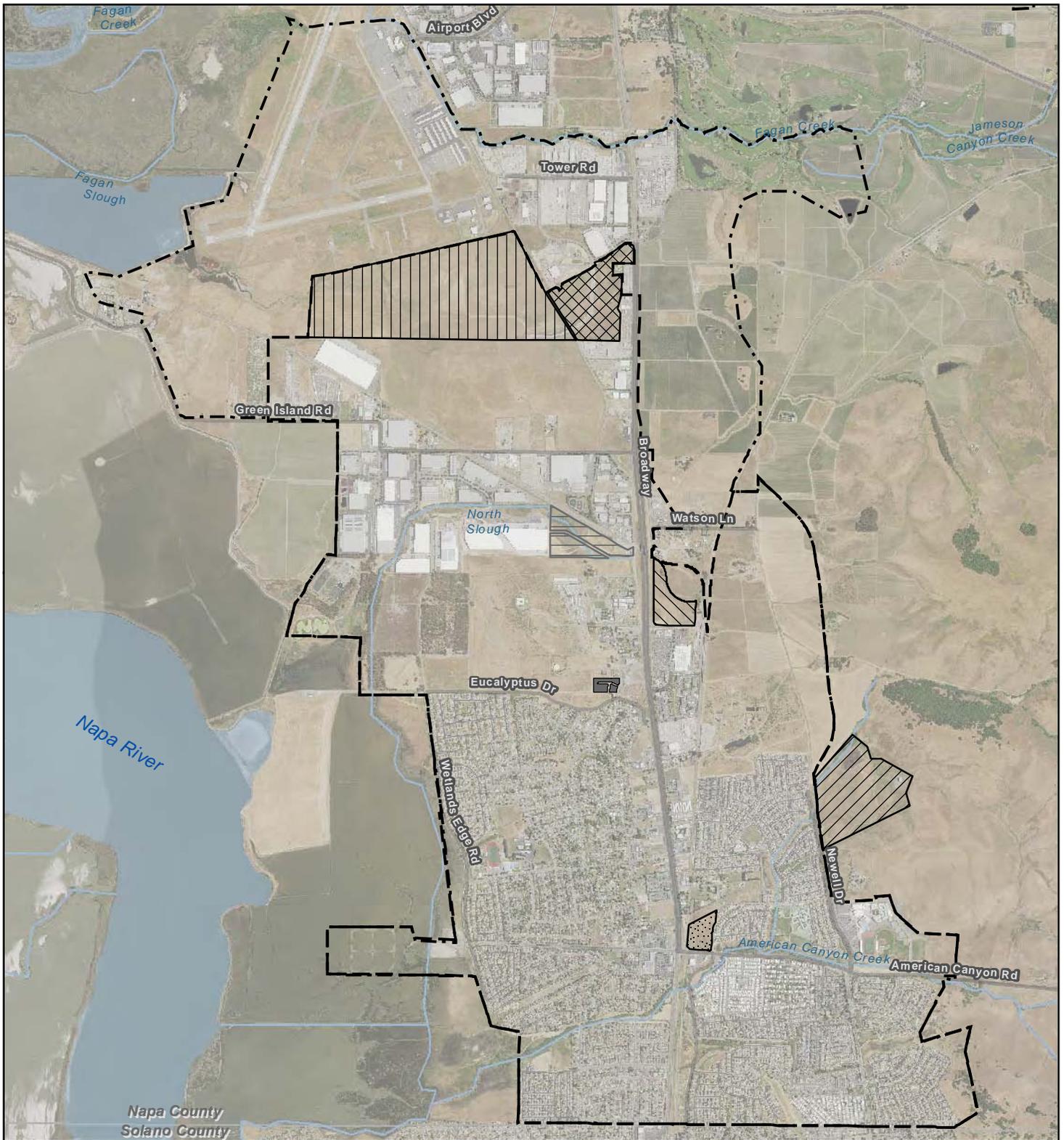


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### Watson Ranch and PDA Developments

**Figure 8**



- |  |                             |  |                               |  |                          |
|--|-----------------------------|--|-------------------------------|--|--------------------------|
|  | City Limits                 |  | Canyon Estates                |  | Napa Logistics I & II    |
|  | Sanitary Sewer Service Area |  | Napa Airport Corporate Center |  | Valley View              |
|  | 255/256 Lombard             |  | Napa Junction III             |  | Village at Vintage Ranch |

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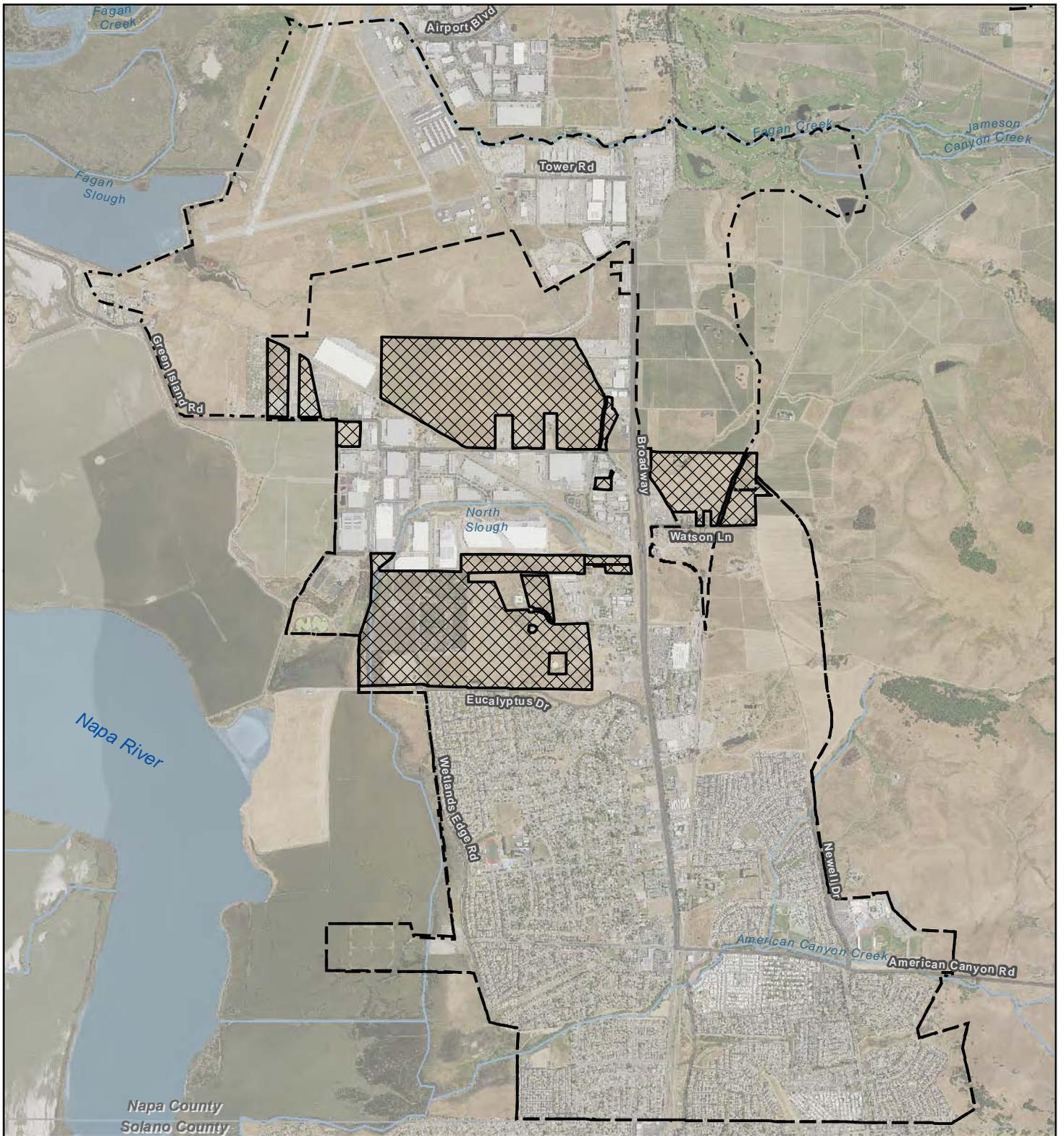


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Other Known  
 Development Projects

Figure 9



- City Limits
- Sanitary Sewer Service Area
- Undeveloped Parcels

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 Map Projection: Lambert Conformal Conic  
 Horizontal Datum: North American 1983  
 Grid: NAD 1983 StatePlane California II FIPS 0402 Feet



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 Potable Water Master Plan

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**Undeveloped Parcels**

**Figure 10**

## 6. Hydraulic Evaluation

A hydraulic model of the City's sewer collection system was utilized for this master plan to evaluate the existing and proposed buildout conditions. The hydraulic evaluation identifies issues that must be resolved to alleviate existing hydraulic deficiencies and for the preparation of future system expansions.

### 6.1 System Description

The City's sewer collection system is divided into three primary sewer basins and consists of approximately 53 miles of sewer mains, five pump stations, and 5 miles of sewer force main, which is described in the next subsections. Collection system pipelines and pump stations are shown in figures included in Appendices B through E and a schematic of the sewer collection system is shown in Figure 11.

#### 6.1.1 Sewer Basins

The sewer collection system is divided into three primary sewer basins:

- **Main Basin:** Encompasses the southern portion of the City service area and conveys primarily residential flows to the Main Basin Pump Station (a.k.a., Building E). The Main Basin was further divided into four subbasins based on flow monitoring locations prepared by V&A;
- **Sunset Meadows:** Encompasses the middle portion of the City service area and conveys a combination of residential and commercial flows to the Sunset Meadows Pump Station. The Sunset Meadows Basin was further divided into two subbasings based on flow monitoring locations prepared by V&A; and
- **Industrial Area:** Encompasses the northern portion of the City service area and conveys industrial flows to the Tower Road and Green Island Pump Stations.

#### 6.1.2 Pipelines and Pump Stations

The sewer collection system includes gravity pipelines that range in size from 4- to 24-inches in diameter and force mains that range in size from 4- to 18-inches in diameter. Pipelines are constructed primarily of PVC, vitrified clay, and asbestos cement. Flows from the sewer collection system are conveyed to the following pump stations, which are described in Section 2:

- Main Basin Pump Station (MBPS)
- Sunset Meadows Pump Station (SMPS)
- Green Island Pump Station (GIPS)
- Tower Road Pump Station (TRPS)
- Kimberly Pump Station (KPS)

Pump stations convey flows to the City WRF, which is located at the western edge of the service area adjacent to the Napa River. The WRF treats the wastewater to Title 22 standards and discharges to either the Napa River or to the City's recycled water distribution system.

The modeled sewer collection system totals over 20 miles of pipelines. Pump stations and associated force mains were not included in the hydraulic model, though the sewer collection

system flows conveyed to each pump station were compared to each pump station's firm capacity and the maximum flow velocity criterion established in Section 4.3.

A summary of the modeled sewer collection system pipelines is shown in Table 19. Pipe material information by pipe diameter was not available for the preparation of this master plan document.

Table 18 Gravity Pipeline Lengths by Diameter

Diameter	Length (LF)
4-inch	278
6-inch	57,323
8-inch	158,359
10-inch	23,646
12-inch	29,862
14-inch	1,103
15-inch	11,316
21-inch	1,078
24-inch	925
<b>Total</b>	<b>283,891</b>

## 6.2 Hydraulic Model

Hydraulic models have previously been prepared for the 1996 and 2001 Sewer Master Plans. Previous models were prepared using Hydra developed by Pizer. The hydraulic methods used in the Hydra program were determined to be too simplistic for use in the current master plan and the software does not have the capability to account for complex hydraulics. SewerCAD by Bentley was initially selected due to its ease of use; ability to use the product as a stand-alone application or work within AutoCAD or MicroStation; and the built-in conversion utilities from CAD, GIS and database files. During model development, GHD needed to utilize a different modeling platform in order to accurately convey flows through the flow split located in Rio Del Mar at its intersection with Rio Grande. H2O Map Sewer (10.5, SP1, Update #7) developed by Innovyze was selected to meet project hydraulic modeling needs.

### 6.2.1 Model Inputs

Pipelines to be included in the model were exported from the prior Hydra model; however, model flows were not exported due to the availability of metered sewer flows and water billing records for the collection system. The following general modeling input data was utilized in the creation of the hydraulic model:

- Manning's "n" value: 0.013 for all pipes.
- Ground elevations were extracted from a topographic GIS shapefile based on information from Napa County. The elevation for each manhole was assigned by linearly interpolating between the 5 foot contours in the GIS shapefile.
- Junctions were placed at all manholes.
- Pipe lengths were based on GIS mapping or as-built mapping (record drawings).

- Static model runs were made under the PDWF and PWWF flow scenarios described in Section 4 for current flows and under the PWWF scenario for future buildout flows.
- Pipe diameters included in the model ranged from 6- to 24-inches.
- Pipe diameters are of nominal size.
- Sewer flows are expressed in gallons per minute (gpm) or million gallons per day (mgd) and were assigned to manholes based on the analysis presented in Section 5.

### 6.3 System Performance

The performance of the City's sewer collection system was analyzed using static flow simulations under PDWF and PWWF scenarios for the existing and buildout conditions. The goal of the hydraulic analysis is to identify system improvements that would be required to address current and future system flows.

#### 6.3.1 Existing Conditions

The existing sewer collection system was analyzed using two flow scenarios (PDWF and PWWF) with the current flows, as discussed in Section 5. The existing modeled pipes and junctions were evaluated using the pipe capacity (d/D) ratio and minimum and maximum pipe slope and velocity criteria presented in Section 4. The hydraulic model results for the existing conditions are included in Appendix B.

In general, the velocities in a majority of the existing pipelines were below the recommended minimum of 2 fps for the PDWF scenario, which is primarily the result of minimal pipe slopes throughout the system. This may contribute to additional City effort for cleaning pipelines to clear blockages and reduce odors. Velocities are improved for the PWWF scenario, with I/I contributing additional flow in the collection system.

Collection system hydraulic capacity was assessed using the PWWF scenario. Pipelines that exceeded hydraulic evaluation criteria were primarily located in the Sunset Meadows 1 Basin and Main Basin 4, in the vicinity and downstream of Rio Del Mar. The model also identified hydraulic deficiencies in the eastern (upstream) portion of Main Basin 4 and in Broadway within Main Basin 3.

Peak flows within the model also exceeded the capacity of the Main Basin, Sunset Meadows, and Green Island Pump Stations. CIPs SS2, SS3, and SS7 address the capacity at each pump station.

The City also indicated concern for collection system hydraulics between Cartagena Way and Westpark located in Main Basin 4. Relocation of the sewer at the area of concern was addressed in the hydraulic model. CIP SS5, also known as the Summerfield project, addresses City concerns at this location in the collection system.

The peak flow velocity for existing pump stations is less than the maximum velocity criterion of 7 fps.

#### 6.3.2 Existing Conditions with CIP Fixes

The PWWF existing conditions model scenario was updated to incorporate the CIP projects identified to alleviate existing hydraulic conditions. The hydraulic model results for the existing conditions scenario with CIP fixes in place are included in Appendix C.

A few areas of minor hydraulic deficiencies remained after implementation of the CIP projects in the model, including pipe capacity exceeding the 0.75 d/D limit for the pipeline in American Canyon

Road immediately upstream of the Main Basin Pump Station and minimal freeboard remaining in four manholes located in the upper reaches of Main Basin 4.

The peak flow velocity for the MBPS force main would increase to approximately 9 fps with the increase in pumping capacity provided in the existing conditions model with CIP fixes implemented. This flow velocity exceeds the design maximum of 7 fps, and should be accounted for during design. Detailed design should include smoothing out of pumping rates by using variable frequency drives (VFDs), consideration for number of pumps to handle the range of anticipated flows (ADWF to PWWF), and the effect of peak flows and associated flow velocities attributed to I/I reduction in the Main Basin.

### 6.3.3 Buildout Conditions

The existing sewer collection system with the implementation of CIP projects was analyzed using two flow scenarios (PDWF and PWWF) with the future flows, as discussed in Section 5. The existing modeled pipes and junctions were evaluated using the pipe capacity (d/D) ratio and minimum and maximum pipe slope and velocity criteria presented in Section 4. The hydraulic model results for the existing conditions are included in Appendix D.

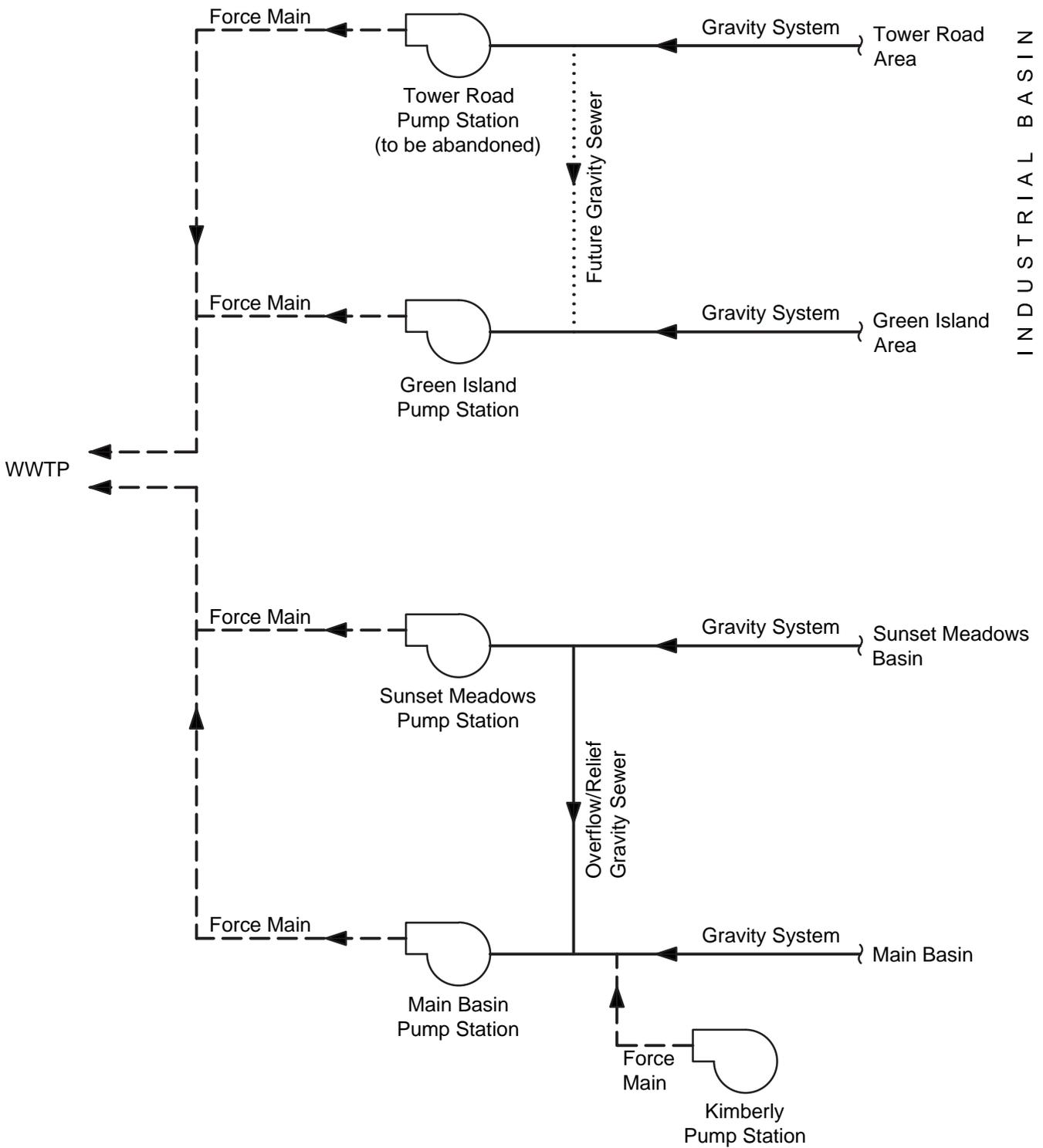
Two locations within the sewer collection system exceeded the pipe capacity limit of 0.75 d/D, including approximately 2,004 linear feet (LF) of the existing 6- and 10-inch gravity sewer in Broadway between Donaldson Way East and American Canyon Road and 2,110 LF of the existing 8-inch gravity sewer in Broadway north of Rio Del Mar.

### 6.3.4 Buildout Conditions with CIP Fixes

The PWWF future conditions model scenario was updated to incorporate the CIP projects identified to alleviate future hydraulic conditions. The hydraulic model results for the future conditions scenario with CIP fixes in place are included in Appendix E.

The same areas of minor hydraulic deficiencies as in the Existing Conditions with CIP Fixes model remained after implementation of the CIP projects in the model. As discussed in Section 7, reduction of I/I in the sewer collection system will improve the general hydraulic performance of the system and likely alleviate areas shown in the model with minor hydraulic deficiencies.

Peak flow velocity for the MBPS force main should be evaluated during detailed design, as noted under the prior section.



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Date | 18 Mar 2016

Sewer System Schematic

Figure 11

## 7. Recommended Improvement Projects

Recommended improvement projects are primarily focused on upsizing existing pipelines to increase hydraulic capacity, increase the firm capacity at pump stations to handle anticipated peak flows, and reduce the contribution of I/I within the collection system where cost effective. Most of these improvements address existing deficiencies while also accommodating future growth in the Airport area and Watson Ranch. Improvements are focused on reducing the potential for sanitary sewer overflow (SSO) and associated environmental and cost impacts, with designs conforming to established design criteria (see Section 4).

### 7.1 Improvements to Address Current Deficiencies

The hydraulic evaluation identified a number of deficiencies with the current sewer collection system including pipelines and pump stations with insufficient hydraulic capacity to convey peak flows for existing and/or future conditions. Improvement projects will enable the City to resolve the current hydraulic deficiencies within the sewer collection system and support the buildout condition of existing communities. In addition, the City identified certain pipes with known structural deficiencies that are also addressed with the CIP projects.

All of the existing capacity deficiencies are related to I/I entering the system in that pipes have adequate capacity to handle peak dry weather flows, but not peak wet weather flows. Improvements that address I/I typically include lining sewer mains and laterals and rehabilitating manholes to minimize leaking (infiltration) into the collection system. Improvements also address known illicit connections from the storm drain system, roof leaders, yard drains and basement pumps (inflow). I/I programs typically require flow monitoring in sub-basins with high I/I flows, nighttime reconnaissance during wet weather, CCTV inspections and smoke testing to identify target neighborhoods for rehabilitation.

Results from I/I reduction projects vary from neighborhood to neighborhood, and they are dependent on several factors including extent of rehabilitation of a main and its appurtenances, and the percentage of a basin rehabilitated. For example, lining a sewer main but not rehabilitating the manholes and laterals may have little benefit. Likewise, rehabilitating one block in a neighborhood may not be effective because water flows down the trench to the next block and enters the system at that location.

In general, the wastewater industry does not have clear manual of practice for addressing I/I. Reported results vary and in general one can conclude that at least 40 percent of a sub-basin needs to be fully rehabilitated (mains, manholes and laterals) to get meaningful results. As a percentage of PWWF reduction, results are typically in the 15 to 50 percent range as measured at the sub-basin level. Moving downstream the reduction in peak flow as a percentage is reduced due to attenuation of flow in the collection system and therefore the benefit is not as great for downstream infrastructure.

For these reasons the recommended CIP projects are budgeted around capacity upgrade costs rather than I/I reduction, with the exception of project SS1 in the Rio Del Mar neighborhood. However, it would be worthwhile for the City to investigate potential I/I reduction projects in other neighborhoods to evaluate whether or not the cost and potential benefit would be improved over the recommended capacity upgrade projects. The scope of this master planning effort is not sufficiently detailed to make that determination.

- SS1 consists of I/I rehabilitation within the Rio Del Mar area, including approximately 2.1 miles of 6- and 8-inch gravity sewers, 60 manholes, and 230 sewer laterals. The assumed method for rehabilitation is cured-in-place pipe (CIPP) lining for sewer mains and laterals and epoxy coating or similar for manholes. Reduction of I/I within the Rio Del Mar area is anticipated to have multiple benefits, including: reduced potential for an SSO in the project area and downstream system; and reduction in conveyance needs, including energy costs associated with pumping excess I/I in the downstream system (i.e., at the Main Basin Pump Station);
- SS2 consists of upgrading the firm capacity for the Green Island Road Pump Station (GIPS) to 950 gallons per minute (gpm) to meet current hydraulic conditions. The project involves the construction of a new pump station at the existing pump station site;
- SS3 consists of pipeline upsizing and relaying of sewers to alleviate hydraulic conditions related to the sewers located downstream of the flow split at the intersection of Rio Del Mar and Rio Grande, including the Sunset Meadows Pump Station (SMPS). The project scope consists of pipeline upsizing of approximately 3,134 LF of existing 15-inch gravity sewer with a 24- to 30-inch gravity sewer between Rio Del Mar and American Canyon Road. The project also consists of relaying 268 LF of 10-inch gravity sewer in Rio Del Mar downstream of the flow split to restrict the amount of flow conveyed towards SMPS. Alternatives to be considered for this project during preliminary design include: construction of a parallel sewer in lieu of replacing the existing sewer; and diverting all flows to SMPS and upgrading SMPS capacity, which would reduce the hydraulic demand on MBPS;
- SS4 consists of pipeline upsizing of approximately 2,004 LF of the existing 6- and 10-inch gravity sewer in Broadway between Donaldson Way East and American Canyon Road with a 15-inch gravity sewer to address hydraulic deficiencies and a known pipeline defect (i.e., bottom missing from a portion of the pipeline);
- SS5 consists of relocating approximately 430 LF of existing 8-inch gravity sewer that connects Westpark, Cartagena Way, and Independence Drive to access City concerns for hydraulic performance and access limitations. The relocated pipeline would consist of approximately 485 LF of 8-inch gravity sewer;
- SS6 consists of pipeline upsizing of approximately 3,318 LF of the existing 6-inch gravity sewer in Theresa Avenue and Los Altos Drive with an 8- to 10-inch gravity sewer to address hydraulic deficiencies;
- SS7 consists of upgrading the firm capacity for the Main Basin Pump Station (MBPS) to 6,330 gpm to meet current PWWF hydraulic conditions. The project involves the construction of a new pump station at the existing pump station site. Modifications to the MBPS sewer basin could reduce the pump station's peak flow capacity, including: use of an existing pond at the pump station site to temporarily store peak flows; reduction of I/I from various upstream projects; and redirection of additional flows towards the SMPS;
- SS8 consists of pipeline upsizing of approximately 1,111 LF of the existing 10-inch gravity sewer in Broadway between Cartagena Way and the Mobile Home Park Entrance with a 15-inch gravity sewer to address hydraulic deficiencies;
- SS9 consists of pipeline upsizing of approximately 601 LF of the existing 12- and 15-inch gravity sewers in Elliott Drive and Chaucer Lane with 18- to 24-inch gravity sewers to address hydraulic deficiencies; and
- SS10 consists of pipeline upsizing of approximately 2,110 LF of the existing 8-inch gravity sewer in Broadway north of Rio Del Mar with a 10-inch gravity sewer to address hydraulic deficiencies. The scope of this project could be reduced if I/I reduction from implementing CIP project SS1 is significant.

A summary of the recommended sewer collection system improvement projects is presented in Table 19.

Table 19 Recommended Improvement Projects to Address Current Deficiencies

Project ID	Proposed Pipe Size/ Pump Station Capacity	Targeted Deficiencies
SS1	Rehabilitation <sup>1.</sup>	Reduce I/I in collection system to increase hydraulic capacity
SS2	950 gpm	Increase firm capacity for Green Island Pump Station from 600 gpm <sup>2.</sup>
SS3	24 & 30-inch	Increase hydraulic capacity and restrict flows to SMPS
SS4	15-inch	Increase hydraulic capacity and replace deteriorated pipeline
SS5	8-inch	Improve collection system hydraulics and access
SS6	8 & 10-inch	Increase hydraulic capacity
SS7	6,330 gpm	Increase firm capacity for Main Basin Pump Station from 3,000 gpm <sup>2.</sup>
SS8	15-inch	Increase hydraulic capacity
SS9	18 & 24-inch	Increase hydraulic capacity
SS10	10-inch	Increase hydraulic capacity

1. Trenchless rehabilitation of 6- and 8-inch pipelines, manholes, and sewer laterals.

2. Firm capacity is defined as capacity without primary power and largest pump out of service.

## 7.2 Improvements for Planned Growth

Improvements to the sewer collection system to accommodate planned growth primarily focus on serving planned development in the Airport area and connecting the Watson Ranch development to the collection system.

CIP projects SS2, SS4, and SS7 need additional capacity to accommodate the future development projects. The following is a description of the additional capacity requirements:

- SS2 consists of various improvements to serve future developments southeast of the Napa County Airport, including Napa Logistics. Improvements include: upgrading the firm capacity for the Green Island Road Pump Station (GIPS) from 950 to 1,455 gpm to meet future hydraulic conditions; construction of approximately 5,832 LF of 10- and 21-inch gravity sewer in between the Tower Road Pump Station (TRPS) and GIPS, including sewer under the railroad west of TRPS and in the airport property, in the future Devlin Road extension, and in Green Island Road; and abandonment of the TRPS and 18-inch force main between TRPS and GIPS;
- SS4 consists of pipeline upsizing of an additional 1,922 LF of the existing 6- and 10-inch gravity sewer in Broadway between Donaldson Way East and American Canyon Road with a 15-inch gravity sewer to address hydraulic deficiencies and serve future customers including Watson Ranch; and
- SS7 consists of upgrading the firm capacity for the MBPS from 6,330 to 6,864 gpm to serve future customers including Watson Ranch.

A summary of the recommended improvement projects for planned growth is presented in Table 20.

Table 20 Recommended Improvement Projects for Planned Growth

Project ID	Proposed Pipe Size/ Pump Station Capacity	Targeted Development
SS2	GIPS from 950 to 1,455 gpm Pipes: 10 & 21-inch	Industrial customers southeast of Napa County Airport
SS4	15-inch	Watson Ranch development
SS7	MBPS from 6,330 to 6,864 gpm	Watson Ranch development

## 8. Capital Improvements Plan

The CIP is intended to provide a roadmap for the construction or replacement of sewer infrastructure to address the current and future sewer flows within the City. Nine projects are recommended and have been prioritized to meet more critical and time dependent needs first, whether to correct existing system deficiencies or accommodate pending development projects, and then address longer term issues and future planned growth over an extended timeframe. Project assumptions, cost estimations, and project prioritizations for these projects are discussed below. The detailed project descriptions and cost estimates for each CIP project are included in this report as Appendix F and Appendix G, respectively.

### 8.1 Estimates of Probable Cost

The estimates of probable cost in this CIP should be considered as order-of-magnitude estimates for planning purposes only. The total project cost consists of the construction cost, design and technical effort, construction management effort, and a contingency fund. Land acquisition and/or City degradation fees are not included in the cost estimates.

Construction costs are based on a Class 5 (planning-level) estimate of probable cost as defined by the Association for the Advancement of Cost Engineering, International (AACE). AACE defines the “Class 5” estimate as follows:

*Generally prepared on very limited information, where little more than proposed plan type, its location, and the capacity are known, and for strategic planning purposes such as but not limited to market studies, assessment of viability, evaluation of alternate schemes, project screening, location and evaluation of resource needs and budgeting, long-range capital planning, etc. Some examples of estimating methods used would include cost/capacity curves and factors, scale-up factors, and parametric and modeling techniques. Typically, very little time is expended in the development of this estimate. The typical expected accuracy ranges for this class estimate are -20% to -50% on the low side and +30% to +100% on the high side.*

Construction costs are based on the July 2015 Engineering News Record Construction Cost Index (ENR CCI) for San Francisco, CA (11,155).

#### 8.1.1 Construction Cost

Construction costs associated with sewer projects typically include the efforts and materials for the following items:

- Mobilization and demobilization
- Temporary traffic control
- Potholing to identify existing utilities
- Shoring and trench safety
- Trench dewatering
- Handling, treatment and disposal of contaminated soil and groundwater
- Construction or replacement of collection system and supporting infrastructures

A summary of the unit costs associated with each item is presented in Table 21. The unit cost estimates are based on previous project experience and contractor/supplier-provided information.

Adjustments to the cost estimates can be made in the future by applying a ratio of the future ENR CCI to the value used herein.

Estimated unit costs for pipelines includes pipe material, trenching (at minimum cover), installation, backfill, fittings and appurtenances, connections, pavement restoration, testing, and traffic control. Sewer pipelines are assumed to be SDR 26 or AWWA C900 PVC for pipelines 15-inch and smaller, AWWA C905 PVC for pipelines 18-inch and larger. Method of rehabilitation for sewer pipelines, including sewer laterals is cured-in-place pipe (CIPP). Method of rehabilitation for sewer manholes is epoxy coating or similar.

Costs were developed for construction of sewer pump stations ranging in size from 2.1 to 9.9 million gallons per day (mgd). The costs are for a typical wet well / dry well pump station, with associated improvements for valve vault, generator, electrical and instrumentation, and limited grading and access impacts. Costs were based on published cost curves (*Pumping Station Design, Second Edition, Sanks, 2000*), with adjustment for ENR CCI values.

Table 21 Construction Unit Costs

Item	Unit Cost
Mobilization and demobilization	6% of construction costs
Temporary traffic control	5% of construction costs <sup>1</sup> .
Potholing to identify existing utilities	\$12/linear foot (LF)
Shoring and trench safety	\$20/LF
Trench dewatering	\$40/LF <sup>2</sup> .
Temporary bypass pumping	\$5 to \$30/LF <sup>3</sup> .
Handling, treatment and disposal of contaminated soil and groundwater	\$10/LF
Construction or replacement of collection system and supporting infrastructures	
• 8" SDR 26 PVC Sewer Pipe (invert 10' or less)	\$91/LF
• 8" SDR 26 PVC Sewer Pipe (invert over 10' to 18')	\$108/LF
• 8" SDR 26 PVC Sewer Pipe (invert 18' or more)	\$125/LF
• 10" SDR 26 PVC Sewer Pipe (invert 10' or less)	\$104/LF
• 10" SDR 26 PVC Sewer Pipe (invert over 10' to 18')	\$123/LF
• 12" SDR 26 PVC Sewer Pipe (invert 10' or less)	\$118/LF
• 12" SDR 26 PVC Sewer Pipe (invert over 10' to 18')	\$138/LF
• 15" SDR 26 PVC Sewer Pipe (invert 10' or less)	\$138/LF
• 15" SDR 26 PVC Sewer Pipe (invert over 10' to 18')	\$161/LF
• 18" C905 PVC Pipe (invert over 10' to 18')	\$183/LF
• 18" C905 PVC Pipe (invert 18' or more)	\$208/LF
• 24" C905 PVC Pipe (invert 10' or less)	\$199/LF
• 24" C905 PVC Pipe (invert over 10' to 18')	\$228/LF
• 27" C905 PVC Pipe (invert 10' or less)	\$293/LF
• 27" C905 PVC Pipe (invert over 10' to 18')	\$329/LF

Item	Unit Cost
• 30" C905 PVC Pipe (invert over 10' to 18')	\$359/LF
• Reconnect Sewer Lateral	\$5,000/each (EA)
• 48" Diameter Manhole (invert 10' or less)	\$8,000/EA
• 48" Diameter Manhole (invert over 10' to 18')	\$10,000/EA
• 48" Diameter Manhole (invert 18' or more)	\$15,000/EA
• 60" Diameter Manhole (invert 10' or less)	\$15,000/EA
• 60" Diameter Manhole (invert over 10' to 18')	\$20,000/EA
• 60" Diameter Manhole (invert 18' or more)	\$25,000/EA <sup>4.</sup>
• 21" Tunneled Pipeline (CIP-SS2)	\$750/LF
• 18" Steel Tunnel Casing	\$750/LF <sup>5.</sup>
• 30" Steel Tunnel Casing	\$1,000/LF <sup>6.</sup>
• 42" Steel Tunnel Casing	\$1,500/LF <sup>7.</sup>
• Tunneling Sending and Receiving Pits	Lump sum <sup>8.</sup>
• 6" Pipe – Cured-in-Place Pipe (CIPP) Rehabilitation	\$90/LF
• 8" Pipe – Cured-in-Place Pipe (CIPP) Rehabilitation	\$120/LF
• Sewer Lateral Rehabilitation	\$8,000/EA
• Sewer Manhole Rehabilitation	\$4,000/EA
• Sewer Pipeline Cleaning and CCTV Inspection	\$10/LF
• Miscellaneous Utility Relocations	Lump sum <sup>9.</sup>
• Additional Pavement Restoration in Caltrans R/W	Lump sum <sup>10.</sup>

1. Temporary traffic control increased to 10% for anticipated high traffic areas.

2. Trench dewatering was increased to \$80/LF for projects with deep utility trenching.

3. Temporary bypass pumping varied depending on anticipated effort.

4. Very deep 60" diameter manholes associated with CIP-SS2 (Napa Logistics and Green Island Road Pump Station) unit cost: \$50,000/EA.

5. Tunnel casing under Southern Pacific Railroad west of Tower Road Pump Station for CIP-SS2.

6. Tunnel casing under Southern Pacific Railroad in Green Island Road for CIP-SS2.

7. Tunnel casing under creek located north of American Canyon Middle School for CIP-SS3.

8. Lump sum amounts based on anticipated scope of work, including depth of pits.

9. Lump sum amount based on anticipated scope of work for specific project.

10. Lump sum amount based on anticipated scope of work paving within Caltrans right-of-way in addition to standard trench paving.

### 8.1.2 Design and Technical Effort

Design and technical efforts include the costs for the following items:

- Completing the pipeline and infrastructure designs
- Land surveys
- Geotechnical surveys
- Environmental review
- Permitting (excluding permits associated with land acquisition)

The costs for the design and technical efforts are estimated to be approximately 25% of the construction cost based on previous project experience.

### 8.1.3 Construction Management Effort

Construction management efforts include the costs for the following items:

- Site inspections
- Project management
- Engineering services during construction

The costs for the construction management efforts are estimated to be approximately 12% of the construction cost based on previous project experience.

### 8.1.4 Contingency

The actual project costs can vary greatly due to a number of possible external factors, including but not limited to climate, market conditions, government policy and material pricing. An additional 25 percent of the construction cost is added to the overall cost as a contingency to ensure appropriate levels of financing for the CIP.

## 8.2 Prioritized Capital Improvements Plan

The CIP will be implemented in stages based on the priority assigned to each project. The projects are prioritized according to the condition of the existing infrastructures, the existing and future sewer flows, the anticipated timing of developments within the City, and the complexity of the project. The CIP projects presented in Table 22 are prioritized using the above criteria, in which Project SS1 has the highest priority and Project SS10 has the lowest priority. The total project cost for the sewer system Capital Improvements Plan is \$51,170,000. The estimates for each CIP project are rounded to the nearest \$10,000.

I/I rehabilitation for the sewer collection system in the vicinity of Rio Del Mar was given the highest priority, which was based on the cumulative benefit of I/I reduction in the collection system, including the following: reduce the potential for sanitary sewer overflow (SSO) from hydraulically-deficient pipelines within and downstream of the project area; and reduction in conveyance needs, including energy costs associated with pumping excess I/I in the downstream system. Project SS1 is scoped to be an I/I rehabilitation project in lieu of capacity enhancement project, wherein existing pipelines would be lined with cured-in-place pipe (CIPP) or similar in lieu of replaced with larger pipelines.

Modification to the existing sewer collection system between the Green Island Pump Station (GIPS) and Tower Road Pump Station (TRPS) was given the next highest priority, which was based on addressing hydraulic deficiency for the GIPS and to serve planned development in the sewer basin (e.g., Napa Logistics). Project SS2 consists of pump station replacement for GIPS, extension of a new sewer main between GIPS and TRPS, and abandonment of the TRPS and 18-inch force main between the TRPS and GIPS. Other high priority projects address current deficiencies for collection system hydraulics that have the highest potential for SSO, as based on modeling results for surcharging of sewer pipelines, will be implemented first.

The order of the project implementation may change in the future due to changes in sewer demand, infrastructure deterioration, land development, and funding availability. Based on current priorities CIP projects SS1 through SS6 are considered near-term priorities and should be completed over the next 10 years. CIP projects SS7 through SS10 are of a lower priority or need more time for other projects to be completed and could be completed 11 to 20 years from now. For example, Project SS7 has a high priority but would benefit by having projects SS1, SS3, SS4 and SS6

completed before designing the upgrades to the Main Basin Pump Station. The locations of the near-term and long-term CIP projects are shown in Figures 12 and 13.

CIP projects are funded from two sources, wastewater capacity fees and wastewater rates. Wastewater capacity fees are paid by new development to offset their impact on the system. This “Wastewater Capacity” revenue is then used to construct capacity improvements required to meet the needs of new growth. Wastewater rates, the monthly service charges levied by the wastewater utility, pays for all operating expenses as well as debt covenants and replacement and rehabilitation of capital assets. This “Wastewater Operations” revenue is used to cover operating expenses including the cost of treatment, power and chemicals, salaries and benefits for wastewater utility staff, and timely replacement and rehabilitation of wastewater infrastructure. Table 22 lists the near and long-term CIP projects and estimated costs and funding sources.

Table 22 Sewer System Capital Improvements Plan

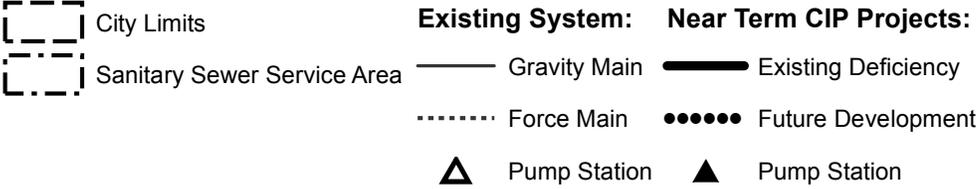
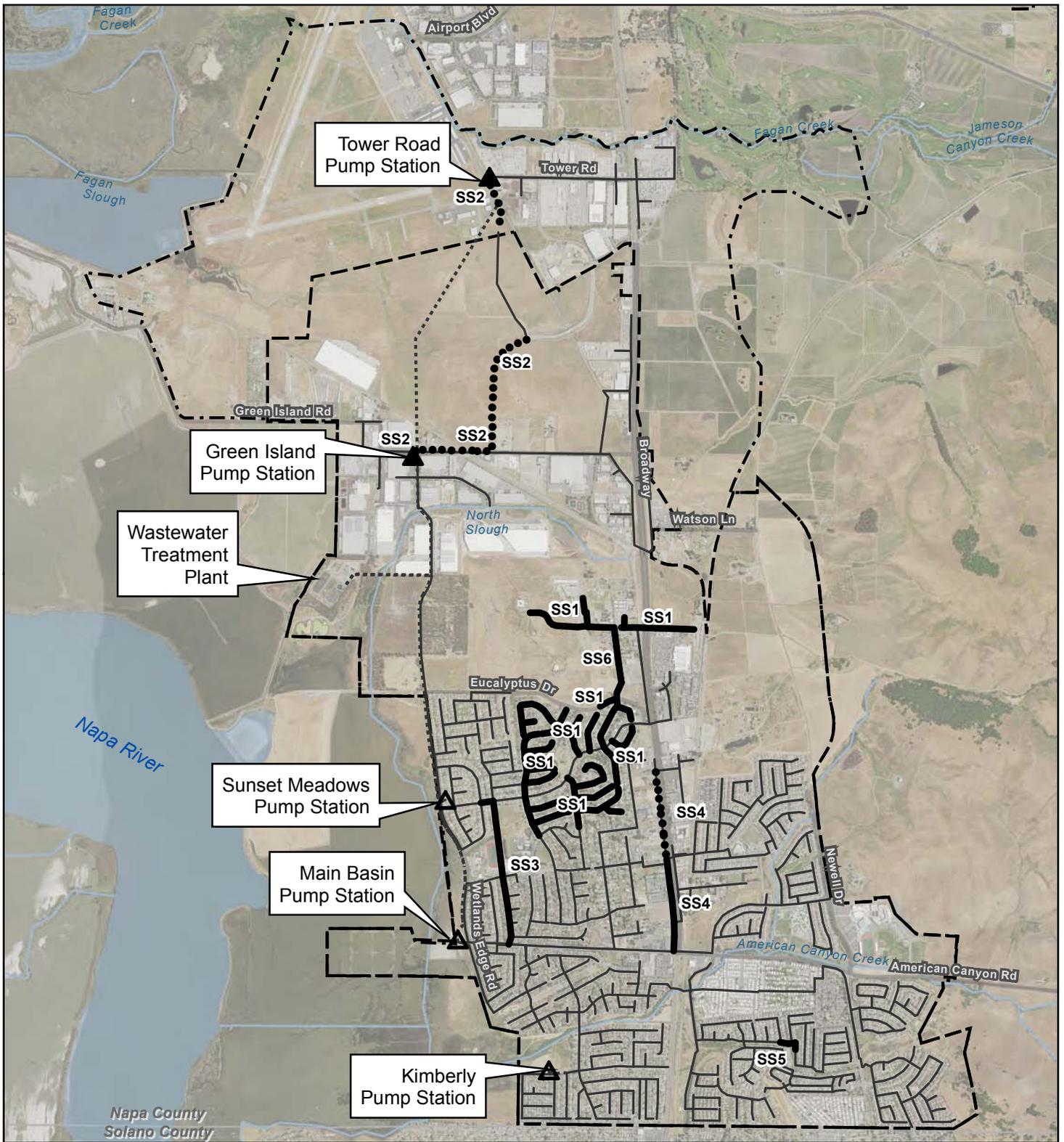
CIP Project	Funding Source	Project Cost
<b>Near-Term CIP Projects (0 – 10 Years)</b>		
SS1 Rio Del Mar Basin	Wastewater Operations	\$7,170,000
SS2 Napa Logistics and Green Island Pump Station	Wastewater Operations and Wastewater Capacity	\$18,800,000
SS3 Huntington Way	Wastewater Operations	\$4,580,000
SS4 Broadway North of American Canyon Road	Wastewater Operations and Wastewater Capacity	\$2,540,000
SS5 Summerfield Project	Wastewater Operations	\$370,000
SS6 Theresa Avenue and Los Altos Drive	Wastewater Operations	\$2,050,000
<b>Long-Term CIP Projects (11 – 20 Years)</b>		
SS7 Main Basin Pump Station	Wastewater Operations and Wastewater Capacity	\$12,860,000
SS8 Broadway, Cartagena Way to Mobile Home Park Entrance	Wastewater Operations	\$680,000
SS9 Elliott Drive South of Northampton	Wastewater Operations	\$1,090,000
SS10 Broadway North of Rio Del Mar	Wastewater Operations	\$1,030,000
<b>Total CIP</b>		<b>\$51,170,000</b>

Preliminary design for each project should include an evaluation of the feasibility for I/I rehabilitation in lieu of upsizing of existing infrastructure. Reduction of I/I has multiple benefits for the City’s sewer system, including:

- Alleviating hydraulic conditions within the collection system;
- Reducing the scope and cost of downstream projects;
- Reducing energy costs associated with pumping excess I/I to the WRF; and
- Reducing energy and other infrastructure costs associated with treating excess I/I at the WRF.

The City may consider a pilot project to test the effectiveness of I/I reduction, wherein pre- and post-construction flow monitoring and assessment would be used to demonstrate I/I reduction for specific collection system improvements. CCTV inspection records should also be used to identify specific collection system defects in order to define the rehabilitation scope of improvements.

The scope of improvements for pump station projects should be based on providing a firm capacity capable of handling anticipated buildout PWWF. Pump design should also consider handling anticipated low flows and maintaining minimum and not exceeding maximum flow velocities, instrumentation and SCADA provisions, and easy site access.



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 Map Projection: Lambert Conformal Conic  
 Horizontal Datum: North American 1983  
 Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

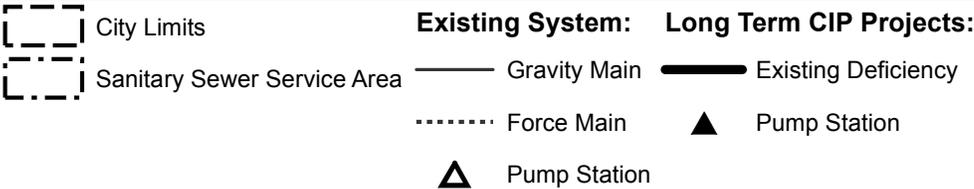
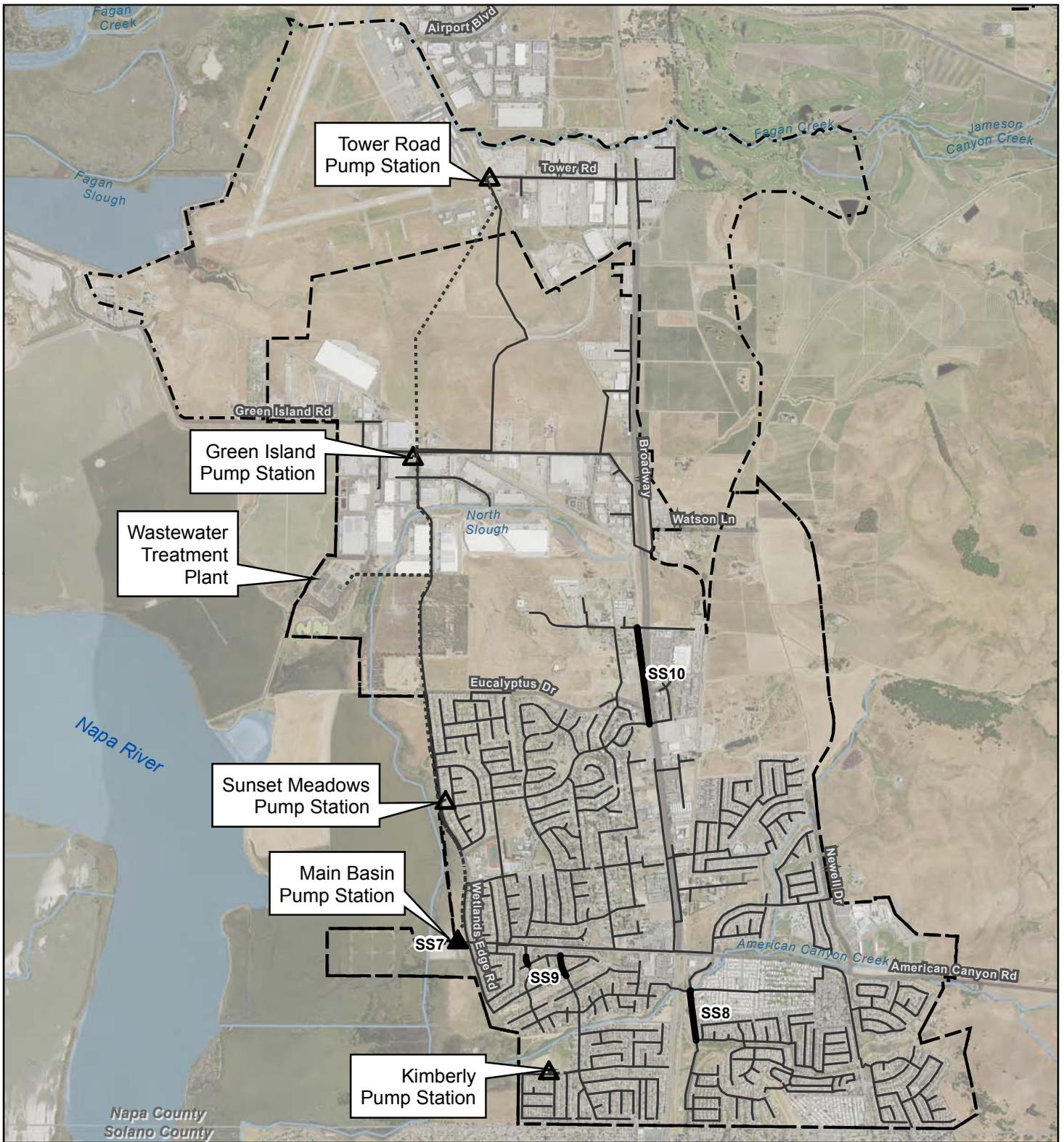


City of American Canyon  
 Sewer Master Plan

Job Number | 8411338  
 Revision | 2  
 Date | 05 May 2016

**Recommended Near Term  
 CIP Projects**

**Figure 12**



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 Feet  
 Map Projection: Lambert Conformal Conic  
 Horizontal Datum: North American 1983  
 Grid: NAD 1983 StatePlane California II FIPS 0402 Feet



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 Sewer Master Plan

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**Recommended Long Term  
 CIP Projects**

**Figure 13**

## Wastewater Collection System CIP Summary

**Table 1: Summary of Recommended Wastewater Collection System CIP Projects**

<b>CIP Project</b>	<b>Wastewater Operations</b>	<b>Wastewater Capacity</b>	<b>Total Project</b>
SS1 Rio Del Mar Basin	\$7,170,000	\$0	\$7,170,000
SS2 Napa Logistics and Green Island Pump Station	\$2,400,000	\$16,400,000	\$18,800,000
SS3 Huntington Way	\$4,580,000	\$0	\$4,580,000
SS4 Broadway north of American Canyon Rd	\$1,280,000	\$1,260,000	\$2,540,000
<b>SS5 Summerfield Project</b>	\$370,000	\$0	\$370,000
SS6 Theresa Avenue and Los Altos Drive	\$2,050,000	\$0	\$2,050,000
SS7 Main Basin Pump Station	\$11,990,000	\$870,000	\$12,860,000
SS8 Broadway, Cartagena Way to Mobile Home Park Entrance	\$680,000	\$0	\$680,000
SS9 Elliott Drive south of Northampton	\$1,090,000	\$0	\$1,090,000
SS10 Broadway north of Rio Del Mar	\$1,030,000	\$0	\$1,030,000
<b>Total Budget</b>	<b>\$32,640,000</b>	<b>\$18,530,000</b>	<b>\$51,170,000</b>

## **CIP – SS1 Rio Del Mar, Los Altos Drive to Rio Grande**

Hydraulic evaluation of the existing 12-inch gravity sewer in Rio Del Mar between Los Altos Drive and Rio Grande finds that the pipeline is undersized to convey existing peak wet weather flows. This capacity deficiency results in surcharging of the sewer and potential sanitary sewer overflow.

CIP SS1 includes reduction of infiltration and inflow (I/I) in the sewer basin tributary to this pipeline. The tributary basin includes approximately 4.2 miles of 6- and 8-inch gravity sewer pipelines with associated manholes and approximately 450 sewer laterals that serve residential and commercial properties. Predesign for the project should characterize the distribution of I/I within the sewer basin, including the location and quantity of infiltration and inflow sources. Due to a lack of specific data for the distribution of I/I within the project area, an assumption needed to be made regarding I/I contribution: two-thirds (66.7 percent) of the I/I is assumed to be contributed by 50 percent of the pipelines and associated laterals.

Characterization of I/I within the project area is recommended prior to beginning project design.

Pre- and post-construction flow monitoring is also recommended to quantify the amount of I/I in the project area relative to the scope of improvements and associated cost for the I/I rehabilitation. The project cost for CIP SS1 includes budget for flow monitoring and further study of the sewer basin, with the goal to define the scope of project improvements.

Rehabilitation of the existing sewer system includes lining of sewer mains, lower and upper laterals, and manholes, which constitutes “full” rehabilitation with an approximate I/I reduction rate of 70 percent for the rehabilitation components. Pre- and post-construction flow monitoring will demonstrate the effectiveness for I/I reduction, and inform the City of the need, if applicable, for further I/I reduction or capacity enhancements in the sewer basin.

CIP SS1 includes rehabilitation of approximately 2.1 miles of the existing 6- and 8-inch gravity sewers, 60 manholes, and 230 sewer laterals. The assumed method for rehabilitation is cured-in-place pipe (CIPP) lining for sewer mains and laterals and epoxy coating or similar for manholes. The project scope includes coordination with residents for lateral improvements and bypass pumping during lining work.

Rehabilitation is targeted at restoring approximately 44 percent (1,131 gpm) of the estimated 2,561 gpm I/I for the 10-year design storm in the upstream sewer basin. By removing this I/I in the upstream basin, the amount of flow pumped at the Main Basin PS and treated at the City’s wastewater treatment plant would be reduced; costs associated with pump station improvements and conveying and treating flows would also be reduced. CIP SS1 may also be combined with related CIP projects in the sewer basin tributary to Rio Del Mar for I/I reduction in lieu of capacity enhancement for those projects. This may result in a reduced scope of improvements for CIP SS10 if adequate I/I reduction can be achieved in the pipelines located upstream of that project in Broadway.

Figure 1 provides an illustration of project improvements. The pipelines highlighted for potential I/I reduction are generally consistent with anecdotal information provided by the City in October 2015 for pipelines to be targeted for I/I rehabilitation.

**Figure 1**



**Table 1: CIP – SS1 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>Rehabilitate 11,040 LF (2.1 miles) of 6- and 8-inch gravity sewer by CIPP lining</li> <li>Rehabilitate 60 manholes by epoxy coating or similar method</li> <li>Rehabilitate 230 sewer laterals, including lower and upper laterals by CIPP lining or similar method</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>Obtain rights-of-entry from private properties for sewer lateral work</li> <li>Construction permits</li> </ul>
Project Cost Total <sup>(1)</sup>	\$7,170,000 – Wastewater Operations

(1) Detailed information for the project cost is provided in Appendix G.

## **CIP – SS2 Napa Logistics and Green Island Road Pump Station**

Various sewer system improvements are necessary to accommodate development in the sewer basins tributary to the existing Tower Road Pump Station (TRPS) and Green Island Pump Station (GIPS). Capacity upgrade is also needed for GIPS to pump the estimated future peak wet weather flow rate of 1,455 gallons per minute (gpm), inclusive of the Napa Logistics development. According to pump station data provided by the City, the existing firm capacity for GIPS is approximately 600 gpm; the existing firm capacity for TRPS is approximately 1,400 gpm. Note: firm capacity is defined as one primary pumping unit out of service and the availability of a secondary power source (i.e., standby diesel generator). TRPS does not have a generator, so the statement regarding firm capacity only regards pumping capacity.

The existing peak wet weather flow conveyed to GIPS is estimated at 950 gpm; the peak flow rate increases to 1,455 gpm for future conditions, which includes rerouting of a portion of the basin flows currently tributary to TRPS.

Improvements planned to serve development within the basin include open cut and tunneled construction of 8- to 21-inch diameter gravity pipelines that vary in depth from 8 feet to over 30 feet deep. Pipeline improvements include tunneled construction under the railroad west of TRPS and in the airport property, in the proposed Devlin Road Extension, within Green Island Road, and under the railroad in Green Island Road. Pump station improvements include replacement of the existing GIPS within the pump station site with a new pump station. The new pump station has a firm capacity (i.e., one pump in standby and backup power generation available) of 1,455 gpm. In order to handle the range of dry and wet weather flows conveyed to the new pump station, the new pump station should be equipped with multiple pumps, potentially including small and large capacity pumps.

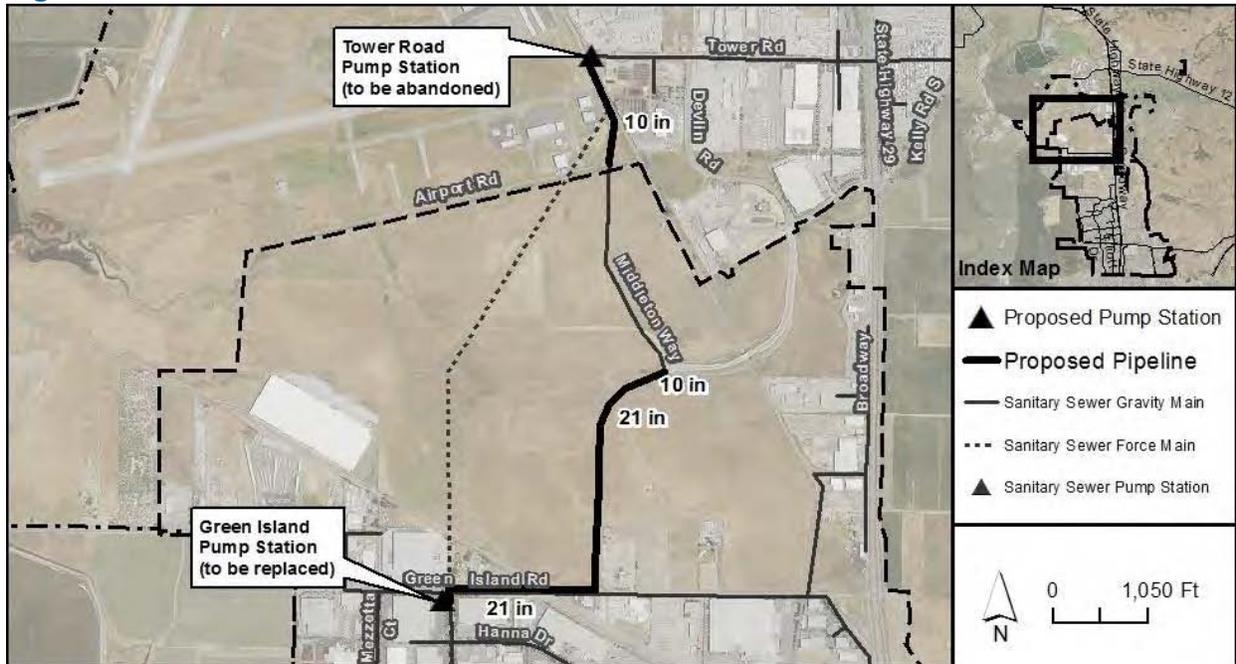
The existing TRPS is abandoned, with tributary flows now conveyed to GIPS. The TRPS site is anticipated to be converted to a winery truck waste disposal station.

Land acquisition is not included in project planning.

Figure 2 provides an illustration of project improvements.

The cost provided in Table 2 for upgrading GIPS to meet existing flow conditions is \$2.4 million. The cost to upgrade the pump station and construct other project components to meet buildout flow is \$16.4 million, for a total CIP cost of \$18.8 million.

**Figure 2**



**Table 2: CIP – SS2 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>Construct a new 1,455 gpm capacity Green Island Pump Station (GIPS) to replace the existing pump station</li> <li>Construct associated piping and appurtenances at the GIPS site, including emergency generator</li> <li>Construct 1,421 LF of 10-inch gravity sewer between TRPS and Middleton Way, including 119 LF of gravity sewer tunneled under the railroad west of TRPS</li> <li>Construct 4,530 LF of 21-inch gravity sewer by tunneling in Devlin Road and Green Island Road</li> <li>Abandon TRPS and 18-inch force main between TRPS and GIPS</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>CEQA review, environmental and construction permits, OSHA Tunnel Classification and right-of-way agreement with the railroad for tunneling under the railroad</li> </ul>
Project Cost Total <sup>(1)</sup>	<p>\$2,400,000 – Wastewater Operations</p> <p>\$16,400,000 – Wastewater Capacity</p> <p>\$18,800,000 – Project Total</p>

(1) Detailed information for the project cost is provided in Appendix G.

## **CIP – SS3 Huntington Way, Rio Del Mar to American Canyon Road**

The existing 15-inch gravity sewer in Huntington Way and the American Canyon Middle School property between Rio Del Mar and American Canyon Road is undersized to convey existing peak wet weather flows. This capacity deficiency results in surcharging of the sewer and potential sanitary sewer overflow within the school property and into the creek located within the school property. During peak flow events, the existing flow split at the intersection of Rio Del Mar and Rio Grande conveys a portion of the wastewater flow west towards the Sunset Meadows Pump Station (SMPS), which results in surcharging of a portion of the sewer between Rio Grande and SMPS.

CIP SS3 includes relaying of 268 LF of the existing 10-inch gravity sewer located west of the flow split to restrict the amount of flow conveyed towards SMPS to 650 gallons per minute (gpm), which is the pump station's firm capacity. Flow reduction to the west at the flow split maintains collection system capacity in the downstream pipelines and SMPS.

CIP SS3 also includes upsizing of 3,134 LF of the existing 15-inch gravity sewer located south of the flow split to a 24- to 30-inch gravity sewer. Alignment of the new sewer would be parallel to the existing sewer, which is located within school property (easement) and Huntington Way. Existing sewer laterals and local collector sewers in the project vicinity would be connected to the new sewer. Trenchless crossing of the creek is anticipated.

Predesign analysis should consider alternatives for CIP SS3, including the following:

- Alternative 1: Construct a new pipeline parallel to the existing 15-inch pipeline. This alternative may reduce the amount of bypass pumping needed during construction, but may necessitate the acquisition of additional easement area. Preliminary evaluation of this alternative finds that it may have a lower capital cost (\$2,910,000).
- Alternative 2: Divert all or a portion of flow towards SMPS in order to reduce the peak flow demand in the existing 15-inch gravity sewer in Huntington Way, within the American Canyon Middle School property, and at the Main Basin Pump Station (MBPS). This alternative would involve: replacement of the existing 10- to 15-inch gravity sewer between the flow split and SMPS; upsizing of SMPS to up to 3,774 gpm; and construction of a new force main between SMPS and the 18-inch MBPS force main. Depending on the quantity of flow diverted to SMPS, the existing 15-inch sewer located south of the flow split could be used to convey a portion of the flow to MBPS. Preliminary evaluation of this alternative finds that it may have a higher capital cost (\$6,350,000); however, the reduction in peak flow at MBPS may result in a cost savings at MBPS that is similar to or greater than the additional cost for CIP SS3.

Alternative 2 may not be feasible to construct due to site constraints at SMPS. The existing pump station is located within a small, narrow property with four adjoining residential properties. Significant bypass pumping may be required to take the existing pump station offline so that the new pump station can be constructed within the footprint of the existing pump station. Impacts to adjacent properties and to vehicles and pedestrians in Wetlands Edge Road would need to be mitigated. Detailed feasibility study is recommended to determine the feasibility of a substantial modification to SMPS.

Hydraulic capacity could be restored within the existing 15-inch pipeline by removing approximately 70 percent (2,087 gpm) of the estimated 2,991 gpm infiltration/inflow (I/I) for the 10-year design storm in the upstream sewer basin. Predesign analysis for CIP SS3 should evaluate the feasibility of removing I/I to offset a portion or all of the CIP SS3 improvements, with a secondary benefit of reducing the amount of I/I that is pumped at the SMPS and MBPS and treated at the City's wastewater treatment plant. Predesign analysis may be combined with study of the Rio Del Mar sewer basin, which is described in CIP SS1.

Figure 3 provides an illustration of project improvements.

**Figure 3**



**Table 3: CIP – SS3 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>Relay 286 LF of 10-inch gravity sewer to the west of the Rio Del Mar and Rio Grande intersection to restrict flows to 650 gpm conveyed to SMPS</li> <li>Replace 3,134 LF of 15-inch gravity sewer with 24- to 30-inch gravity sewer</li> <li>Connect sewer laterals and local collector sewers to the new gravity sewer</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>Easement / right-of-way considerations – Temporary and potentially permanent easements within American Canyon Middle School property</li> <li>Environmental permitting for crossing of the creek located within the school property and construction permits</li> </ul>
Project Cost Total <sup>(1)</sup>	\$4,580,000 – Wastewater Operations

(1) Detailed information for the project cost is provided in Appendix G.

## **CIP – SS4 Broadway, Donaldson Way East to American Canyon Road**

The existing 10-inch gravity sewer in Broadway between Donaldson Way East and American Canyon Road is undersized to convey existing peak wet weather flows. Also, City inspection of the three pipelines immediately upstream of American Canyon Road finds that the bottom of those pipelines is missing, which is suspected to be a significant factor for infiltration/inflow (I/I) during peak wet weather events. The capacity deficiency, together with the noted pipeline condition results in surcharging of the sewer and potential sanitary sewer overflow. Under future flow conditions, the pipeline between Donaldson Way and Poco Way is undersized to convey peak wet weather flows.

CIP SS4 includes upsizing 3,926 LF of the existing 6- and 10-inch gravity sewer to a 15-inch gravity sewer. Alignment of the new sewer would be parallel to the existing sewer, which is located in the southbound lane of Highway 29 (Caltrans right-of-way). Pipe bursting may not be feasible given the close proximity of a water main to the sewer alignment. Trenchless construction should be considered during project predesign to minimize disruption to highway traffic operations. Night work is also anticipated.

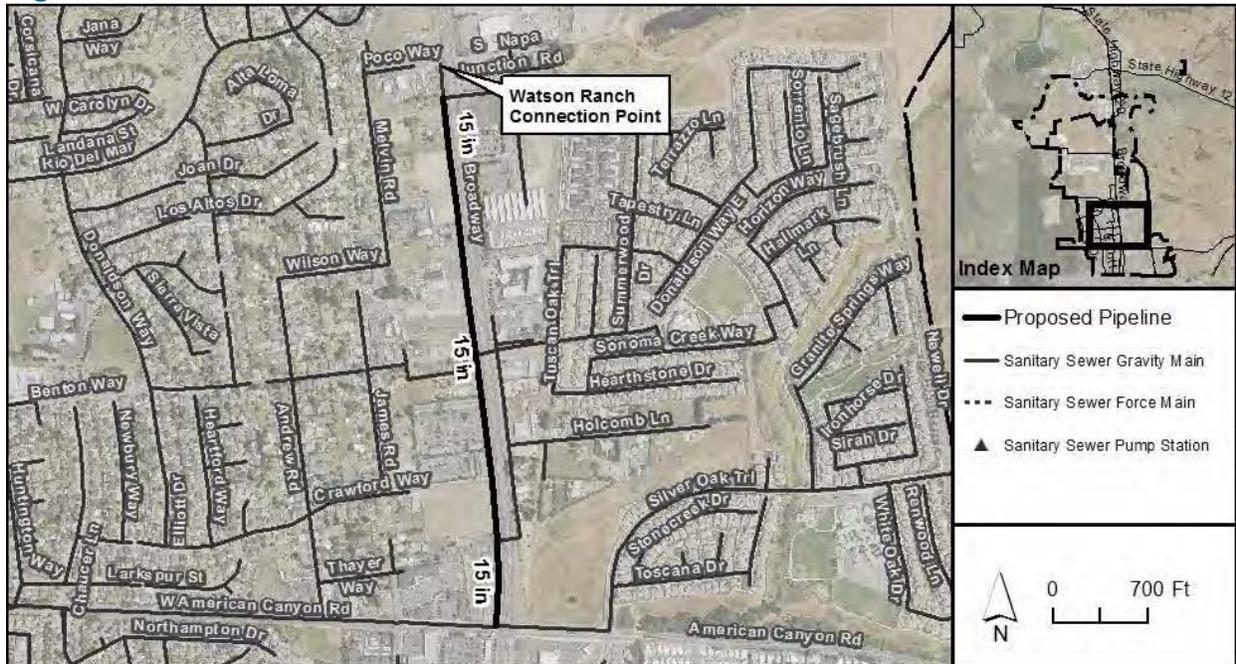
Hydraulic capacity could be restored within the existing pipeline north of Donaldson Way East by removing approximately 64 percent (178 gpm) of the estimated 276 gpm infiltration/inflow (I/I) for the 10-year design storm in the upstream sewer basin. Hydraulic capacity cannot be restored within the existing pipeline south of Donaldson Way East because the capacity deficiency exceeds the I/I in the upstream sewer basin.

Replacement of the damaged pipelines will reduce the amount of I/I contribution into the collection system by approximately 486 gpm for the 10-year design storm. Hydraulic evaluation of the collection system accounts for this reduction in I/I, including sizing of downstream CIP projects (e.g., Main Basin Pump Station).

This project is needed, in part, to serve future development.

Figure 4 provides an illustration of project improvements.

**Figure 4**



**Table 4: CIP – SS4 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>• Replace 3,926 LF of 6- and 10-inch gravity sewer with 15-inch gravity sewer</li> <li>• Connect sewer laterals and local collector sewers to the new gravity sewer</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>• Easement / right-of-way considerations – Potential temporary easements on private properties located west of and adjacent to Highway 29 to facilitate construction activities</li> <li>• Caltrans encroachment permitting</li> </ul>
Project Cost Total <sup>(1)</sup>	<p>\$1,280,000 – Wastewater Operations</p> <p>\$1,260,000 – Wastewater Capacity</p> <p>\$2,540,000 – Project Total</p>

(1) Detailed information for the project cost is provided in Appendix G.

## CIP – SS5 Summerfield Project

The existing 8-inch pipeline located between Westpark, Independence Drive, and Cartagena Way has hydraulic deficiencies and is difficult for City staff to access manholes.

CIP SS5 includes the relocation of approximately 430 LF of existing 8-inch gravity sewer with approximately 485 LF of new 8-inch gravity sewer. Alignment of the new sewer would be in Westpark and Cartagena Way, including the parking lot at the east end of Cartagena Way. Existing sewers would be abandoned in place. Existing sewer laterals and local collector sewers in the project vicinity would be connected to the new sewer.

Figure 5 provides an illustration of project improvements.

**Figure 5**



**Table 5: CIP – SS5 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>Abandon 430 LF of 8-inch gravity sewer located between Westpark, Independence Drive, and Cartagena Way</li> <li>Construct 485 LF of 8-inch gravity sewer to relocate abandoned sewer</li> <li>Connect sewer laterals and local collector sewers to the new gravity sewer</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>Construction permits</li> </ul>
Project Cost Total <sup>(1)</sup>	\$370,000 – Wastewater Operations

Detailed information for the project cost is provided in Appendix G.

### **CIP – SS6 Theresa Avenue and Los Altos Drive, north of Rio Del Mar**

The existing 6-inch gravity sewer in Theresa Avenue and Los Altos Drive located north of Rio Del Mar is undersized to convey existing peak wet weather flows. This capacity deficiency results in surcharging of the sewer and potential sanitary sewer overflow. Additionally, this gravity sewer contains sags, offset joints, and potentially illicit connection(s).

CIP SS6 includes upsizing 3,318 LF of the existing 6-inch gravity sewer to an 8- to 10-inch gravity sewer. Alignment of the new sewer would be in Theresa Avenue and Los Altos Drive, either parallel to the existing sewer or within the existing pipeline's alignment. Existing sewer laterals and local collector sewers in the project vicinity would be connected to the new sewer. Pipe bursting should be considered during project predesign; however, reconnection of sewer laterals, bypass pumping needs, and potential impacts to adjacent utilities may eliminate this alternative.

Hydraulic capacity could be restored within the existing pipeline by removing approximately 57 percent (236 gpm) of the estimated 416 gpm infiltration/inflow (I/I) for the 10-year design storm in the upstream sewer basin. I/I removal in the upstream basin would also reduce the amount of flow pumped at the Main Basin PS and treated at the City's wastewater treatment plant. This project may be combined with CIP SS4.

Figure 6 provides an illustration of project improvements.

**Figure 6**



**Table 6: CIP – SS6 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>• Replace 3,318 LF of 6-inch gravity sewer with 8- and 10-inch gravity sewer</li> <li>• Connect sewer laterals and local collector sewers to the new gravity sewer</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>• Construction permits</li> </ul>
Project Cost Total <sup>(1)</sup>	\$2,050,000 – Wastewater Operations

(1) Detailed information for the project cost is provided in Appendix G.

## CIP – SS7 Upsize Main Basin Pump Station

The firm capacity for the existing Main Basin Pump Station (MBPS) is 3,000 gallons per minute (gpm), which is based on operation of three of the four pumps with the fourth pump in standby mode. Existing peak wet weather flow conveyed to MBPS is estimated at 6,330 gpm; the peak flow rate increases to 6,864 gpm for future conditions. Exceeding the pump station capacity could result in significant sanitary sewer overflow at the pump station site and at low points in the upstream collection system. The existing equalization basins at MBPS are assumed to not contribute storage of wastewater for the benefit of reducing the peak flow rates to be pumped by MBPS.

Increase of capacity from 3,000 gpm to 6,864 gpm is anticipated to require the construction of a new pump station at the MBPS site. Construction of a new pump station would allow for operation of the existing pump station during construction. In order to handle the range of dry and wet weather flows conveyed to MBPS, the new pump station should be equipped with multiple pumps, potentially including small and large capacity pumps.

Hydraulic capacity could be restored for the MBPS by removing approximately 73 percent (3,864 gpm) of the estimated 5,298 gpm infiltration/inflow (I/I) for the 10-year design storm in the upstream sewer basin. This amount of I/I reduction is not considered feasible since it may not be achieved even with complete replacement of the upstream collection system (including sewer mains and laterals).

Predesign analysis should consider alternatives for CIP SS7, including the following:

- Alternative 1: Improve the existing pond at the pump station site in order to temporarily store peak flows during storm events. Preliminary evaluation of this alternative finds that this alternative may have a lower capital cost (\$8,570,000) compared to a large capacity increase for the pump station. However, a detailed feasibility study is recommended for use of the pond that considers various factors for use of the pond, including: available storage volume, environmental impacts, resource agency permitting, hydraulic considerations, pond lining needs, etc. Use of an extended period simulation (EPS) model may improve the City's understanding of collection system hydraulics relative to peak flow demand at the MBPS.
- Alternative 2: This alternative assumes that project SS3 Alternative 2 is implemented, diverting flow to the SMPS and upsizing those facilities to handle the additional flow. If that alternative were to be implemented than the cost of upgrading the MBPS would be reduced to \$5,140,000.

Useable storage volume for the pond is calculated as follows, which should be further evaluated during a feasibility study: based on review of aerial mapping, the pond area is approximately 2.3 acres. Assuming an average storage depth of 5 feet, the pond would hold approximately 3.75 million gallons (MG) of wastewater. It may be feasible to increase the pond storage depth by excavation of the pond bottom or raising of the surrounding levee

70 percent reduction in I/I is generally accepted in the wastewater industry as the upper bound for I/I rehabilitation projects. To achieve that level of I/I reduction, complete rehabilitation of the upstream collection system may be required, which is anticipated to be cost prohibitive. The approximate cost for rehabilitation of one mile of sewer mainline and associated manholes and sewer laterals is \$3 million. The addition of upper lateral rehabilitation increases this cost. The project cost provided on the following page is \$12.86 million. That budget would afford the rehabilitation of approximately 4.3 miles of I/I rehabilitation. Upon more detailed I/I study of the MBPS sewer basin, it may require rehabilitation of more than 4.3 miles of sewer main and associated manholes and laterals to achieve the I/I reduction necessary to avoid upgrade of the pump station.

Predesign for the pump station improvements should evaluate partial reduction of I/I contributing to the MBPS in order to reduce the scope of pump station improvements and the flow velocity within the pump station's existing 18-inch discharge force main to under 10 feet per second (fps).

Figure 7 provides an illustration of project improvements.

**Figure 7**



**Table 7: CIP – SS7 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>Construct a new 6,864 gpm capacity pump station</li> <li>Construct associated piping and appurtenances at the pump station site, including emergency generator</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>CEQA review, environmental and construction permits</li> </ul>
Project Cost Total <sup>(1)</sup>	<p>\$11,990,000 – Wastewater Operations</p> <p>\$870,000 – Wastewater Capacity</p> <p>\$12,860,000 – Project Total</p>

(1) Detailed information for the project cost is provided in Appendix G.

## CIP – SS8 Broadway, Cartagena Way to Mobile Home Park Entrance

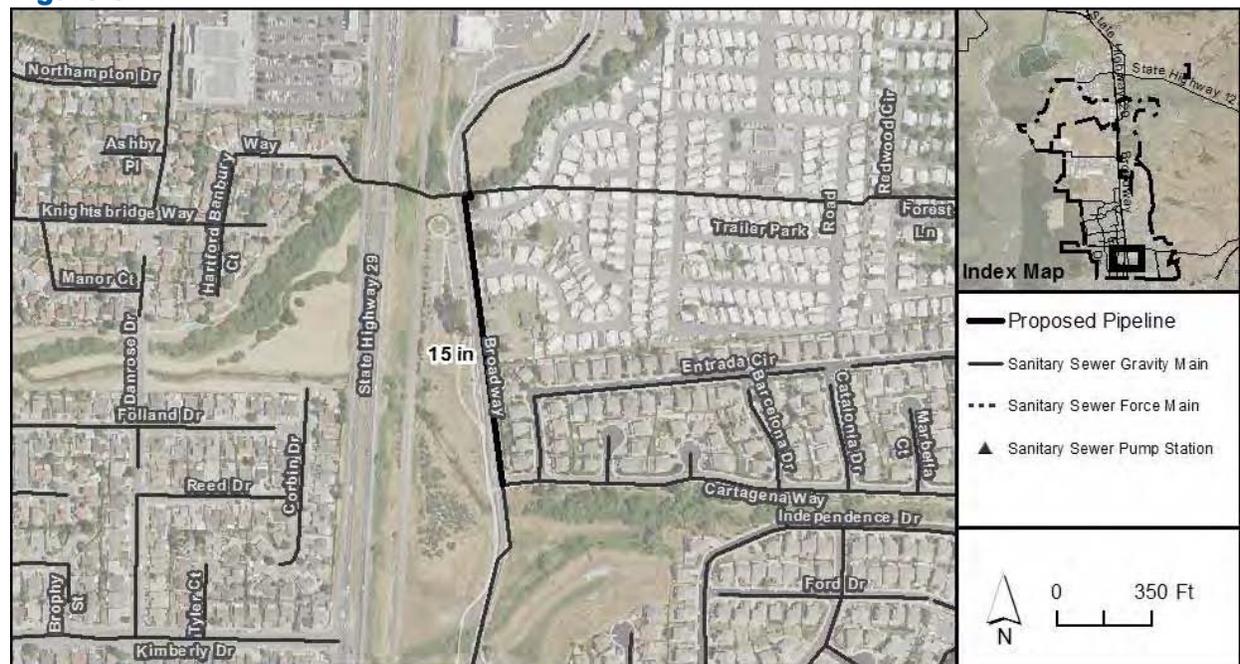
The existing 10-inch pipeline located in Broadway between the entrance to the Las Casitas mobile home park and Cartagena Way is undersized to convey peak wet weather flow.

CIP SS8 includes the upsizing of 1,111 LF of existing 10-inch gravity sewer to a 15-inch sewer. Alignment of the new sewer would be in Broadway, either parallel to the existing sewer or within the existing pipeline’s alignment. Existing sewer laterals and local collector sewers in the project vicinity would be connected to the new sewer. Pipe bursting should be considered during project predesign; however, reconnection of sewer laterals, bypass pumping needs, and potential impacts to adjacent utilities may eliminate this alternative.

Hydraulic capacity could be restored within the existing pipeline by removing approximately 25 percent (28 gpm) of the estimated 111 gpm infiltration/inflow (I/I) for the 10-year design storm in the upstream sewer basin. I/I removal in the upstream basin would also reduce the amount of flow pumped at the Main Basin Pump Station and treated at the City’s wastewater treatment plant.

Figure 8 provides an illustration of project improvements.

**Figure 8**



**Table 8: CIP – SS8 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>Replace 1,111 LF of 10-inch gravity sewer with 15-inch gravity sewer in Broadway</li> <li>Connect sewer laterals and local collector sewers to the new gravity sewer</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>Construction permits</li> </ul>
Project Cost Total <sup>(1)</sup>	\$680,000 – Wastewater Operations

(1) Detailed information for the project cost is provided in Appendix G.

### **CIP – SS9 Elliott Drive, Bedford Lane to Northampton Drive and Chaucer Lane, Northampton Drive to West American Canyon Road**

The existing 12-inch gravity sewer in Elliott Drive starting just south of Bedford Lane and the existing 15-inch sewer in Chaucer Lane to the north of Northampton Drive are undersized to convey existing peak wet weather flows. These capacity deficiencies result in surcharging of the sewers and potential sanitary sewer overflow.

CIP SS9 includes upsizing 601 LF of the existing 12- and 15-inch gravity sewer in Elliott Drive and Chaucer Lane to 18- to 24-inch gravity sewers.

Alignment of the new sewers would be in Elliott Drive and Chaucer Lane, either parallel to the existing sewers or within the existing pipelines' alignments. Existing sewer laterals and local collector sewers in the project vicinity would be connected to the new sewers. Pipe bursting should be considered during project predesign; however, reconnection of sewer laterals, bypass pumping needs, and potential impacts to adjacent utilities may eliminate this alternative.

Hydraulic capacity could be restored within the existing pipelines by removing approximately 38 percent (442 gpm) of the estimated 1,178 gpm infiltration/inflow (I/I) for the 10-year design storm in the upstream sewer basin. I/I removal in the upstream basin would also reduce the amount of flow pumped at the Main Basin Pump Station and treated at the City's wastewater treatment plant.

Figure 9 provides an illustration of project improvements.

**Figure 9**



**Table 9: CIP – SS9 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>Replace 601 LF of 12- and 15-inch gravity sewer with 18- to 24-inch gravity sewer</li> <li>Connect sewer laterals and local collector sewers to the new gravity sewer</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>Construction permits</li> </ul>
Project Cost Total <sup>(1)</sup>	\$1,090,000 – Wastewater Operations

(1) Detailed information for the project cost is provided in Appendix G.

## **CIP – SS10 Broadway north of Rio Del Mar**

The existing 8-inch gravity sewer in the western margin of the Broadway / Highway 29 right-of-way (Caltrans) between Rio Del Mar and Napa Junction Road is undersized to convey existing peak wet weather flows. This capacity deficiency results in surcharging of the sewer and potential sanitary sewer overflow. Addressing the hydraulic deficiency would also address potential structural issues with the pipelines.

CIP SS10 includes upsizing 2,110 LF of the existing 8-inch gravity sewer to a 10-inch gravity sewer. Alignment of the new sewer would either be parallel to the existing sewer or within the existing pipeline's alignment. Existing sewer laterals and local collector sewers in the project vicinity would be connected to the new sewer. Pipe bursting and trenchless construction should be considered during project predesign to minimize disruption to highway traffic operations. Night work is also anticipated.

Hydraulic capacity could be restored within the existing pipeline by removing approximately 55 percent (172 gpm) of the estimated 310 gpm infiltration/inflow (I/I) for the 10-year design storm in the upstream sewer basin, which overlaps with the sewer basin associated with CIP SS1. I/I removal in the upstream basin would also reduce the amount of flow pumped at the Main Basin PS and treated at the City's wastewater treatment plant.

Figure 10 provides an illustration of project improvements.

**Figure 10**



**Table 10: CIP – SS10 Summary**

CIP Component	Description
Proposed Improvements	<ul style="list-style-type: none"> <li>Replace 2,110 LF of 8-inch gravity sewer with 10-inch gravity sewer</li> <li>Connect sewer laterals and local collector sewers to the new gravity sewer</li> </ul>
Additional Project Considerations	<ul style="list-style-type: none"> <li>Easement / right-of-way considerations – Potential temporary easements on private properties located west of and adjacent to Highway 29 to facilitate construction activities</li> <li>Caltrans encroachment permitting</li> </ul>
Project Cost Total <sup>(1)</sup>	\$1,030,000 – Wastewater Operations

(1) Detailed information for the project cost is provided in Appendix G.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

*CIP Project; CIP-SS1: Rio Del Mar Basin*

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$226,000	\$226,000
Temporary Traffic Control (5%)		1	LS	\$189,000	\$189,000
Temporary Bypass Pumping		1	LS	\$332,000	\$332,000
Cleaning and CCTV Inspection		11,040	LF	\$10	\$110,400
6" Pipe - CIPP Rehabilitation	6	7,800	LF	\$90	\$702,000
8" Pipe - CIPP Rehabilitation	8	3,240	LF	\$120	\$388,800
Sewer Lateral Rehabilitation		230	EA	\$8,000	\$1,840,000
Sewer Manhole Rehabilitation		60	EA	\$4,000	\$240,000
Pre- and Post-Construction I/I Assessment		1	LS	\$150,000	\$150,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$4,179,000
<b>Construction Subtotal (Rounded)</b>					<b>\$4,180,000</b>
Contingency (25%) (Rounded)					\$1,045,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					<b>\$5,230,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$1,307,500
Inspection/CM/ESDC (12% of Construction)	\$627,600
Easement/Land Acquisition <sup>(1)</sup>	0

**Project Total (Rounded) \$7,170,000**

Notes:

(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

CIP Project; CIP-SS2: Napa Logistics and Green Island Pump Station (Exist.)

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
New Green Island Pump Station (950 gpm)		1	LS	\$1,400,000	\$1,400,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$1,400,000
<b>Construction Subtotal (Rounded)</b>					<b>\$1,400,000</b>
Contingency (25%) (Rounded)					\$350,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					<b>\$1,750,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$437,500
Inspection/CM/ESDC (12% of Construction)	\$210,000
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$2,400,000</b>

Notes:

(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

CIP Project; CIP-SS2: Napa Logistics and Green Island Pump Station (Future)

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$604,000	\$604,000
Temporary Traffic Control (3%)		1	LS	\$302,000	\$302,000
Potholing		1	LS	\$36,000	\$36,000
Shoring and Trench Safety		1	LS	\$150,000	\$150,000
Dewatering		1	LS	\$580,000	\$580,000
Temporary Bypass Pumping		1	LS	\$72,000	\$72,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$72,000	\$72,000
New Green Island Pump Station (1,455 gpm)		1	LS	\$1,800,000	\$1,800,000
10" Pipe - Tower Rd PS to Devlin Rd (invert 10' or less)	10	1,221	LF	\$104	\$126,984
10" Pipe - Tower Rd PS to Devlin Rd (invert over 10' to 18')	10	81	LF	\$123	\$9,963
18" Casing under Southern Pacific RR (10" trunk sewer to Tower Rd PS)	18	119	LF	\$750	\$89,250
10" Pipe - Railroad Crossing to Tower Rd PS (invert 10' or less)	10	119	LF	\$104	\$12,376
Tunneling Sending and Receiving Pits for Tunneled Portion to Tower Rd PS		1	LS	\$250,000	\$250,000
30" Casing under Southern Pacific RR (21" trunk sewer)	30	350	LF	\$1,000	\$350,000
21" Pipe - Devlin Rd to Green Island Pump Station (tunneled)	21	4,180	LF	\$750	\$3,135,000
Tunneling Sending and Receiving Pits for Tunneled Portion		1	LS	\$1,500,000	\$1,500,000
Tunneling Sending and Receiving Pits for RR Crossing (Green Island Rd)		1	LS	\$500,000	\$500,000
15" Pipe - Railroad Crossing to Green Island PS (open cut) (invert over 10' to 18')	15	1,115	LF	\$161	\$179,515
48" Manholes - for 8" and 12" Pipelines		26	EA	\$15,000	\$390,000
60" Manholes (invert 18' or more)		11	EA	\$50,000	\$550,000
Abandon Existing 18" Force Main		1	LS	\$5,000	\$5,000
Abandon Tower Rd PS and Demolish Green Island PS		1	LS	\$150,000	\$150,000
Misc. Utility Relocations and Lateral/Service Replacements		1	LS	\$100,000	\$100,000
Pavement Overlay		-	TN	\$120	
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$10,965,000
<b>Construction Subtotal (Rounded)</b>					
					\$10,970,000
Contingency (25%) (Rounded)					\$2,743,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					
					<b>\$13,720,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$3,430,000
Inspection/CM/ESDC (12% of Construction)	\$1,646,400
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$18,800,000</b>

Notes:  
(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

*CIP Project; CIP-SS3: Huntington Way*

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$142,000	\$142,000
Temporary Traffic Control (5%)		1	LS	\$119,000	\$119,000
Potholing		1	LS	\$41,000	\$41,000
Shoring and Trench Safety		1	LS	\$69,000	\$69,000
Dewatering		1	LS	\$205,000	\$205,000
Temporary Bypass Pumping		1	LS	\$18,000	\$18,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$35,000	\$35,000
10" Pipe (invert 10' or less)	10	268	LF	\$104	\$27,872
24" Pipe (invert 10' or less)	24	213	LF	\$199	\$42,387
24" Pipe (invert over 10' to 18')	24	46	LF	\$228	\$10,488
27" Pipe (invert 10' or less)	27	151	LF	\$293	\$44,243
27" Pipe (invert over 10' to 18')	27	1,236	LF	\$329	\$406,644
30" Pipe (invert over 10' to 18')	30	1,488	LF	\$359	\$534,192
60" Manholes for 18" - 36" Pipes (invert over 10' to 18')		4	EA	\$20,000	\$80,000
60" Manholes for 18" - 36" Pipes (invert 18' or more)		6	EA	\$25,000	\$150,000
42" Casing under Creek (27" trunk sewer)		200	LF	\$1,500	\$300,000
Tunneling Sending and Receiving Pits for Creek		1	LS	\$250,000	\$250,000
Reconnect Sewer Laterals		32	EA	\$5,000	\$160,000
Misc. Utility Relocations		1	LS	\$30,000	\$30,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$2,665,000
<b>Construction Subtotal (Rounded)</b>					
					\$2,670,000
Contingency (25%) (Rounded)					\$668,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					
					<b>\$3,340,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$835,000
Inspection/CM/ESDC (12% of Construction)	\$400,800
Easement/Land Acquisition <sup>(1)</sup>	0

**Project Total (Rounded) \$4,580,000**

Notes:

(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

**ALT. 1 - Construct Parallel 15-inch Sewer**  
**CIP Project; CIP-SS3: Huntington Way**

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$89,000	\$89,000
Temporary Traffic Control (5%)		1	LS	\$75,000	\$75,000
Potholing		1	LS	\$41,000	\$41,000
Shoring and Trench Safety		1	LS	\$69,000	\$69,000
Dewatering		1	LS	\$205,000	\$205,000
Temporary Bypass Pumping		1	LS	\$18,000	\$18,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$35,000	\$35,000
10" Pipe (invert 10' or less)	10	268	LF	\$104	\$27,872
15" Pipe (invert 10' or less)	15	364	LF	\$138	\$50,232
15" Pipe (invert over 10' to 18')	15	2,770	LF	\$161	\$445,970
48" Manholes for 10" - 15" Pipes (invert over 10' to 18')		4	EA	\$10,000	\$40,000
48" Manholes for 10" - 15" Pipes (invert 18' or more)		6	EA	\$12,000	\$72,000
30" Casing under Creek (15" trunk sewer)		200	LF	\$1,200	\$240,000
Tunneling Sending and Receiving Pits for Creek		1	LS	\$250,000	\$250,000
Misc. Utility Relocations		1	LS	\$30,000	\$30,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$1,689,000
<b>Construction Subtotal (Rounded)</b>					<b>\$1,690,000</b>
Contingency (25%) (Rounded)					\$423,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					<b>\$2,120,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$530,000
Inspection/CM/ESDC (12% of Construction)	\$254,400
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$2,910,000</b>

Notes:  
(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

**ALT. 2 - Divert Flow to SMPS**  
**CIP Project; CIP-SS3: Huntington Way**

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$199,000	\$199,000
Temporary Traffic Control (5%)		1	LS	\$166,000	\$166,000
Potholing		1	LS	\$17,000	\$17,000
Shoring and Trench Safety		1	LS	\$28,000	\$28,000
Dewatering		1	LS	\$84,000	\$84,000
Temporary Bypass Pumping		1	LS	\$250,000	\$250,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$14,000	\$14,000
18" Pipe (invert 10' or less)	18	560	LF	\$159	\$89,040
18" Pipe (invert over 10' to 18')	18	840	LF	\$183	\$153,720
60" Manholes for 18" - 36" Pipes (invert 10' or less)		3	EA	\$15,000	\$45,000
60" Manholes for 18" - 36" Pipes (invert over 10' to 18')		4	EA	\$20,000	\$80,000
Upgrade Sunset Meadows Pump Station Capacity to 3,774 gpm		1	LS	\$2,500,000	\$2,500,000
16" SSFM from SMPS to 18-inch SSFM	16	100	LF	\$250	\$25,000
Connection to 18-inch SSFM	16	1	LS	\$15,000	\$15,000
Misc. Utility Relocations		1	LS	\$30,000	\$30,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$3,696,000
<b>Construction Subtotal (Rounded)</b>					
					\$3,700,000
Contingency (25%) (Rounded)					\$925,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					
					<b>\$4,630,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$1,157,500
Inspection/CM/ESDC (12% of Construction)	\$555,600
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$6,350,000</b>

Notes:  
(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

*CIP Project; CIP-SS4: Broadway North of American Canyon Rd (Exist.)*

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$37,000	\$37,000
Temporary Traffic Control (10%)		1	LS	\$62,000	\$62,000
Potholing		1	LS	\$25,000	\$25,000
Shoring and Trench Safety		1	LS	\$41,000	\$41,000
Dewatering		1	LS	\$121,000	\$121,000
Temporary Bypass Pumping		1	LS	\$31,000	\$31,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$21,000	\$21,000
15" Pipe (invert 10' or less)	15	1,508	LF	\$138	\$208,104
15" Pipe (invert over 10' to 18')	15	496	LF	\$161	\$79,856
48" Manholes for 10" - 15" Pipes (invert 10' or less)		3	EA	\$8,000	\$24,000
48" Manholes for 10" - 15" Pipes (invert over 10' to 18')		2	EA	\$10,000	\$20,000
Reconnect Sewer Laterals		6	EA	\$5,000	\$30,000
Misc. Utility Relocations		1	LS	\$25,000	\$25,000
Additional Pavement Restoration in Caltrans Right-of-Way		1	LS	\$15,000	\$15,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$740,000
<b>Construction Subtotal (Rounded)</b>					<b>\$740,000</b>
Contingency (25%) (Rounded)					\$185,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					<b>\$930,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$232,500
Inspection/CM/ESDC (12% of Construction)	\$111,600
Easement/Land Acquisition <sup>(1)</sup>	0

**Project Total (Rounded) \$1,280,000**

Notes:

(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

CIP Project; CIP-SS4: *Broadway North of American Canyon Rd (Future)*

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$74,000	\$74,000
Temporary Traffic Control (10%)		1	LS	\$123,000	\$123,000
Potholing		1	LS	\$48,000	\$48,000
Shoring and Trench Safety		1	LS	\$79,000	\$79,000
Dewatering		1	LS	\$236,000	\$236,000
Temporary Bypass Pumping		1	LS	\$20,000	\$20,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$40,000	\$40,000
15" Pipe (invert 10' or less)	15	1,618	LF	\$138	\$223,284
15" Pipe (invert over 10' to 18')	15	2,308	LF	\$161	\$371,588
48" Manholes for 10" - 15" Pipes (invert 10' or less)		2	EA	\$8,000	\$16,000
48" Manholes for 10" - 15" Pipes (invert over 10' to 18')		8	EA	\$10,000	\$80,000
Reconnect Sewer Laterals		16	EA	\$5,000	\$80,000
Misc. Utility Relocations		1	LS	\$50,000	\$50,000
Additional Pavement Restoration in Caltrans Right-of-Way		1	LS	\$30,000	\$30,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$1,471,000
<b>Construction Subtotal (Rounded)</b>					
					\$1,480,000
Contingency (25%) (Rounded)					\$370,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					
					<b>\$1,850,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$462,500
Inspection/CM/ESDC (12% of Construction)	\$222,000
Easement/Land Acquisition <sup>(1)</sup>	0

**Project Total (Rounded) \$2,540,000**

Notes:

(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

**CIP Project; CIP-SS5: Summerfield Project**

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$11,000	\$11,000
Temporary Traffic Control (5%)		1	LS	\$9,000	\$9,000
Potholing		1	LS	\$6,000	\$6,000
Shoring and Trench Safety		1	LS	\$9,000	\$9,000
Dewatering		1	LS	\$26,000	\$26,000
Temporary Bypass Pumping		1	LS	\$22,000	\$22,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$3,000	\$3,000
8" Pipe (invert 10' or less)	8	485	LF	\$91	\$44,135
Abandon 8" Pipe	8	430	LF	\$20	\$8,600
48" Manholes for 8" - 15" Pipes (invert 10' or less)		4	EA	\$8,000	\$32,000
Reconnect Sewer Laterals		5	EA	\$5,000	\$25,000
Misc. Utility Relocations		1	LS	\$5,000	\$5,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$201,000
<b>Construction Subtotal (Rounded)</b>					
					\$210,000
Contingency (25%) (Rounded)					\$53,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					
					<b>\$270,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$67,500
Inspection/CM/ESDC (12% of Construction)	\$32,400
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$370,000</b>

Notes:  
(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

**CIP Project; CIP-SS6: Theresa Avenue and Los Altos Drive**

<b>ENR Construction Cost Index:</b>	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$62,000	\$62,000
Temporary Traffic Control (5%)		1	LS	\$52,000	\$52,000
Potholing		1	LS	\$40,000	\$40,000
Shoring and Trench Safety		1	LS	\$67,000	\$67,000
Dewatering		1	LS	\$200,000	\$200,000
Temporary Bypass Pumping		1	LS	\$34,000	\$34,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$17,000	\$17,000
8" Pipe (invert 10' or less)	8	1,772	LF	\$91	\$161,252
10" Pipe (invert 10' or less)	10	1,546	LF	\$104	\$160,784
48" Manholes for 10" - 15" Pipes (invert 10' or less)		12	EA	\$8,000	\$96,000
Reconnect Sewer Laterals		54	EA	\$5,000	\$270,000
Misc. Utility Relocations		1	LS	\$25,000	\$25,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$1,186,000
<b>Construction Subtotal (Rounded)</b>					<b>\$1,190,000</b>
Contingency (25%) (Rounded)					\$298,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					<b>\$1,490,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$372,500
Inspection/CM/ESDC (12% of Construction)	\$178,800
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$2,050,000</b>

Notes:

(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

*CIP Project; CIP-SS7: Main Basin Pump Station (Exist.)*

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
New Main Basin Pump Station (6,330 gpm)		1	LS	\$7,000,000	\$7,000,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$7,000,000
<b>Construction Subtotal (Rounded)</b>					<b>\$7,000,000</b>
Contingency (25%) (Rounded)					\$1,750,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					<b>\$8,750,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$2,187,500
Inspection/CM/ESDC (12% of Construction)	\$1,050,000
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$11,990,000</b>

Notes:

(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

ALT. 1 - Improve Storage Pond to Reduce PWWF Capacity  
CIP Project; CIP-SS7: Main Basin Pump Station (Exist.)

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Improve Storage Pond to Provide 3.75 MG Storage		1	LS	\$2,000,000	\$2,000,000
New Main Basin Pump Station (4,000 gpm)		1	LS	\$3,000,000	\$3,000,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$5,000,000
<b>Construction Subtotal (Rounded)</b>					<b>\$5,000,000</b>
Contingency (25%) (Rounded)					\$1,250,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					<b>\$6,250,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$1,562,500
Inspection/CM/ESDC (12% of Construction)	\$750,000
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$8,570,000</b>

Notes:  
(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

**ALT. 2 - Divert Flow to SMPS to Reduce PWWF Capacity**  
**CIP Project; CIP-SS7: Main Basin Pump Station (Exist.)**

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Divert Flow to SMPS Under Separate CIP (SS3)					
New Main Basin Pump Station (4,000 gpm)		1	LS	\$3,000,000	\$3,000,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$3,000,000
<b>Construction Subtotal (Rounded)</b>					<b>\$3,000,000</b>
Contingency (25%) (Rounded)					\$750,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					<b>\$3,750,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$937,500
Inspection/CM/ESDC (12% of Construction)	\$450,000
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$5,140,000</b>

Notes:  
(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

*CIP Project; CIP-SS7: Main Basin Pump Station (Future)*

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
New Main Basin Pump Station (6,864 gpm)		1	LS	\$7,500,000	\$7,500,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$7,500,000
<b>Construction Subtotal (Rounded)</b>					<b>\$7,500,000</b>
Contingency (25%) (Rounded)					\$1,875,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					<b>\$9,380,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$2,345,000
Inspection/CM/ESDC (12% of Construction)	\$1,125,600
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$12,860,000</b>

Notes:

(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

*CIP Project; CIP-SS8: Broadway, Cartagena Way to Trailer Park Rd*

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$21,000	\$21,000
Temporary Traffic Control (5%)		1	LS	\$17,000	\$17,000
Potholing		1	LS	\$14,000	\$14,000
Shoring and Trench Safety		1	LS	\$23,000	\$23,000
Dewatering		1	LS	\$67,000	\$67,000
Temporary Bypass Pumping		1	LS	\$17,000	\$17,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$6,000	\$6,000
15" Pipe (invert 10' or less)	15	276	LF	\$138	\$38,088
15" Pipe (invert over 10' to 18')	15	835	LF	\$161	\$134,435
48" Manholes for 10" - 15" Pipes (invert 10' or less)		1	EA	\$8,000	\$8,000
48" Manholes for 10" - 15" Pipes (invert over 10' to 18')		2	EA	\$10,000	\$20,000
Reconnect Sewer Laterals		2	EA	\$5,000	\$10,000
Misc. Utility Relocations		1	LS	\$10,000	\$10,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$386,000
<b>Construction Subtotal (Rounded)</b>					
					\$390,000
Contingency (25%) (Rounded)					\$98,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					
					<b>\$490,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$122,500
Inspection/CM/ESDC (12% of Construction)	\$58,800
Easement/Land Acquisition <sup>(1)</sup>	0

**Project Total (Rounded) \$680,000**

Notes:

(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

*CIP Project; CIP-SS9: Elliott Drive south of Northampton*

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$34,000	\$34,000
Temporary Traffic Control (5%)		1	LS	\$28,000	\$28,000
Potholing		1	LS	\$8,000	\$8,000
Shoring and Trench Safety		1	LS	\$13,000	\$13,000
Dewatering		1	LS	\$37,000	\$37,000
Temporary Bypass Pumping		1	LS	\$10,000	\$10,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$7,000	\$7,000
18" Pipe (invert over 10' to 18')	18	218	LF	\$183	\$39,894
18" Pipe (invert 18' or more)	18	199	LF	\$208	\$41,392
24" Pipe (invert over 10' to 18')	24	184	LF	\$228	\$41,952
60" Manholes for 18" - 36" Pipes (invert 10' or less)		2	EA	\$15,000	\$30,000
60" Manholes for 18" - 36" Pipes (invert over 10' to 18')		9	EA	\$20,000	\$180,000
60" Manholes for 18" - 36" Pipes (invert 18' or more)		3	EA	\$25,000	\$75,000
Reconnect Sewer Laterals		11	EA	\$5,000	\$55,000
Misc. Utility Relocations		1	LS	\$25,000	\$25,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$626,000
<b>Construction Subtotal (Rounded)</b>					
					\$630,000
Contingency (25%) (Rounded)					\$158,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					
					<b>\$790,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$197,500
Inspection/CM/ESDC (12% of Construction)	\$94,800
Easement/Land Acquisition <sup>(1)</sup>	0
<b>Project Total (Rounded)</b>	<b>\$1,090,000</b>

Notes:  
(1) Does not include property acquisition, permit costs, or City degradation fees.



**City of American Canyon  
Wastewater Collection System Master Plan  
Planning Level Opinion of Probable Cost**

*CIP Project; CIP-SS10: Broadway north of Rio Del Mar*

ENR Construction Cost Index:	
Jul-15	11,155.07

Date:  
5/2/2016

Description	Diameter (in)	Quantity	Unit	Unit Cost	Total Cost
Mobilization and Demobilization (6%)		1	LS	\$30,000	\$30,000
Temporary Traffic Control (10%)		1	LS	\$49,000	\$49,000
Potholing		1	LS	\$26,000	\$26,000
Shoring and Trench Safety		1	LS	\$43,000	\$43,000
Dewatering		1	LS	\$85,000	\$85,000
Temporary Bypass Pumping		1	LS	\$22,000	\$22,000
Handling, Treatment, and Disposal of Contaminated Soil and GW		1	LS	\$11,000	\$11,000
10" Pipe (invert 10' or less)	10	1,810	LF	\$104	\$188,240
10" Pipe (invert over 10' to 18')	10	300	LF	\$123	\$36,900
48" Manholes for 10" - 15" Pipes (invert 10' or less)		7	EA	\$8,000	\$56,000
Reconnect Sewer Laterals		5	EA	\$5,000	\$25,000
Misc. Utility Relocations		1	LS	\$10,000	\$10,000
Additional Pavement Restoration in Caltrans Right-of-Way		1	LS	\$10,000	\$10,000
<b>TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST</b>					
Subtotal (Rounded)					\$593,000
<b>Construction Subtotal (Rounded)</b>					
					\$600,000
Contingency (25%) (Rounded)					\$150,000
<b>Total Estimate of Probable Construction Cost (Rounded) <sup>(1)</sup></b>					
					<b>\$750,000</b>

Design, Survey, Geotechnical, Environmental Review, Permits (25% of Construction)	\$187,500
Inspection/CM/ESDC (12% of Construction)	\$90,000
Easement/Land Acquisition <sup>(1)</sup>	0

**Project Total (Rounded) \$1,030,000**

Notes:

(1) Does not include property acquisition, permit costs, or City degredation fees.

[www.ghd.com](http://www.ghd.com)



**Appendix 9.0 – Key Performance Indicators (KPI)**



**City of American Canyon SSMP Audit Performance Indicators**

SSMP Element	SSMP Section	Description	Performance Indicator	Unit	Target
System Information (tracking purposes only, no targets)			Total System Length	miles	
			Service Area	sq miles	
			Population	number	
			Service Connections	number	
			# Manholes	number	
			# Pump Stations	number	
			Sewer < 8 inch	miles	
			8 inch < sewer < 15 inch	miles	
			15 inch < sewer < 21 inch	miles	
			21 inch < sewer < 42 inch	miles	
			Average age of system piping	years	
			New sewer main installation	miles	
			New sewer lateral installation	miles	
			New cleanout installation	number	
Financial Information			Wastewater collections operations & maintenance staff (SEE NOTE 1)	number	14
			Total sewer collection O&M spending	\$M	\$1.0M
			Total sewer collection R&R spending	\$M	\$1.0M
Organization (tracking only, no targets)	D.13.ii.c	Chain of Communication	Total customer service calls	number	
			Total customer service calls resolved	number	
O&M	D.13.iv.a	Maps	Age of oldest un-fulfilled map update request	days	180
	D.13.iv.b	PM Activities	Certified wastewater collections operators	number	8
			Sewer laterals cleaned per year	number	20
			Sewer mains cleaned per year	miles	15
			Manholes inspected per year	number	300
			Sewer main CCTV inspected per year	miles	13.5
			Sewer laterals CCTV inspected per year	number	20
	Lift Stations maintained annually	number	11		
	D.13.iv.c	R&R Plan	Sewer main rehabilitated/replaced per year	miles	0.5 – 1.0 mi
			Sewer laterals rehabilitated/replaced per year	number	5
			Manholes rehabilitated	number	10-20
			% of CCTV inspection records reviewed for condition assessment purposes	%	100
			% of active Level 4 defects analyzed and included in CIP planning documents	%	90
			% of active Level 5 defects scheduled for repair within 5-year CIP	%	100

	D.13.iv.d	Training	Overall % completion of training matrices for all wastewater collections operations & maintenance staff	%	100
	D.13.iv.e	Critical Parts	Complete annual review of lift station spare part availability	Yes/No	Yes
Design	D.13.v.b	Construction	% of new sewer mains inspected	%	100
			% of new sewer laterals inspected	%	100
OERP	D.13.vi.a	Notification	Average response time to SSO	minutes	<60
	D.13.vi.d	SSO Containment	Percentage of SSO volume reaching a surface water	%	<25
FOG	D.13.vii.a	Public Education	Annual distribution of FOG informational flyers with City utility billing.	Yes/No	Yes
	D.13.vii.d	Grease Removal Devices	% of total FSE's with Grease Removal Devices installed	%	80
	D.13.vii.e	FOG Inspections	% of FSEs with permits inspected in the current year	%	100
			% of FSEs with violations that require increased inspections	%	<10
	D.13.vii.f	FOG Hot Spots	Length of FOG hotspot sections of pipe	feet	2,500
Number of SSO's caused by FOG			number	<2	
Monitoring & Measurement	D.13.ix	SSO Trends	SSO Rate per 100 miles of pipe	#/100 mi	7
			Total volume of SSO events per 100 miles of pipe	gal/100 mi	40,000
			% of total SSO volume recovered	%	75
			Number of SSOs caused by roots	number	<2
			Number of SSOs caused by debris	number	<2
			Number of SSOs caused by pipe failure	number	<2
			Number of SSOs caused by capacity	number	0
Total Number of Private Lateral SSOs	number	<5			
Audit	D.13.x	Updates	# of Days since completion of last audit	days	<730
			# of Days since completion of last SSMP update	days	<1,825
Communication	D.13.xi	Communication Program	Most current SSMP documents posted to City website	Yes/No	Yes

Notes:

1. Calculate the total number of City staff employed under the following positions:
  - Maintenance & Utilities Dept: WRF Operations Manager, MUD Supervisor, Maintenance Worker, Wastewater Operator.



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## TITLE

4th Quarter Investment Report for the City and Fire District

## RECOMMENDATION

Receive and file the City and Fire District's Treasurer's Report for the month ended June 30, 2022.

## CONTACT

Jemelyn Cruz, Interim Finance Director

## BACKGROUND & ANALYSIS

The City's Investment Policy requires; the Treasurer to submit a quarterly investment report to the City Council. The report ([Attachment 1](#)) for the quarter ended June 30, 2022 includes investment transactions for both the City and Fire District. The report shows the City's cash and investment book balance, including debt reserves and unspent proceeds, was \$73,972,521. The Fire District's book balance was \$6,865,876.

- The City's diversified portfolio includes \$45.03 million invested in the California State Treasurer's Office Local Agency Investment Fund (LAIF) and \$23.89 million managed by Chandler Asset Management. The funds managed by Chandler are invested in U.S. Treasury Notes, Federal Agency Securities, Asset Backed Securities, U.S. Corporate Notes, Supranational Securities, and FDIC insured Corporate Notes. The lower market value to book value is due to the rising interest rate environment. That is an unrealized number, since the City normally holds investments to maturity. The increasing rate environment also offers an opportunity to invest to achieve higher returns.
- The Fire District maintains cash and investment accounts separately from the City. The book value of the District's total portfolio is \$6.86 million. All cash not needed to meet the current operational requirements of the Fire District is invested with Local Agency Investment Fund (LAIF).

## COUNCIL PRIORITY PROGRAMS AND PROJECTS

Organizational Effectiveness: "Deliver exemplary government services."

**FISCAL IMPACT**

The recommended action will have no impact on the city's budget.

**ENVIRONMENTAL REVIEW**

Not Applicable

**ATTACHMENTS:**

[4th Quarter Investment Report for the City and Fire District](#)

**Investment Report  
For the Month Ended  
June 30, 2022**



**City of American Canyon**

<u>Operating and Capital Funds</u>	<u>Book Value</u>	<u>Market Value</u>	<u>Book Yield <sup>(1)</sup></u>	<u>% of Portfolio</u>
Cash - Petty	\$ 2,400	\$ 2,400		0.00%
Cash - Westamerica Bank	\$ 921,540	\$ 921,540		1.32%
Local Agency Investment Fund	45,030,293	44,450,546	0.75%	64.47%
Asset Backed Securities	2,356,738	2,299,825	1.52%	3.37%
Federal Agency Securities	4,909,137	4,708,139	1.42%	7.03%
Collateral Mortgage Obligations	157,907	149,297	0.72%	0.23%
Corporate Notes	6,239,326	5,916,306	1.96%	8.93%
Money Market Fund	299,554	299,554	0.97%	0.43%
Negotiable CD	1,350,007	1,342,670	0.23%	1.93%
Supranational	804,214	752,286	0.56%	1.15%
U.S. Treasury Notes	7,776,853	7,363,833	1.14%	11.13%
<b>TOTAL OPERATING CASH</b>	<b>69,847,969</b>	<b>68,206,397</b>		<b>100.00%</b>

**Debt Reserves and Proceeds**

<b>Debt Service Reserves</b>				
602 - American Canyon Road	434,030	434,030		
601 - 2004 Reassessment	-	-		
603 - CFD	3,084,098	3,084,098		
<b>BofA (Engie) - Cash</b>				
440 - Governmental Engie Debt Service	-	-		
515 - Water Debt Service	-	-		
545 - Wastewater Debt Service	-	-		
<b>Capital Reserve</b>				
601 - 2004 Reassessment	315,483	315,483		
360 - AmCyn Road East	290,941	290,941		
<b>TOTAL DEBT &amp; CAPITAL RESERVES</b>	<b>4,124,552</b>	<b>4,124,552</b>		
<b>TOTAL CASH AND INVESTMENTS - CITY</b>	<b>\$ 73,972,521</b>	<b>\$ 72,330,950</b>		

(1) The weighted average yield as operating and capital funds for the month ended 6/30/22 was 0.95%.

**American Canyon Fire Protection District**



<u>Description</u>	<u>Book Value</u>	<u>Market Value</u>	<u>Book Yield <sup>(2)</sup></u>	<u>% of Portfolio</u>
Cash - Westamerica Bank	\$ 223,215	223,215		3.25%
BofA (Engie) - Cash	-	-		0.00%
Local Agency Investment Fund	6,642,662	6,557,140	0.75%	96.75%
<b>TOTAL CASH AND INVESTMENTS - FIRE</b>	<b>\$ 6,865,876</b>	<b>\$ 6,780,355</b>		<b>100.00%</b>

(2) The weighted average yield for the month ended 6/30/22 was 0%.

The investments, as shown above, are in conformance with the Investment Policy or bond agreements. There are sufficient funds to meet the City's budgeted financial obligations for the next six months.

Respectfully submitted,

Jemelyn Cruz  
Interim Finance Director



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## TITLE

Property Exchange with Napa Valley Unified School District

## RECOMMENDATION

Adopt a Resolution approving a Property Exchange and Acquisition Agreement to transfer approximately 5.6 acres of land where the community center/gymnasium is located to the Napa Valley Unified School District in exchange for receiving the 6.57-acre property where the former Napa Junction Elementary School is located (on Napa Junction Rd.) from the Napa Valley Unified School District.

## CONTACT

Jason Holley, City Manager

## BACKGROUND & ANALYSIS

### Executive Summary

On August 22, the City Council approved the Property Exchange and Acquisition Agreement. The Agreement is revised to remove provision for a due diligence period and to require a reconciliation of the amount of school fees paid at building permit issuance. Staff recommends the Council approve the updated Agreement.

### Background

The City of American Canyon and the Napa Valley Unified School District (NVUSD) are the two largest landowners in American Canyon. As the City's population grew from 6,200 people at incorporation in 1992 to nearly 22,000 people today, the City worked with the NVUSD to expand educational opportunities here. Twenty-five years ago, this unique partnership manifested itself in the creation of a joint civic complex that includes the American Canyon Middle School (ACMS), a community center/gymnasium and the Philip West Aquatics Center (PWAC).

Tonight, the Council will discuss the parties' intention to collaborate on the future of school and civic sites within American Canyon. The discussions pertain to various properties, including the site of the former Napa Junction Elementary School (located on Napa Junction Road), the community center/gymnasium at ACMS, and vacant lands on Eucalyptus Drive and American Canyon Road. Key components of the new partnership include the City relinquishing its role as the co-owner of the community center/gymnasium and NVUSD transitioning its ownership of the former Napa Junction

Elementary school site to the City. The City and NVUSD intend upon accomplishing this exchange by through a "Property Exchange and Acquisition Agreement" (Attachment 2, Exhibit A).

Importantly, the City and NVUSD are committed to ensuring existing civic facilities will remain available for use by the community through the City's and NVUSD's respective facility rental programs. As noted in a recent joint press release, NVUSD Superintendent Dr. Rosanna Mucetti states, "It is our duty and responsibility to provide the best educational programs for students across the district, and this exchange will allow us flexibility for enhanced programs for American Canyon students. At the same time, our collective hope with the City is to maximize the space for the broader community – so we believe this exchange will represent a 'win-win' for everyone." Meanwhile City Manager Holley added, "The future of the former school site is a 'blank slate' and after an agreement is finalized, the City Council will begin its process for listening to the community's ideas and interests before ultimately deciding its new future. The continued sharing of our respective civic facilities and maximizing their use remains essential for the community's benefit. The City appreciates our collaborative relationship with NVUSD and values our partnership".

#### *100 Benton Way Property*

The City currently owns a 9.66 acre-property (APN 058-040-026) located at 100 Benton Way, which is used for education and community recreation purposes. The "L-shaped" property was dedicated by a developer to the former American Canyon County Water District in 1986, and it became a City asset at Incorporation in 1992 (Attachment 2, Agreement Exhibit A).

The "100 Benton Way Property" contains the community center/gymnasium, a portion of the ACMS track and field, a temporary skateboard park, and the PWAC. Per "1997 Agreements" (Attachment 3), the NVUSD is a "tenant" of the City for the first 20-years and then starting July 1, 2022, the NVUSD and the City are to become "co-owners" of the gymnasium/community center. Additionally, each party retains separate sole ownership of the ACMS and PWAC respectively.

Unfortunately, the 1997 Agreements are relatively silent as to details of the future transition from landlord-tenant relationship to one of co-ownership. Of note, the NVUSD is not a tenant nor do they "co-own" any other educational facilities districtwide. Suffice it to say, standards for educational facilities and the general public are different. Prospectively this juxtaposition is likely resolve in favor of the most conservative conditions.

For example, the ACMS track/field straddles the ACMS Property and 100 Benton Way Property. The maintenance standards for this facility are not severable based upon separate ownership and must meet the more strict CA Department of Education (Cal-Ed) and NVUSD requirements. Under a co-ownership scenario, the City may have to pay for a portion (if not all) of any needed repairs, even though it rarely uses the facility. Likewise, this concept holds true for the gymnasium/community center itself - a 20-year old building approaching significant lifecycle maintenance costs (e.g. roof replacement, etc.) Lastly, after discussing future co-ownership issues with the "NVUSD 2x2 Committee" (Joseph/Washington), it also became clear changes to allowable uses at the building

were imminent. In particular, consistent with State Law (California Business and Professions Code Section 25608) and NVUSD policy, the use of alcohol would be prohibited at the community center/gymnasium.

Under the proposed agreement, the City would relinquish its (impending) co-ownership of a 5.6-acre portion of the 100 Benton Way Property through the execution of a Quitclaim Deed (dashed area shown on Attachment 2, Agreement Exhibit B). The community center/gymnasium, a portion of the ACMS track and field, a temporary skateboard park are all located on the portion of land to be transferred to NVUSD. The PWAC would stay under City ownership on a new (smaller) parcel.

Prospectively, the gymnasium will be available for City and community use consistent with the NVUSD policies and facility rental program. Additionally, the temporary skateboard park will be relocated to a location that is still TBD. Lastly, the northern (rear) of the property will be secured in the same manner as the northern boundary of the ACMS property to prevent unauthorized access and thus, pedestrians will no longer access the property from the north.

#### *Former Napa Junction Elementary School Property*

NVSUD owns a 6.57-acre property (APN 058-320-0015) which is the site of the (former) Napa Junction Elementary School ("Napa Junction Rd. Property"). Napa Junction Elementary was moved from its former location due to the damage from the 2014 earthquake and recently opened a brand-new campus on Eucalyptus Drive. The City's acquisition of the Napa Junction Rd. Property is for public community and recreation purposes and to continue vehicle access for Napa Junction Road. The property abuts the 7-acre Little League Field - which came under City ownership in conjunction with the 1997 Agreement and is an example of the prior land exchange. All told, the City would own 13.5-acres of land bounded by Napa Junction Rd. and Hess Road (on 2 sides) (Attachment 2, Agreement Exhibit C). While the existing buildings can be re-used, development of new buildings will be constrained by the presence of earthquake faults. Unoccupied facilities such as new parks, ballfields, parking lots and unoccupied structures would not be constrained.

In the near term, the City intends to develop a full-time operational presence on a portion of the now vacant property to prevent vandalism, etc. Additionally, the multi-purpose room (with kitchen) and classrooms are intended to be made available for public through the City's facility rental program. Long-term, the property is a blank slate. Strategically located next to the City-owned Little League Field and underdeveloped property to the east, there are numerous opportunities for public serving amenities.

#### *General Plan Conformity*

Consistent with California Government Code Section 65402, on May 26, the Planning Commission unanimously confirmed the proposed exchange of public properties conforms with the City's General Plan (Attachment 4). Of note, the Commission determined the City's co-ownership interests in a portion of the "100 Benton Way Property" containing the community center/gymnasium et al. to be exchanged to the District will be unnecessary for the City as it will be gaining the Napa

Junction Rd. Property from the District intended for community and recreation purposes and to continue vehicle access to implement, consistent with Government Code Section 65103(b) its General Plan, 2018 Circulation Element (Pps. 11, 13), designating Napa Junction Road as a minor and major collector.

#### General Plan Update - Land Use Element

The City is currently processing a comprehensive update to its General Plan, including the Land-Use Element. On May 5 and June 7, the City Council reviewed the General Plan Update Draft Environmental Impact Report (DEIR) Notice of Preparation (NOP), which included potential changes to the Land-Use Element (Attachment 4). The Agreement provides that City staff will include residential land-use designations for certain undeveloped parcels of land adjacent to the (new) Napa Junction Elementary School and the American Canyon High School, and these changes are shown in the DEIR NOP. The changes shown in the DEIR NOP will be incorporated into the Draft General Plan, which will be available for further review and comment by the public, before consideration/approval by the Council.

#### Next Steps

Assuming the Council approves the Agreement tonight, then the NVUSD Board is scheduled to consider items related to this property exchange at an upcoming meeting in August.

On August 4, the Parks and Community Services Commission will consider recommendations to City Council for locations to relocate the skate park, which is scheduled to be brought forward for Council consideration on August 16.

### **COUNCIL PRIORITY PROGRAMS AND PROJECTS**

Community and Sense of Place: "Build on the strength of our local community to develop a clear 'sense of place' and establish our unique identity."

### **FISCAL IMPACT**

#### *Increased Future Costs*

The Agreement will result in increased one-time costs of at least approximately \$100k for the relocation of the temporary skate park. One-time costs for renovations of the former school property have not been determined and will depend upon future decisions about short-term and long-term uses. Additionally, the City's is expected to incur increased on-going costs to for renting the gymnasium. If all of the current recreation programming remains at the gymnasium, the cost is estimated to be \$60k; however, staff anticipates moving some programming to the Napa Junction Rd. location to reduce cost.

#### *Avoided Future Costs*

The Agreement is expected to contain "as-is" provisions - meaning each party is solely responsible for future maintenance costs, liabilities, etc. Thus, all future costs to maintain/repair/replace the ACMS track and field, gymnasium etc. up to "education standards" will be borne by the NVUSD.

Near-term estimates of the costs for the ACMS track and field exceed one million dollars. Future costs for the building have not been estimated, but expected to be significant.

## **ENVIRONMENTAL REVIEW**

The Project is exempt under the California Environmental Quality Act (Pub. Res. Code § 21000 et seq., "CEQA") as it is not a "Project" under CEQA Guidelines § 15378(b), and is categorically exempt under CEQA Guidelines § 15312-sale of surplus government property, and statutorily exemption under Government Code § 65996: Methods of considering and mitigating impacts on school facilities.

## **ATTACHMENTS:**

1. [Resolution - Napa Valley School District](#)
2. [Land Exchange Agreement](#)
3. [1997 Agreement](#)
4. [PC Resolution GP Conformity](#)
5. [Excerpt from General Plan Update Draft EIR NOP](#)

RESOLUTION NO. 2022- \_\_\_\_\_

**A RESOLUTION APPROVING A PROPERTY EXCHANGE AND ACQUISITION AGREEMENT TO TRANSFER APPROXIMATELY 5.6 ACRES OF LAND WHERE THE COMMUNITY CENTER/GYMNASIUM IS LOCATED TO THE NAPA VALLEY UNIFIED SCHOOL DISTRICT IN EXCHANGE FOR RECEIVING THE 6.57-ACRE PROPERTY WHERE THE FORMER NAPA JUNCTION ELEMENTARY SCHOOL IS LOCATED (ON NAPA JUNCTION RD.) FROM THE NAPA VALLEY UNIFIED SCHOOL DISTRICT.**

**WHEREAS**, City is the fee owner of 9.66 acres of real property (APN 058-040-026) known as the Community Center/American Canyon Middle School Gym/Track property ("Community Center/ACMS Gym Property"); and

**WHEREAS**, pursuant to that certain *1997 Agreement between the Parties for Construction and Development of the American Canyon Middle School, Gymnasium/Civic Center and Aquatic Center*, the gym building located on the Community Center/ACMS Gym Property was intended to revert to joint ownership between City and Napa Valley Unified School District (District) upon payment in full of the City's debt related to said building; and

**WHEREAS**, City's debt related to said building is now paid; and

**WHEREAS**, instead of joint ownership of the gym building, District now desires sole fee ownership of approximately 5.6 acres of the Community Center/ACMS Gym Property ("City Exchange Property") – including the gym building - to facilitate and enhance the provision for District educational services in the City and the District; and

**WHEREAS**, the District is the fee owner of 6.57 acres of real property (APN 058-320-015) which is the former site of the Napa Junction Elementary School ("District Exchange Property"); and

**WHEREAS**, City desires fee ownership of the District Exchange Property for use for community and recreation purposes and to supplement vehicle access to implement, consistent with Government Code section 65103(b) and its General Plan, 2018 Circulation Element (Pgs. 11, 13, designating Napa Junction Road as a minor and major collector to the Oat Hill Residential Project); and,

**WHEREAS**, the Parties will mutually benefit by exchange ("Property Exchange") of the District Exchange Property and the City Exchange Property ("Subject Properties") on an "as-is" transactional basis; and

**WHEREAS**, the City Planning Commission reported on May 26, 2022, that exchange of Subject Properties conforms with the adopted City General Plan under Government Code section 65402; and

**WHEREAS**, the City Council provided public notice of the Property Exchange at a duly noticed public meeting on June 7, 2022; and

**WHEREAS**, the District is also the fee owner of that certain undeveloped parcels of land adjacent to the (new) Napa Junction Elementary School and the American Canyon High School ("Remnant District Parcels"); and

**WHEREAS**, the City is currently processing an update to its Comprehensive General Plan, for which City staff will include residential land-use designations for the Remnant District Parcels in the Draft Land Use Element.

**NOW, THEREFORE, BE IT RESOLVED** that the City Council hereby approves and authorizes the City Manager to modify as necessary – subject to approval by the City Attorney – and then execute the Property Exchange and Acquisition Agreement attached hereto as Exhibit A.

**NOW, THEREFORE, BE IT FURTHER RESOLVED** that consistent with Government Code 27281, the City Council hereby authorizes the City Manager to any and all action necessary to accept real property of behalf of the City as described in the Property Exchange and Acquisition Agreement.

**NOW, THEREFORE, BE IT FURTHER RESOLVED** that the City Council hereby determines the Property Exchange is not a "Project" subject to environmental review under California Environmental Quality Act pursuant to California Code of Regulations Section 15378(b), is categorically exempt under CEQA Guidelines § 15312-sale of surplus government property, and statutorily exempt under Government Code § 65996: Methods of considering and mitigating impacts on school facilities.

**PASSED, APPROVED and ADOPTED** at a regularly scheduled meeting of the City Council of the City of American Canyon held on the 2nd day of August 2022, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
Leon Garcia, Mayor

ATTEST:

APPROVED AS TO FORM:

\_\_\_\_\_  
Taresa Geilfuss, City Clerk

\_\_\_\_\_  
William D. Ross, City Attorney

**Exhibit A - Property Exchange and Acquisition Agreement**

## **PROPERTY EXCHANGE AND ACQUISITION AGREEMENT**

This Property Exchange and Acquisition Agreement (“Agreement”) is entered into by the Napa Valley Unified School District (“District”), and the City of American Canyon (the “City”), a municipal corporation. District and the City are sometimes collectively referred to herein as the “Parties” or each individually as a “Party.”

### **RECITALS**

**WHEREAS**, City is the fee owner of 9.66 acres of real property (APN 058-040-026) known as the Community Center/American Canyon Middle School Gym/Track property (“Community Center/ACMS Gym Property”) located in the City in Napa County, California, as more specifically depicted in **Exhibit “A”** attached hereto and incorporated herein by this reference, and pursuant to that certain Agreement between the Parties for Construction and Development of the American Canyon Middle School, Gymnasium/Civic Center and Aquatic Center, the Parties jointly own the gym building located on the Community Center/ACMS Gym Property, or said building will revert to joint ownership upon payment in full of the City’s debt related to said building; and,

**WHEREAS**, the District desires fee ownership of approximately 4.6 acres of the Community Center/ACMS Gym Property as more specifically depicted in **Exhibit “B”** (“City Exchange Property”) to facilitate and enhance the provision for District educational services in the City and the District; and,

**WHEREAS**, the District is the fee owner of 6.57 acres of real property (APN 058-320-015) which is the former site of the Napa Junction Elementary School (“District Exchange Property”), located in the City in Napa County, California, as more specifically depicted in **Exhibit “C”** attached hereto and incorporated herein by this reference; and,

**WHEREAS**, City desires fee ownership of the District Exchange Property for use for community and recreation purposes and to supplement vehicle access to implement, consistent with Government Code section 65103(b) and its General Plan, 2018 Circulation Element (Pgs. 11, 13, designating Napa Junction Road as a minor and major collector to the Oat Hill Residential Project); and,

**WHEREAS**, the Parties will mutually benefit by exchange of the District Exchange Property and the City Exchange Property (jointly, “Subject Properties”), as subsequently described in this Agreement on an “as-is” transactional basis; and,

**WHEREAS**, the City Planning Commission reported on May 26, 2022, that exchange of Subject Properties conforms with the adopted City General Plan under Government Code section 65402; and,

**WHEREAS**, the District is also the fee owner of that certain parcel of land within the City, the “American Canyon Road Site” as depicted in attached **Exhibit “D,”** as well as that certain parcel of land identified as APN 058-030-067-000, a portion of which is undeveloped and hereinafter referred to as the “Eucalyptus Drive Site,” as depicted in attached **Exhibit “E.”** The American Canyon Road Site and the Eucalyptus Drive Site are sometimes referred to as the “Remnant District Parcels” in this Agreement; and,

**WHEREAS**, the City is currently processing an update to its Comprehensive General Plan, which will include land-use designations in its Land Use Element.

**NOW, THEREFORE**, incorporating the foregoing Recitals, the Parties agree as follows:

1. Property Exchange. The Parties shall cooperatively accomplish the following transactions to effectuate the property exchange:

a. The City will convey fee title to the City Exchange Property, including all right, title, and interest to all buildings and improvements located thereon, to the District by grant deed substantially in the form attached as **Exhibit “F”** hereto (“City Exchange Property Grant Deed”).

b. The District will convey fee title to the District Exchange Property, including all right, title, and interest to all buildings and improvements located thereon, to the City by grant deed substantially in the form attached as **Exhibit “G”** hereto (“District Exchange Property Grant Deed”).

2. Conditions of Property Exchange.

a. Conditions applied to District and City:

i. The Subject Properties will be transferred to the District and the City, respectively, in an “as-is” condition.

ii. The shared ownership/operation of Community Center/ACMS Gym Property by District and City will terminate as described in this Agreement. All past agreements regarding ACMS Gym Property not specifically referenced in this Agreement - including but not limited to - that certain *March 20, 1997 Sublease and Joint Use Agreement* between the Parties will terminate as of the Closing (as that term is defined in Section 8(b) hereof).

iii. Respective “Title(s)” to the Subject Properties shall be “free and clear” of any and all encumbrances before the Closing, including but not limited to removal of any current debt obligations secured by either of the Subject Properties. The intent is for the Subject Properties to be unencumbered at the time of Closing.

iv. The Parties will take all actions reasonably necessary to cause the existing License Agreement (“License Agreement”) made and entered into July 23, 2020, by the City and Pacific Gas & Electric Company (“PG&E”) to be replaced and superseded by a new license agreement between the City, the District and PG&E.

v. Promptly after the Closing, the Parties will notify any 3rd-party users of the Subject Properties about change in ownership and termination of use.

vi. After Closing, each Party will be responsible for paying the cost of utility services to their respective property.

b. City Obligations.

i. On or prior to the Effective Date, City will cease renting facilities at the City Exchange Property to community groups and other third-party users. In the event that City has scheduled any such rentals, District will honor scheduled rentals through October 30, 2022, as long as those rentals do not conflict or interfere with school activities, events, or athletic programs, which shall have priority use of the facilities for practices and games. Subject to the foregoing, the Parties will cooperate with one another to resolve any issues related to such rentals affecting District use or school activities. City

shall take all actions necessary to cancel such rentals scheduled after October 30, 2022. City shall provide District with reasonable documentation evidencing any such cancellations.

ii. City will remove the skate park within one-hundred-eighty (180) days of the Agreement Closing Date. District will grant City a temporary right of entry valid for one-hundred-eighty (180) days from the Agreement Closing Date to accomplish removal. District shall have the right in its sole discretion to fence off the skate park area so long as such fencing does not prevent the City from removing the skate park.

iii. As shown on Exhibits B and F-1, the top of the southerly bank of the Rio Del Mar Creek generally represents the boundary between the property to be owned by the District (i.e., City Exchange Property) and the northern remnant of the Community Center/ACMS Gym Property which is to be retained in ownership by the City after Closing. While the preponderance of Rio Del Mar Creek lies within said northern remnants of property retained in ownership by the City, a portion of the southerly bank of the Rio Del Mar Creek lies within the City Exchange Property, and notwithstanding provisions of this Agreement stipulating each Party is solely responsible for maintenance of only its own property after Closing, the Parties agree the City is solely responsible for maintenance of those portions of Rio Del Mar that lie upon the City Exchange Property (owned by the District). The Parties agree that they will memorialize their specific, separate obligations related to the City's maintenance responsibility by separate instrument to be recorded within thirty (30) days after Closing.

iv. As evidenced by that certain "Notice of Preparation of the City of American Canyon General Plan Update", dated July 5, 2022 (**Exhibit "H"**), City has designated the Remnant District Parcels as "Residential" in the Draft General Plan Land Use Element, with residential density similar to the immediately surrounding area

v. City will ensure that all school impact fees required for the Oat Hill Residential Project ("Project") pursuant to Education Code sections 17620, *et seq.*, and Government Code sections 65995, *et seq.* ("Fees"), are provided to the District prior to Closing. Fees will be based on the amount of fees approved and adopted by the District's Board on April 21, 2022, which is \$4.79 per square foot of residential development and \$0.78 per square foot of commercial development. As of the Effective Date, the Parties anticipate that the Project will include 263,472 square feet of residential development, such that the amount of Fees to be paid at Closing will be One Million Two Hundred Sixty-Two Thousand Thirty Dollars (\$1,262,030.00) ("Prepayment Amount").

At such time as the City intends to issue one or more building permits for the Project (or any portion thereof), City shall first require the Project developer or his or her successor-in-interest or assignee ("Developer") to obtain certification from the District, as required by Education Code section 17620(b), and provide same to the City. District shall calculate the amount of Fees owing, taking into account any Fee increases adopted by the District's Board after Closing. District shall credit the Developer for Fees owing up to the Prepayment Amount. In the event that either the amount of square footage of the Project or the rate of the Fees increases prior to issuance of all building permits for the Project, then Developer shall be responsible to pay for any additional amounts owing and beyond the Prepayment Amount. In the event that the rate of such Fees increases subsequent to Closing or the square footage of the Project increases, and the City issues any building permit(s) for the Project (or any portion thereof) prior to receipt of said certification from the District, then the City will be liable to the District for any incrementally increased amount of Fees or Fees associated with the added square footage.

c. District Obligations.

i. Consistent with the “Civic Center Act” and other applicable state law, District shall allow the American Canyon community to continue to use City Exchange Property, subject to adopted District policies/fee schedule.

ii. District has no obligation to maintain existing pedestrian access across ACMS Property.

iii. District has no obligation to maintain any trees, vegetation, or bank of the Rio Del Mar Creek that may be located on the ACMS Property. Notwithstanding the foregoing, any changes to the physical environment remain subject to local, state, and federal laws and regulations. Given that the pedestrian pathway bifurcates City Exchange Property, it is understood and acknowledged by the City that the community will likely not have access to the trees or vegetation through said Property after the exchange.

3. Consideration. In consideration of the property exchanges provided herein, the City shall convey the City Exchange Property via grant deed to the District, and the District shall convey the District Exchange Property via grant deed to the City. No additional compensation will be owed to by either Party to the other. The total consideration provided to the City for the conveyance of the City Exchange Property consists of the District Exchange Property and the District’s performance of the terms and conditions of this Agreement. The total consideration provided to the District for the conveyance of the District Exchange Property to the City consists of the City Exchange Property and the performance of the terms and conditions of this Agreement. Except as to any costs contemplated by this Agreement, there will be no cost to either the City or the District in connection with the Property Exchange. Except as otherwise provided herein, each Party is responsible for its own costs, fees, and charges necessary to complete the property exchange contemplated under this Agreement.

4. Costs. The Parties are responsible for their respective costs of staff and administrative time, or any other costs of performing their respective obligations under this Agreement, including but not limited to attorneys’ fees related to drafting, reviewing, negotiating, and implementing the terms of this Agreement.

5. Representations and Warranties.

a. City covenants, represents, and warrants the following:

i. Full Authority to Convey All Interest in the City Exchange Property. City has the full right, power, and authority to execute this Agreement, has the full right, power, and authority to perform all of the obligations hereunder, and has the full right, power and authority to dispose of or otherwise convey the City Exchange Property as described herein.

ii. Compliance with Applicable Law and No Pending Litigation Against the City Exchange Property. To the best of City’s actual knowledge, there is no violation of federal, state, or local law, code, ordinance, rule, regulation or requirement, nor is there any pending or threatened litigation in connection with the City Exchange Property which would prohibit the conveyance of the City Exchange Property, or the use of the City Exchange Property for the District’s intended purposes.

iii. No Liens Securing Payment or Other Obligations on City Exchange Property. City warrants that the City Exchange Property is not encumbered, or will not be encumbered by the Closing Date, by liens securing payment or other obligations which, if not performed, would entitle a third party or entity to foreclose on the City Exchange Property as collateral. Except as specifically disclosed to District in writing, City has not, and shall not without the prior written consent of District prior to the Closing Date, made any written commitments or agreements materially and adversely

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affecting the City Exchange Property, or any part thereof, or any interest therein, which will survive the Close of Escrow (as defined below), including agreements regarding the sale, rental, management, repair, or other matters affecting the City Exchange School Property. The Parties mutually acknowledge that certain rental agreements involving the Community Center/ACMS Gym Property will be honored as provided in Agreement Section 2.b.i., above.

iv. Survival. City's representations, warranties, and obligations under this section 5 shall survive the Closing Date.

b. District covenants, represents and warrants the following:

i. Full Authority to Convey All Interest in the District Exchange Property. The District has the full right, power, and authority to execute this Agreement, has the full right, power, and authority to perform all of the obligations hereunder, has the full right, power and authority to dispose of or otherwise convey the District Exchange Property as described herein.

ii. Compliance with Applicable Law and No Pending Litigation Against the District Exchange Property. To the best of the District's actual knowledge, there is no violation of federal, state, or local law, code, ordinance, rule, regulation or requirement, nor is there any pending or threatened litigation in connection with the District Exchange Property which would prohibit the conveyance of the District Exchange Property or prohibit the use of the District Exchange Property for City's intended purposes.

iii. No Liens Securing Payment or Other Obligations on District Exchange Property. The District warrants that the District Exchange Property is not encumbered, or will not be encumbered by the Closing Date, by liens securing payment or other obligations which, if not performed, would entitle a third party or entity to foreclose on the District Exchange Property as collateral. Except as specifically disclosed to City in writing, District has not, and shall not without the prior written consent of City prior to the Closing Date, made any written commitments or agreements materially and adversely affecting the District Exchange Property, or any part thereof, or any interest therein, which will survive the Close of Escrow, including agreements regarding the sale, rental, management, repair, or other matters affecting the District Exchange Property.

iv. Survival. The District's representations, warranties, and obligations under this section 5 shall survive the Closing Date.

c. Incorrect Representations. If, by the Closing Date, either Party becomes aware of facts or circumstances which would make any of the other Party's representations or warranties materially incorrect, the initial Party shall have the right to either: (i) terminate the Agreement, or (ii) waive such condition and proceed to Close of Escrow in accordance with this Agreement in which case the representations and warranties hereunder shall be deemed modified and remade to incorporate such fact or circumstance as an exception thereto.

6. Due Diligence / Condition of Title and Title Review.

a. Title. The Parties agree to take title to the Subject Properties in an "as-is" condition.

b. Free of Debts and Encumbrances. The City warrants that the City Exchange Property shall be transferred to the District free and clear of monetary encumbrances, including that no current debt obligations are secured by the City Exchange Property. The District warrants that the District

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Exchange Property is free and clear of monetary encumbrances, including that no current debt obligations are secured by the District Exchange Property.

c. Optional Title Insurance. Prior to Closing, either Party may elect to have the Title Company issue a title insurance policy (“Title Policy”) guaranteeing the Party requesting the Title Policy as fee owner of its respective property to be received pursuant to the property exchange. Any Title Policy issued pursuant to this Agreement must be issued on or shortly after Close of Escrow. Each Party shall bear the costs of its own respective Title Policy.

7. Conditions to Closing.

a. District’s obligation to proceed with the property exchange is subject to the fulfillment of the following conditions, each of which is for the benefit of District and any or all of which may only be waived by District in writing at its option:

i. City shall deposit into Escrow, on or prior to the Closing Date, a fully executed, notarized, and otherwise complete and binding version of the City Exchange Property Grant Deed conveying all of City’s right, title, and interest in and to the City Exchange Property to the District.

ii. City shall deposit into Escrow, on or prior to the Closing Date, a fully executed and otherwise complete and binding certificate of acceptance for the District Exchange Property.

iii. If District elects to obtain a Title Policy, then Title Company shall have issued to District on or before the Closing Date, in a form satisfactory to District, a binding commitment to issue a Title Policy to District.

iv. The Fees shall have been paid pursuant to section 2.b.v hereof.

v. City’s covenants, representations, and warranties shown above shall be true as of the Closing Date.

vi. City must not be in breach or default of any of its obligations under this Agreement.

vii. The City will have deposited with the Title Company all of the items required of it under this Agreement, and all title costs, fees, and charges for which it is responsible, as necessary to complete the property exchange.

b. City’s obligation to proceed with the property exchange is subject to the fulfillment of the following conditions, each of which is for the benefit of City and any or all of which may only be waived by City in writing at its option:

i. District shall deposit into Escrow, on or prior to the Closing Date, a fully executed, notarized, and otherwise complete and binding version of the District Exchange Property Grant Deed conveying all of District’s right, title, and interest in and to the District Exchange Property to the City.

ii. District shall deposit, on or prior to the Closing Date, a fully executed and otherwise complete and binding certificate of acceptance for the City Exchange Property.

iii. If City elects to obtain a Title Policy, then Title Company shall have issued to City on or before the Closing Date, in a form satisfactory to District, a binding commitment to issue a Title Policy to City.

iv. District's covenants, representations, and warranties shown above shall be true as of the Closing Date.

v. District must not be in breach or default of any of its obligations under this Agreement.

vi. The District will have deposited with the Title Company all of the items required of it under this Agreement, and all title costs, fees, and charges for which it is responsible, as necessary to complete the property exchange.

8. Escrow and Closing.

a. Escrow. The Parties will accomplish the property exchange contemplated by this Agreement through an escrow company. As soon as practicable, but in no event later than September 9, 2022, the Parties shall cause to be delivered a fully executed copy of the Agreement to First American Title Insurance Company, located at 497 Walnut Street, Napa, California 94559 ("Escrow Holder" or "Title Company"). Such delivery shall constitute the opening of escrow ("Escrow") for the property exchange ("Opening of Escrow"). The Parties shall provide Escrow Holder with supplemental escrow instructions, if necessary, and any other documents necessary to open Escrow for the property exchange as contemplated by this Agreement.

b. The Closing. The "Closing" or "Closing Date" shall mean the date upon which the grant deeds transferring title to the Subject Properties to the District and the City, respectively, are recorded with the Napa County Recorder. Close of Escrow shall take place no later than September 16, 2022.

c. Signing of Other Documents; Compliance with Regulations. The Parties agree to cooperate and take all actions and sign all documents that are reasonably necessary for the Closing to occur consistent with the terms of this Agreement. Furthermore, the Parties will comply at their own expense with all applicable laws and governmental regulations required for the Closing to occur, including, but not limited to, any required filings with governmental authorities.

d. Closing Costs and Prorations. All Escrow and Closing costs shall be split equally between the District and the City. All revenues and expenses relating to the Subject Properties, including without limitation, assessments, utility charges and the like, shall be prorated on an accrual basis as of the Close of Escrow. The Parties will cooperate with one another to ensure that utility and service accounts are terminated or assigned to the other Party consistent with the acquiring Party's preference.

e. Escrow Cancellation Charges. If Escrow fails to close because of the default of either Party, the defaulting Party shall be liable for all Escrow cancellation charges. If Escrow fails to close for any other reason, the Parties will equally share payment of all Escrow cancellation charges.

f. Title Company's Obligations on the Closing.

i. The Title Company will provide the Parties with *pro forma* closing statements prior to Close of Escrow.

ii. Upon satisfaction of all conditions contained in Section 7 of this Agreement, Escrow Holder shall cause to be recorded with the Napa County Recorder's Office on the Closing Date: (1) the District Exchange Property Grant Deed, (2) the City Exchange Property Grant Deed, (3) all executed certificates of acceptance, and (4) all other documents necessary in order to accomplish the property exchange.

iii. Perform such other duties as, in the opinion of the Title Company, are necessary to carry out the terms and provisions of this Agreement.

iv. At or prior to Closing, Escrow Holder shall release the Fees to the District.

g. Distribution of Closing Documents. Title Company will deliver by mail and distribute the following documents promptly after Close of Escrow to the addresses set forth in Section 10:

i. To the District, after recordation, the original of the City Exchange Property Grant Deed.

ii. To the City, after recordation, the original of the District Exchange Property Grant Deed.

iii. To the District and/or City, copies of any Title Policies ordered pursuant to this Agreement.

iv. To the District and City, copies of such other documents, if any, not referenced herein and which are recorded at the Closing.

9. Cooperation in the Event of Legal Challenge. In the event of any administrative, legal, or equitable action or other proceeding instituted by any person not a party to this Agreement challenging the validity of any provision of this Agreement or all actions, discretionary or ministerial, relating to the exchange of the Subject Properties, the Parties will agree to jointly defend the validity and implementation of the Agreement and to cooperate with one another to the extent practicable in defending against the claims so asserted, with each Party bearing its own attorneys' fees and costs in connection with the defense of the Agreement. Participation in a joint defense as contemplated by this Agreement shall not constitute representation by counsel by one Party for another Party, nor shall such participation be grounds to disqualify counsel or experts from representing any Party. Further, each Party agrees to waive any conflict that may be created between Parties and/or their counsel and experts as a result of this Agreement. The Parties shall cooperate in defending such action or proceeding to settlement, stipulation, or final judgment including all appeals; provided, however, that nothing in this Section shall be construed as requiring either Party to defend a lawsuit or other administrative, legal, or equitable action or proceeding if such Party determines, in its sole and absolute discretion, that it would not be financially or otherwise prudent to do so.

10. Notices. Any notice, request, demand or other communication required or permitted to be given hereunder shall be in writing, may be personally served, telecopied, telexed or sent by an internationally recognized overnight delivery or courier service and shall be deemed to have been given when delivered in person or by courier or overnight service or upon receipt of a telecopy or telex, addressed to the recipients as follows:

The District:

Napa Valley Unified School District  
Attn: Rosanna Mucetti, Superintendent  
2425 Jefferson St.

{SR750989}

Napa CA 94558

With a copy to:

Kelly Rem, Esq.  
Lozano Smith  
2001 North Main Street, Suite 500  
Walnut Creek, CA 94596  
[krem@lozanosmith.com](mailto:krem@lozanosmith.com)

The City:

Jason B. Holley, City Manager  
4381 Broadway Street, Suite 201  
American Canyon, CA 94503

With a copy to:

Law Offices of William D. Ross  
Attn: William Ross, City Attorney  
400 Lambert Street  
Palo Alto, CA 94306  
[wross@lawross.com](mailto:wross@lawross.com)

Either Party may change its address by giving notice thereof to the other Parties in accordance with this Section.

#### 11. General Provisions

a. Successors and Assigns; Covenants run with the Land. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns, and on all parties having or acquiring any right, title or interest in the parcels described above or any part thereof, and all of the covenants and conditions herein shall run with the land.

b. Further Assurances. Each Party agrees to cooperate with the other Party and take all actions reasonably required to carry out the intentions of the Parties under this Agreement.

c. Applicable Law and Venue. This Agreement shall be governed by and interpreted under the laws of the State of California. The venue for any legal action in State court filed by a Party to this Agreement for the purpose of interpreting or enforcing any provision of this Agreement shall be in the Superior Court of California, County of Napa. The venue for any legal action in Federal court filed by a Party to this Agreement for the purpose of interpreting or enforcing any provision of this Agreement within the jurisdiction of the Federal courts shall be the Northern District of California. The appropriate venue for arbitration, mediation, or similar legal proceeding under this Agreement shall be in Napa County, California; however, nothing in this Agreement shall obligate a Party to submit to arbitration any dispute arising under this Agreement.

d. Attorneys' Fees. If any dispute arises under or by reason of this Agreement, the Party prevailing in such dispute shall be entitled to recover its costs, including reasonable attorneys' fees. Attorneys' fees under this Section shall include attorneys' fees on any appeal and, in addition, a Party entitled to attorneys' fees shall be entitled to all other reasonable costs and expenses incurred in connection with such action. In addition to the foregoing award of attorneys' fees to the prevailing Party, the prevailing Party in any lawsuit shall be entitled to its attorneys' fees incurred in any post-judgment proceedings to collect or enforce the judgment. This provision is separate and several and shall survive the merger of this Agreement into any judgment on this Agreement.

e. Entire Agreement. This Agreement and the other documents and agreements referenced herein embody the entire agreement and understanding between the Parties hereto relating to the subject matter hereof, and supersede all prior negotiations, agreements and understandings, oral or written, with respect to that subject matter.

f. Modification: Waiver. This Agreement may be amended, waived or discharged only by an instrument in writing executed by the Party against whom enforcement of such amendment, waiver or discharge is sought, expressly indicating the intention to amend, waive or discharge this Agreement. No waiver by any Party or any failure or refusal by another Party to comply with its obligations shall be deemed a waiver of any other or subsequent failure or refusal to so comply.

g. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument. Signatures delivered electronically or by facsimile shall be as binding as originals upon the Parties so signing and delivering.

h. Effective Date. The Effective Date shall be that date on which all Parties have executed this Agreement.

i. Indemnification. The City hereby waives and releases, and shall indemnify, hold harmless, and defend District, its successors and assigns, its elected and appointed officers, agents, consultants, servants, attorneys and employees ("District Parties") from and against all Losses incurred by the District, arising in any manner out of the willful or negligent act or omission of the District or the District Parties in the performance of this Agreement. The District hereby waives and releases, and shall indemnify, hold harmless, and defend City, its successors and assigns, its elected and appointed officers, agents, consultants, servants, attorneys and employees ("City Parties") from and against all Losses incurred by the City, arising in any manner out of the willful or negligent act or omission of the City or the City Parties in the performance of this Agreement. As used in this Agreement, the term "Loss" or "Losses" means all losses, damages, claims, demands, costs, liabilities, judgments, fines, fees (including, without limitation, reasonable attorney fees) and expenses (including, without limitation, costs of investigation, defense expenses at arbitration, trial or appeal and without institution of arbitration or suit). The indemnity obligations of City and District under this Agreement shall survive any termination of this Agreement or transfer of title to the City and District.

j. Interpretation & Captions. In this Agreement, the neuter gender includes the feminine and masculine, the singular number includes the plural, and the words "person" and "party" include a corporation, partnership, firm, District, or association, whenever the context so requires. The captions of the sections of this Agreement are for convenience and reference only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

k. Non-Business Days. Whenever notice must be given, documents must be delivered or any other action must be taken under this Agreement by a last day that falls on a day on which banking institutions in the State of California are authorized by law to close (a "Non-Business Day"), then the Parties shall have until the next following day that is not a Non-Business Day to take such action.

l. Severability. If any term, provision, covenant or condition of this Agreement is held by a court of competent jurisdiction to be invalid, void, unenforceable, either in whole or in part, such decision shall not affect the remainder of this Agreement; and it is hereby declared to be the intention of the Parties that the term, provision, covenant or condition held invalid, void or unenforceable shall be limited by such court to the extent necessary to make it valid and enforceable.

{SR750989}

- m. Time of Essence. Time is of the essence in this Agreement.
- n. Third Party Beneficiaries. This Agreement confers no rights on any party except the signatories to this Agreement.
- o. Assignment. Neither Party shall have the right to transfer or assign any of its rights or obligations under this Agreement without the prior written consent of the other Party. Further, the District may only assign this Agreement to another entity and be relieved of all liability or responsibility under this Agreement, provided that such assignee fully assumes all of the District's obligations hereunder in a writing approved and duly executed by the City and the assignee, and only where the assignee demonstrates to the satisfaction of the City its capability, both financial and practical, to properly and fully complete and perform all obligations hereunder; otherwise the District will retain all obligations.
- p. Obligations Survive the Closing. All obligations to be performed at a time after the Closing, whether specifically referred to as surviving the Closing or not, and all covenants, representations and warranties of the Parties, will survive the Closing.
- q. Rights and Remedies are Cumulative. Unless stated otherwise in this Agreement, the rights and remedies of the Parties are cumulative. A Party's exercise of any of its right or remedies will not preclude its exercise, at the same or at different times, of any other rights or remedies for the same, or any other default.
- r. Force Majeure. No Party shall be deemed to be in default where failure or delay in the performance of any of its obligations under this Agreement is caused by floods, earthquakes, other acts of God, fires, wars, terrorism, riots or similar hostilities, strikes and other labor difficulties beyond a Party's control, shortage of materials (exclusive of prefab/modular building products), prohibitory court actions (such as restraining orders or injunctions), or other causes beyond a Party's control. If any such events shall occur, the time for performance by any Party of its obligations hereunder shall be extended for the period of time that such events prevented such performance.
- s. Agreement Mutually Drafted. Each Party has participated jointly in the drafting of this Agreement, which each Party acknowledges is the result of extensive negotiations between the Parties, and the language used in this Agreement shall be deemed to be the language chosen by the Parties to express their mutual intent. If an ambiguity or question of intent or interpretation arises, then this Agreement will accordingly be construed as drafted jointly by the Parties, and no presumption or burden of proof will arise favoring or disfavoring any Party to this Agreement by virtue of the authorship of any of the provisions of this Agreement.
- t. Specific Performance. The District and the City agree that the Subject Properties are unique, and that the Parties shall be entitled to the remedy of specific performance.
- u. Exhibits. Exhibits "A," "B," "C," "D," "E," "F" "G" and "H" to this Agreement are incorporated by this reference and made a part of this Agreement.
- v. Authority to Sign. Each person executing this Agreement on behalf of either Party does hereby personally represent and warrant that he or she had the authority to execute the Agreement on behalf of and to fully bind such Party.

*[Signatures on the following page]*

IN WITNESS WHEREOF, the Parties have executed this Property Exchange and Acquisition Agreement as of the day and year first written above.

**CITY OF AMERICAN CANYON:**

\_\_\_\_\_ Date: \_\_\_\_\_, 2022  
By: Jason B. Holley  
Its: City Manager

**Approved as to form:**

\_\_\_\_\_ Date: \_\_\_\_\_, 2022  
By: William D. Ross  
Its: City Attorney

**NAPA VALLEY UNIFIED SCHOOL DISTRICT:**

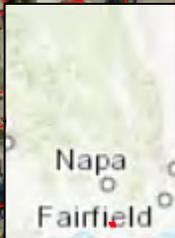
\_\_\_\_\_ Date: \_\_\_\_\_, 2022  
By: Rosanna Mucetti  
Its: Superintendent

**Approved as to form:**

\_\_\_\_\_ Date: \_\_\_\_\_, 2022  
By: Kelly Rem  
Its: District Counsel

EXHIBIT "A"

Community Center/American Canyon Middle School Gym/Track Property  
(APN 058-040-026)

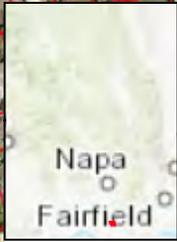


# Community Center/ACMS Gym Property



EXHIBIT "B"

"City Exchange Property" (Portion of APN 058-040-026)

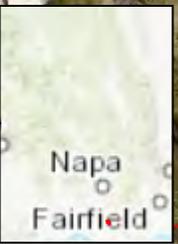


# City Exchange Property (Dashed Area Only)



EXHIBIT "C"

(Former) Napa Junction Elementary School Property (APN 058-320-015)

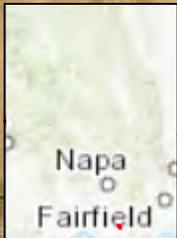


# District Exchange Property



EXHIBIT "D"

American Canyon Road Site

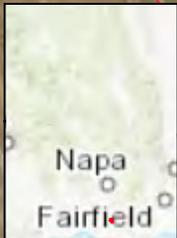


# American Canyon Road Site



EXHIBIT "E"

Eucalyptus Drive Site



Napa  
Fairfield



# Eucalyptus Drive Site (Dashed Area Only)



EXHIBIT "F"

Grant Deed for City Exchange Property

**Recording Requested By:**  
Napa Valley Unified School District

**[For Recorder's Use Only:]**

**When Recorded Mail to:**  
Napa Valley Unified School District  
2425 Jefferson St  
Napa, CA 94558  
Attention: Rosanna Mucetti, Superintendent

**Exempt from Recording fees  
pursuant to Gov. Code §27383**

**GRANT DEED**

The CITY OF AMERICAN CANYON, a municipal corporation ("Grantor") hereby grants to the NAPA VALLEY UNIFIED SCHOOL DISTRICT, a California public school district ("Grantee"), all of its right, title and interest in and to that certain real property identified as Parcel "Y" located in the County of Napa, State of California, bearing the legal description attached herewith as Exhibit "1" and incorporated herein by this reference.

Dated: \_\_\_\_\_, 2022.

CITY OF AMERICAN CANYON,  
a municipal corporation

By: \_\_\_\_\_

**Exhibit “1” to Grant Deed**

**Legal description of property to be conveyed**

**[To be inserted at closing]**



August 1, 2022

#2206-017

**EXHIBIT 1**  
**LEGAL DESCRIPTION**

Certain real property situate in the City of American Canyon, County of Napa and State of California, being a portion of Parcel "B" as shown on the Final Map of Napa Glen Unit 1 filed in Book 15 of Maps at Pages 37 - 45 in the Office of the Recorder of the County of Napa, said portion being more particularly described as follows:

**PARCEL "X"**

**BEGINNING** at the most southeasterly corner of said Parcel "B" ;

Thence, southwesterly along the northerly right of way line of Benton Way as shown on the Map titled "Napa Glen Subdivision Unit 2", filed in Book 16 of Maps at Pages 40 - 46 in Office of the Recorder of the County of Napa, South 83° 08' 43" West, 407.66 feet to beginning of a tangent curve;

Thence, along said tangent curve to the left, having a radius of 2,034.00 feet, through a central angle of 02° 12' 10" and an arc length of 78.21 feet;

Thence, leaving said right of way line and into said Parcel "B" North 07° 28' 26" East, 300.32 feet to the boundary line of above said Parcel "B";

Thence, along said boundary line South 87°44'00" East, 492.91 feet to an angle point on the boundary;

Thence, along the most easterly line of said Parcel "B" South 07°29'00" East, 220.67 feet to the **POINT OF BEGINNING**.

Containing 2.90 Acres of land, more or less.

**PARCEL "Y"**

**COMMENCING** at the most southeasterly Corner of Parcel "B" as shown on the Final Map of Napa Glen Unit 1 filed in Book 15 of Maps at Pages 37 - 45 in the Office of the Recorder of the County of Napa,

Thence, along the most easterly line of said Parcel "B" North 07°29'00" West, 220.67 feet to an angle point on the boundary of said Parcel "B",

Thence, along said boundary North 87°44'00" West, 492.91 feet to the **TRUE POINT OF BEGINNING**;

Thence, leaving said boundary into said Parcel "B" South 07° 28' 26" East, 300.32 feet to the northerly right-of-way line of Benton Way, as shown on Napa Glen Subdivision in Unit 2, filed in Book 16 of Maps at Pages 40 - 46 in the Office of the Recorder of the County of Napa;





Thence, along a non-tangent curve, concave southerly, having radial bearing of South 09° 03' 28" East, a radius of 2,034.00 feet, through a central angle of 01° 05' 19" and an arc length of 38.65 feet;

Thence, continuing along said right of way line, South 79° 51' 13" West, 274.46 feet to the southwest corner of said parcel "B";

Thence, leaving the said right-of-way line and along the westerly line of said Parcel "B" North 07° 29' 00" West, 776.85 feet;

Thence, into said Parcel "B" North 64° 47' 50" East, 308.24 feet to the easterly line of said Parcel "B";

Thence, along the said easterly line of Parcel "B", South 07° 29' 00" East, 552.87 feet to an angle point on the boundary line of said Parcel "B";

Thence, along said boundary South 87° 44' 00" East, 19.47 feet to the **TRUE POINT OF BEGINNING**. Containing 5.56 Acres of land, more or less.

**PARCEL "Z"**

**BEGINNING** at the northwest corner of Parcel "B" as shown on the Final Map of Napa Glen Unit 1 filed in Book 15 of Maps at Pages 37 -45, in the Office of the Recorder of the County of Napa,

Thence, along the northerly line of said Parcel "B" North 82° 31' 00" East, 293.62 feet to an angle point on the boundary of said Parcel "B";

Thence, along said boundary South 07° 29' 00" East, 119.41 feet;

Thence, into said Parcel B South 64° 47' 50" West, 308.24 feet to the westerly line of above said Parcel B;

Thence, along said westerly line North 07° 29' 00" West, 213.23 feet to the **POINT OF BEGINNING**. Containing 1.20 Acres of land, more or less.

This real property description has been prepared by me or under my direction in conformance with the Professional Land Surveyors Act.

*Sudhir K. Chaudhary*

Sudhir Chaudhary, PLS # 89993

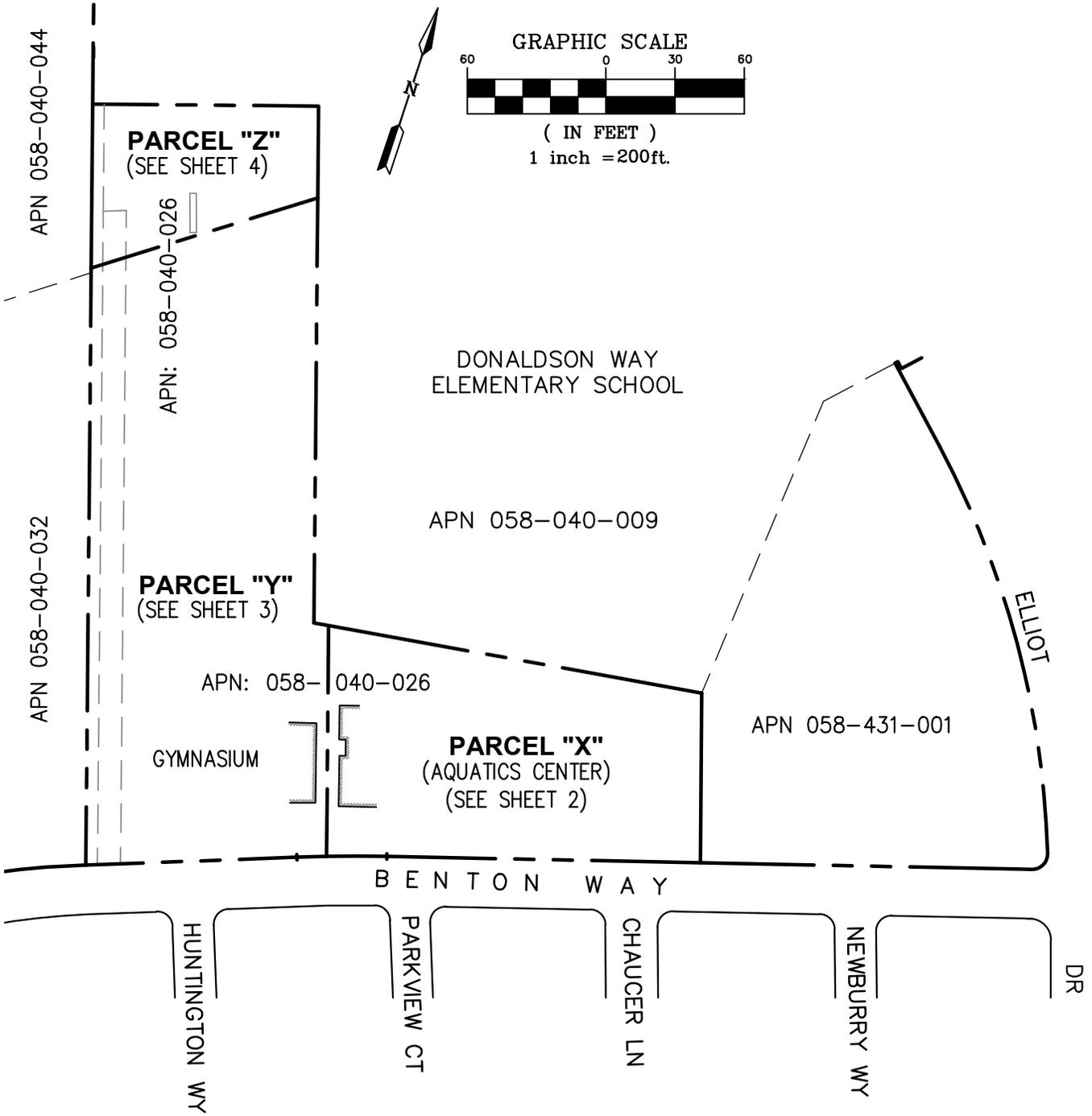


*August 1, 2022*

Date



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**LEGEND**

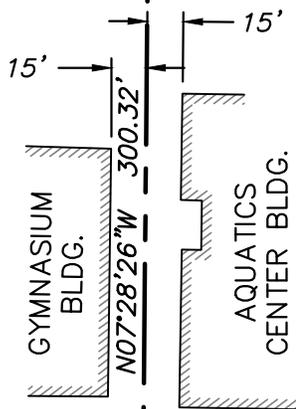
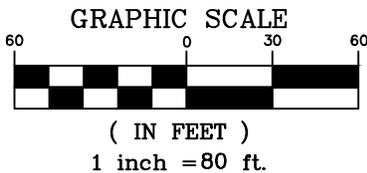
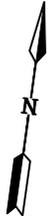
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT
- (R) RADIAL BEARING
- T.P.O.B, TRUE POINT OF BEGINNING

NOTE: THIS PLAT TO ACCOMPANY LEGAL DESCRIPTION PREPARED BY CHAUDHARY & ASSOCIATES, INC., DATED 08/01/22

**PREPARED FOR:**  
CITY OF AMERICAN CANYON  
4381 BROADWAY  
AMERICAN CANYON, CA 94503

**CHAUDHARY & ASSOCIATES, INC.**  
ENGINEERS SURVEYORS INSPECTORS  
211 GATEWAY ROAD WEST, SUITE 204  
NAPA, CALIFORNIA 94558  
Tel: (707) 255-2729 FAX: (707) 255-5021 WWW.CHAUDHARY.COM  
AUGUST 1, 2022

**EXHIBIT 1**  
**TRANSFER OF LAND BETWEEN CITY OF AMERICAN CANYON AND NAPA VALLEY UNIFIED SCHOOL DISTRICT**



**PARCEL "X"**  
AREA= 2.90 AC±

S87°44'00"E 492.91'

S07°29'00"E 220.67'

R=2034.00' L=78.21' Δ=2°12'10"

S83°08'43"W 407.66'

P.O.B.

BENTON WAY

PARKVIEW COURT

CHAUCER LANE

**LEGEND**

- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT
- (R) RADIAL BEARING
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4381 BROADWAY  
AMERICAN CANYON, CA 94503

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Tel: (707) 255-2729 FAX: (707) 255-5021 WWW.CHAUDHARY.COM  
AUGUST 1, 2022

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EXISTING 15' S.S.E.  
736 O.R.111

EXISTING  
BRIDGE

N64°47'50"E 308.24'

30' S.D.E.  
736 O.R. 111

15.0' 30.0'

PARCEL "Y"  
AREA=5.56 AC±

APN 058-.040-009

N07°29'00"W 776.85'

S07°28'58"E 552.87'

S87°44'00"E 19.49'

T.P.O.B.

N87°44'00"W 492.91'

S07°28'26"E 300.32'

GYMNASIUM

PARCEL "X"  
AQUATICS CENTER

R=2034.00'  
L=38.65'  
Δ=1°05'19"

P.O.C.

S79°51'13"W 274.46'

220.67'  
N7°29'00"W

BENTON WAY

S09°03'28"E (R)

**LEGEND**

- O.R. OFFICIAL RECORDS
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT
- S.D.E. STORM DRAIN EASEMENT
- S.S.E. SANITARY SEWER EASEMENT
- (R) RADIAL BEARING
- T.P.O.B. TRUE POINT OF BEGINNING

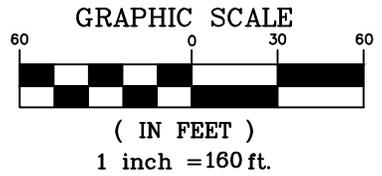
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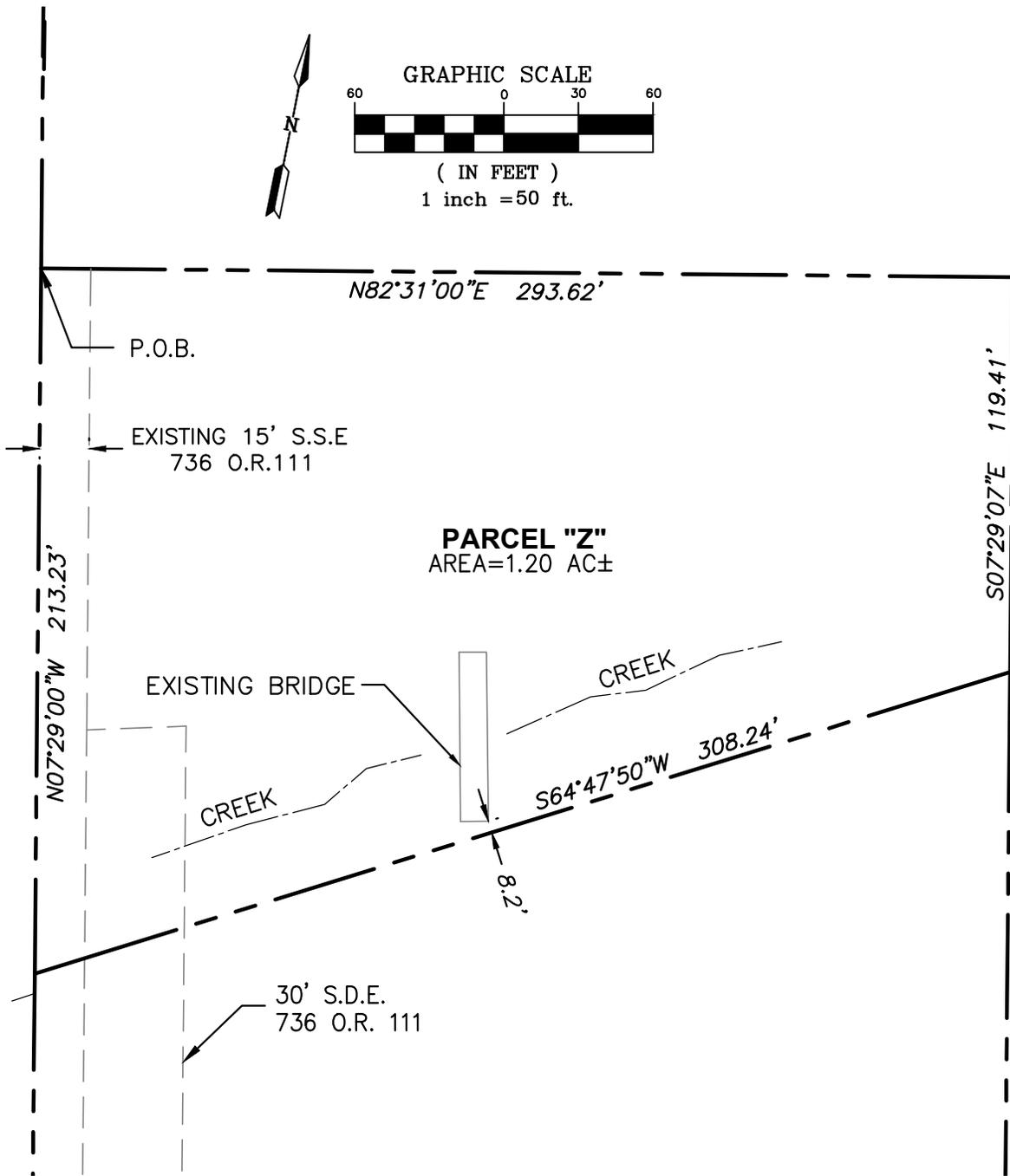
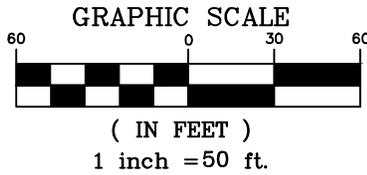
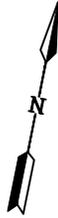
**PREPARED FOR:**

CITY OF AMERICAN CANYON  
4381 BROADWAY  
AMERICAN CANYON, CA 94503

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AUGUST 1, 2022

**EXHIBIT 1**  
**TRANSFER OF LAND BETWEEN CITY OF AMERICAN CANYON AND NAPA VALLEY UNIFIED SCHOOL DISTRICT**





**LEGEND**

- O.R. OFFICIAL RECORDS
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT
- S.D.E. STORM DRAIN EASEMENT
- S.S.E. SANITARY SEWER EASEMENT
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Tel: (707) 255-2729 FAX: (707) 255-5021 WWW.CHAUDHARY.COM  
AUGUST 1, 2022

## ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California  
County of Napa

On \_\_\_\_\_ before me, \_\_\_\_\_  
(insert name and title of the officer)

personally appeared \_\_\_\_\_,  
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal.

Signature \_\_\_\_\_ (Seal)

**CERTIFICATE OF ACCEPTANCE  
GOVERNMENT CODE SECTION 27281**

This is to certify that the interest in real property conveyed by that certain Grant Deed dated \_\_\_\_\_, from the City of American Canyon, a municipal corporation, as Grantor, to the Napa Valley Unified School District, a California public school district, as Grantee, is hereby accepted by the undersigned officer on behalf of the Napa Valley Unified School District pursuant to authority conferred by the California Constitution and California Education Code sections 1240, *et seq.*, and approval of the Napa Valley Unified School District's Governing Board on June 26, 2022, and the Napa Valley Unified School District consents to the recordation thereof by its duly authorized officer.

Dated: \_\_\_\_\_

NAPA VALLEY UNIFIED SCHOOL DISTRICT  
a California public school district

By: \_\_\_\_\_

Name: Rosanna Mucetti

Its: Superintendent

EXHIBIT "G"

Grant Deed for District Exchange Property

**Recording Requested By:**  
City of American Canyon

**[For Recorder's Use Only:]**

**When Recorded Mail to:**  
City of American Canyon  
4381 Broadway Street, Suite 201  
American Canyon, CA 94503  
Attention: Jason B. Holley, City Manager

**Exempt from Recording fees  
pursuant to Gov. Code §27383**

---

**GRANT DEED**

The NAPA VALLEY UNIFIED SCHOOL DISTRICT, a California public school district ("Grantor") hereby grants to the CITY OF AMERICAN CANYON, a municipal corporation ("Grantee"), all of its right, title and interest in and to that certain real property located in the County of Napa, State of California, bearing the legal description attached herewith as Exhibit "1" and incorporated herein by this reference.

Dated: \_\_\_\_\_, 2022.

NAPA VALLEY UNIFIED SCHOOL DISTRICT,  
a California public school district

By: \_\_\_\_\_

**Exhibit “1” to Grant Deed**

**Legal description of property to be conveyed**

**[To be inserted at closing]**

## ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California  
County of Napa

On \_\_\_\_\_ before me, \_\_\_\_\_  
(insert name and title of the officer)

personally appeared \_\_\_\_\_,  
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal.

Signature \_\_\_\_\_ (Seal)

**CERTIFICATE OF ACCEPTANCE  
GOVERNMENT CODE SECTION 27281**

This is to certify that the interest in real property conveyed by that certain Grant Deed dated \_\_\_\_\_, from the Napa Valley Unified School District, a California public school district, as Grantor, to the City of American Canyon, a municipal corporation, as Grantee, is hereby accepted by the undersigned officer on behalf of the City of American Canyon pursuant to \_\_\_\_\_, and the City of American Canyon consents to the recordation thereof by its duly authorized officer.

Dated: \_\_\_\_\_

CITY OF AMERICAN CANYON

a municipal corporation

By: \_\_\_\_\_

Name:

Its:

EXHIBIT "H"

Notice of Preparation of the City of American Canyon General Plan Update (July 5, 2022)



## **NOTICE OF PREPARATION**

### **City of American Canyon General Plan Update**

**Date:** July 5, 2022

**To:** Reviewing Agencies, Interested Parties, and Organizations

**Subject:** Notice of Preparation of a Draft Environmental Impact Report for the City of American Canyon General Plan Update

The City of American Canyon (City) is preparing an update to the City's General Plan. The City has determined that a Program Environmental Impact Report (EIR) will be necessary to evaluate environmental impacts of the General Plan Update pursuant to the California Environmental Quality Act (CEQA). In compliance with CEQA, the City will be the Lead Agency and will prepare the Program EIR. The City is requesting comments and guidance on the scope and content of the Program EIR from responsible and trustee agencies, interested public agencies, organizations, and the general public (CEQA Guidelines Section 15082).

This Notice of Preparation (NOP) provides a summary of the General Plan Update; includes the City's preliminary identification of the potential environmental issues to be analyzed in the EIR; and provides information on how to comment on the scope of the EIR.

**Notice of Preparation Public Review Period:** July 5, 2022 to August 4, 2022

The City requests your careful review and consideration of this notice, and it invites any and all input and comments from interested agencies, persons, and organizations regarding the preparation of the Program EIR. Comments and responses to this notice must be in writing and submitted to the Lead Agency Contact through August 4, 2022 at 4:00 p.m. If applicable, please indicate a contact person for your agency or organization. If your agency is a responsible agency as defined by CEQA Guidelines Section 15381, your agency may use the environmental documents prepared by the City when considering permits or approvals for action regarding the proposed project.

**Lead Agency Contact:**

Brent Cooper, Community Development Director  
City of American Canyon Community Development Department  
4381 Broadway Street, Suite 201  
American Canyon, California 94503  
[bcooper@cityofamericancanyon.org](mailto:bcooper@cityofamericancanyon.org)

**Written Comments:** Please submit written comments within 30 days of the date of this notice to any of the below by 4:00 p.m. on August 4, 2022:

- Email: [njones@cityofamericancanyon.org](mailto:njones@cityofamericancanyon.org)
- Regular Mail: Nicolle Jones, Community Development Department, City of American Canyon, 4381 Broadway Street, Suite 201, American Canyon, California 94503

**Public Scoping Meeting:** The City will hold a virtual scoping meeting to provide an opportunity for agency staff and interested members of the public to submit written and oral comments on the scope of the environmental issues to be addressed in the EIR. The scoping meeting will be held on **July 28, 2022 at 6:30 p.m.** To attend the scoping meeting, go to <https://zoom.us/join>.

Webinar ID: 884 4514 1942  
Passcode: 038881  
Dial: (408) 638 0968

The scoping presentation will be available to view after July 28, 2022 on <https://www.cityofamericancanyon.org/government/city-hall/city-clerk/meetings-agendas>.

**Project Background:** The City must undertake a technical update to its General Plan to ensure the General Plan is internally consistent and maintains a balance of land uses; maintains and supports quality-of-life, community satisfaction, and safety for all residents; and meets new State requirements. A Regional Location map is included as Figure 1.

**Project Location:** The General Plan Update will encompass the City of American Canyon city limits, the Sphere of Influence, Urban Limit Line, and historic water service area (Figure 2).

**Proposed Project:** The American Canyon General Plan update will serve as a long-term framework for future growth and development. The General Plan represents the community's view of its future and contains the goals and polices upon which the City Council, Planning Commission, staff, and the entire community will base land use and resource decisions. To provide a contemporary plan that will guide the community through the next 20 years, the General Plan update will reflect recent development decisions and changes in State law. Major components of the comprehensive technical General Plan Update include:

- **Land Use Element.** This element will resolve inconsistencies between existing and General Plan land uses, expand the Urban Limit Line to include the "Hess/Laird Property," and accommodate land use amendments for certain properties owned by the Napa Valley Unified School District. Proposed land use amendments are depicted in Figure 3. The proposed Urban Limit Line is shown in Figure 4.
- **Circulation Element.** This element will incorporate Vehicle Miles Travelled policies consistent with Senate Bill 743 (SB 743); update street standards for all modes, including pedestrians, bicyclists, and transit consistent with the California Complete Streets Act; include two new Industrial Collector roadways: 1) a new "West Side Connector" roadway segment and 2) a Newell Drive roadway segment between Paoli Loop and S. Kelly Drive and delete former planned connection between Commerce Court and Eucalyptus Drive. See Figure 5.
- **Community Services Element.** This element will focus on goals and policies related to public services, including police, fire, and emergency services.

- **Open Space and Recreation Element.** This element will address the wide variety of parks, trails, and open spaces serving the diverse recreation needs of American Canyon residents, particularly youth, and emphasize the unique features of the City's natural environment – from the Newell Open Space to the east to the wetlands and trails to the west.
- **Conservation Element.** This element will consider the effects of existing and planned development on natural resources located on public lands, including military installations, consistent with Government Code Section 65302(d). This Element will address State law requirements, including air quality, greenhouse gas emissions, and climate change adaptation.
- **Safety Element.** This element will cover seismic activity, other geologic hazards, fire hazards, hazardous materials, flooding, and other potential hazards, consistent with Government Code Section 65302(g). It will also address resiliency and risks from natural hazards in American Canyon, pursuant to Senate Bill (SB) 379. This element update will require a vulnerability analysis to comply with State law.
- **Noise Element.** This element will require, consistent with Government Code Section 65302(f), the inclusion of new existing noise contours as well as projected noise contours based on future traffic volumes projected to arise from improvements planned for in the Circulation Element.
- **Housing Element.** This element will be an update for the 2023-2031 RHNA cycle to adequately plan to meet the housing needs of everyone in the community, consistent with Government Code Section 65583. Due to State-Mandated deadlines, the Housing Element update is anticipated to be completed earlier than the rest of the comprehensive technical General Plan update.
- **Implementation.** This chapter will be a comprehensive implementation strategy with discrete, tangible actions that the City will undertake to carry out all the Plan's goals, policies, and objectives. It will also highlight goals, policies, and programs related to administration of the General Plan. The chapter will detail timing, potential funding sources, and the responsible parties for each implementation measure.

**Project Alternatives:** The EIR will evaluate a reasonable range of proposed project alternatives that, consistent with CEQA, meet most of the proposed project objectives and reduce or avoid potential environmental effects, including a required No Project Alternative.

**Potential Environmental Effect Areas:** The EIR will describe the reasonably foreseeable and potentially significant adverse effects of the proposed project (both direct and indirect). The EIR also will evaluate the cumulative impacts of the proposed project when considered in conjunction with other related past, present, and reasonably foreseeable future projects. The City preliminarily anticipates that the proposed project could result in potentially significant environmental impacts in the following topic areas, which will be further evaluated in the EIR.

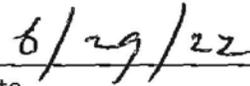
- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Cumulative Effects
- Growth Inducing Effects

When the Draft EIR is completed, it will be available for review at the City's offices located at 4381 Broadway Street, Suite 201, American Canyon, California 94503 and online at: <https://www.cityofamericancanyon.org/government/community-development/planning-zoning/general-plan-update>. The City will issue a Notice of Availability of a Draft EIR at that time to inform the public and interested agencies, groups, and individuals of how to access the Draft EIR and provide comments.

If you have questions regarding this NOP or the scoping meeting, please contact Brent Cooper at (707) 647-4335 or via email at [bcooper@cityofamericancanyon.org](mailto:bcooper@cityofamericancanyon.org)

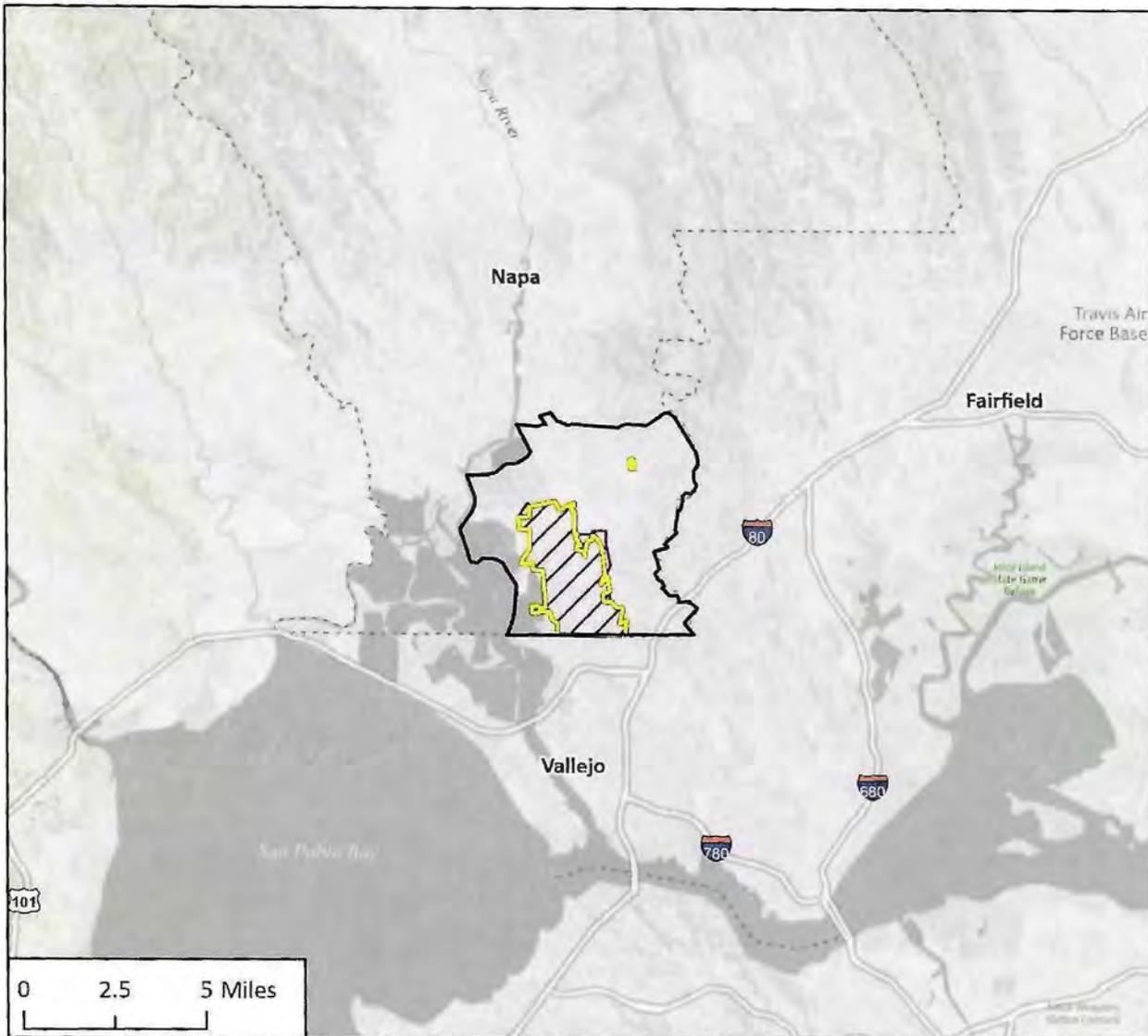


\_\_\_\_\_  
Brent Cooper, Community Development Director



\_\_\_\_\_  
Date

Figure 1 Regional Location

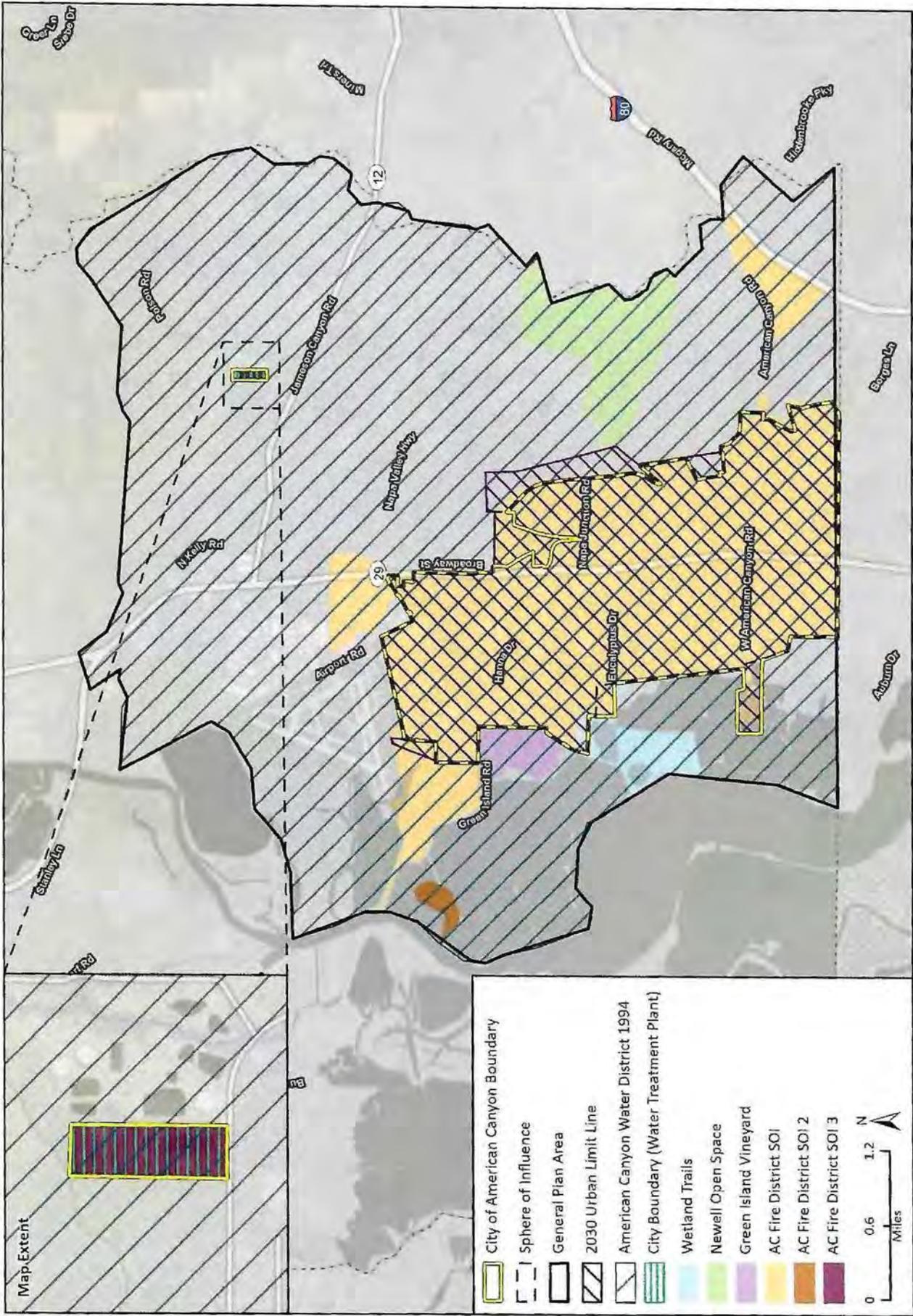


Basemap provided by Microsoft Bing, Esri and their licensors © 2022.  
Additional data provided by the City of American Canyon, 2022.

-  City of American Canyon Boundary
-  General Plan Area
-  2030 Urban Limit
-  Project Location

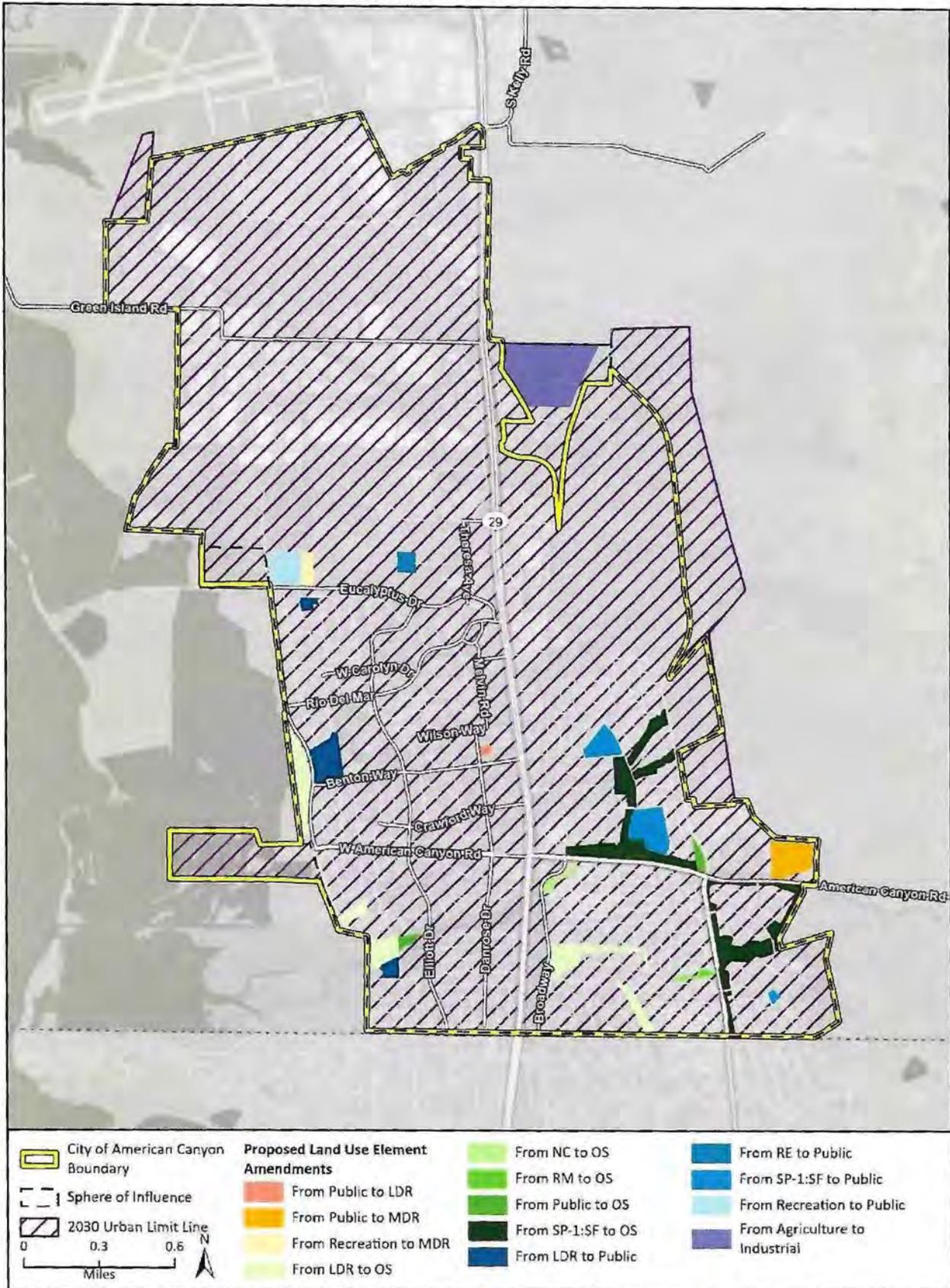


Figure 2 Project Location



Basemap provided by Microsoft Bing, Esri and their licensors © 2022.  
 Additional data provided by the City of American Canyon, 2022.

Figure 3 Area of Proposed Land Use Element Amendments



Basemap provided by Microsoft Bing, Esri and their licensors © 2022  
 Additional data provided by the City of American Canyon, 2022

Figure 4 Proposed Urban Limit Line



Basemap provided by Microsoft Bing, Esri and their licensors © 2022.

Additional data provided by the City of American Canyon, 2021; Hess/Laird Property digitized from the Proposed Urban Limit Line Addition, 2022.

Figure 5 Proposed Circulation Element Amendments



**AGREEMENT**  
**between**  
**NAPA VALLEY UNIFIED SCHOOL DISTRICT**  
**and**  
**CITY OF AMERICAN CANYON**  
**for Construction and Development of the**  
**American Canyon Middle School,**  
**Gymnasium/Civic Center and Aquatic Center**

This Agreement is entered into by and between the following legal entities:

Napa Valley Unified School District  
2425 Jefferson Street  
Napa, CA 94558  
and  
City of American Canyon  
2185 Elliott Drive  
American Canyon, CA 94589-1331

**WHEREAS**, Napa Valley Unified School District and the City of American Canyon have worked together for several years toward the vision of a middle school and community center to be located near the existing Donaldson Way Elementary School; and

**WHEREAS**, the City of American Canyon and the Napa Valley Unified School District wish to cooperate in the joint development of the American Canyon Middle School, Community Center/Gymnasium and Aquatic Center for educational and recreational purposes;

**WHEREAS**, this joint project represents a unique opportunity to provide educational, recreational and civic facilities needed in the community of American Canyon; and

**WHEREAS**, the parties desire to formalize their vision into an agreement for the construction and development of the facilities; and

**WHEREAS**, Section 6500 et seq. the Government Code of the State of California authorize public agencies to enter into agreements for the joint exercise of powers which are common to the parties of such agreement;

**NOW, THEREFORE**, the Napa Valley Unified School District and the City of American Canyon hereby agree to the following terms and conditions:

**1. Project Description.**

The purpose of this agreement is to facilitate the construction of a Middle School, Community Center/ Gymnasium, and Aquatic Center.

- a. School Facilities - The School Facilities shall be constructed on land acquired by the City of American Canyon and conveyed to Napa Valley Unified School District (hereinafter referred to as the "Middle School site") and specified as approximately 9.12 acres located at the Southwestern corner of West Donaldson Way and Sunset Parkway and Southeastern corner of West Donaldson Way and Elliott Drive (Appendix A - Legal Description) which is adjacent to park land known as the American Canyon Community Park and located at the corner of West Donaldson Way and Elliott Drive. The School Facilities shall consist of classrooms, administrative offices, restrooms, cafeteria and kitchen facilities, together with other facilities normally associated with a Middle School ("School Facilities").
- b. Community Center/ Gymnasium - The Community Center/ Gymnasium shall be constructed on land owned by the City of American Canyon which is known as the American Canyon Community Park and located at the corner of West Donaldson Way and Elliott Drive. The Community Center/ Gymnasium shall consist of gymnasium, administrative offices, restrooms, stage, locker area and storage facilities, together with other facilities normally associated with this type of facility ("Community Center/ Gymnasium").
- c. Aquatic Center - An Aquatic Center shall be constructed on land owned by the City of American Canyon which is known as the American Canyon Community Park and located at the corner of West Donaldson Way and Elliott Drive ("Aquatic Center"). The City of American Canyon will be solely responsible for the construction, operation, and security of the Aquatic Center. The City of American Canyon shall supervise the Aquatic Center during the hours that it is used for City of American Canyon programs. The Aquatic Center shall be built to generally accepted standards of safety, access, and other safeguards for pool operations and shall comply with all provisions of the "Field Act" as set forth in the Education Code.

2. Land Acquisition and Exchange.

- a. The City of American Canyon shall be responsible for all costs of acquiring and conveying the land for the School Facilities (9.12 acres located at the Southwestern corner of West Donaldson Way and Sunset Parkway and Southeastern corner of West Donaldson Way and Elliott Drive) from the current owner(s) of the property to Napa Valley Unified School District.
- b. The Napa Valley Unified School District will exchange approximately 7 acres of ball fields at Napa Junction School (Appendix A - Legal Description) for the American Canyon Middle School Facilities Site.
- c. The ball fields at Napa Junction School are currently leased to youth organizations for baseball. Napa Valley Unified School District shall allow those organizations to continue to use these fields until such time as the property is exchanged.

- d. City of American Canyon may allow those organizations to continue to use these fields after the property is exchanged, subject to an agreement between the City of American Canyon and these organizations.
- e. The Napa Valley Unified School District shall continue to have access to these ball fields at Napa Junction School during school hours so long as the Napa Junction Elementary School remains in operation at no cost to the Napa Valley Unified School District, subject to the City of American Canyon's operating needs. The terms and conditions related to the use of the ball fields by Napa Valley Unified School District, shall be set forth in a specific joint use agreement between the City of American Canyon and the Napa Valley Unified School District.
- f. The City of American Canyon shall provide for the Sunset Parkway to include unimpeded drainage of property to the north and east along the existing natural channel. The purpose of this drainage is to prevent or minimize any possible flooding of School Facilities.

3. **Title and Debt Obligations.**

- a. The City of American Canyon shall convey title to the Napa Valley Unified School District to the school site (9.12 acres located at the Southwestern corner of West Donaldson Way and Sunset Parkway and Southeastern corner of West Donaldson Way and Elliott Drive) as soon as possible, but no later than ninety (90) days after the execution of this agreement. No construction bid awards for the construction of the Middle School shall be made by the Napa Valley Unified School District until title is conveyed to the District.
- b. Napa Valley Unified School District shall hold title to the site and all buildings and improvements for School Facilities built on the school site.
- c. The City of American Canyon shall hold title to all of the improvements comprising the Community Center/Gymnasium as required by their debt financing for that facility. Notwithstanding the foregoing, City of American Canyon and Napa Valley Unified School District shall share the costs of construction for the facility as set forth in Exhibit C. The District's construction cost contribution and entitlement to use of the facility for programs during and after school hours shall be specified in a lease agreement to be entered into by the Napa Valley Unified School District and the City of American Canyon. Upon payment in full of the City of American Canyon's debt for the Community Center/Gymnasium, the title shall revert to joint ownership between the City of American Canyon and the Napa Valley Unified School District.

Construction of the Community Center/Gymnasium is contingent upon the execution of the lease agreement. No construction bid awards shall be made until said lease agreement has been executed.

- d. City of American Canyon shall maintain title to all buildings and improvements comprising the Aquatic Center.
- e. Any debt obligation incurred by either party for this project shall be the sole responsibility of the party incurring the debt. In the event any agency must encumber any of its interests in the assets owned by that agency, such encumbrance shall expressly provide that such obligation shall not encumber the interests of the other party and no action by any lender shall disturb the nondefaulting agency's right to use, occupancy and ownership of the improvements owned jointly or solely by it.
- f. The Napa Valley Unified School District shall convey title to the City of American Canyon to 7 acres of ball fields at Napa Junction School within one hundred eighty (180) days of the execution of this agreement.

4. **Future Joint Venture Agreement**

The Napa Valley Unified School District and the City of American Canyon recognize that this project could not be accomplished but for their joint efforts. It is the intent of the parties that they continue their joint efforts for the benefit of the citizens of American Canyon and students within the District in any future development of the existing Napa Junction Elementary School site.

Therefore, the Napa Valley Unified School District and City of American Canyon agree to enter into a joint venture agreement in accordance with Education Code Section 17732.3 for any future development of the Napa Junction Elementary School site and adjacent ball fields.

- a. Napa Valley Unified School District shall be solely responsible for determining the need for moving the Napa Junction Elementary School to a replacement site and for determining whether the existing Napa Junction school site would be needed for school purposes within 30 years from the time the decision to develop the site is made pursuant to Education Code Section 17732.3.
- b. At such time as the Napa Valley Unified School District determines the need for moving the current Napa Junction Elementary School site, the City of American Canyon shall assist Napa Valley Unified School District in locating, securing approvals for and facilitating the District's acquisition of a replacement school site. It is the intent of the parties that the replacement school site be at least fourteen acres so that the City of American Canyon could also relocate the ball fields to that site, however, the replacement of the ball fields shall be determined by the parties based on a consideration of the development opportunities for the existing Napa Junction school site and ball fields (approximately 14 acres) available, and other relevant issues of concern to the City and District, at the time these decisions are made.
- c. It is the intent of the parties to enter a joint venture agreement in order to generate revenues for school facilities purposes and other city purposes as allowed by law. In

order to maximize potential revenues from the joint venture development of the property, the Napa Valley Unified School District and the City of American Canyon agree to contribute sufficient value to the joint venture agreement. To that end, the parties agree that their first priority will be to develop the entire 14 acres of the current Napa Junction school site and ball fields, but that a smaller area may be developed by mutual agreement of the parties. The parties shall determine the extent of the joint venture based on a consideration of the development opportunities available and other relevant issues of concern to the City and District, at the time.

- d. The apportionment of value and revenues derived from any future joint venture development of the ball fields and/or the Napa Junction school site between the Napa Valley Unified School District and the City of American Canyon shall be in direct proportion to the value or investment contributed by each agency to the joint venture. The District acknowledges the efforts of the City in acquiring and conveying the land for the American Canyon middle school site and that the exchange of district ball fields for that land is not an acre for acre exchange. The District further acknowledges the City's waiver of water and sewer connection fees for the middle school project and wishes to recognize these contributions to the middle school project in any future joint venture agreement for the development of the Napa Junction Elementary School site.
- e. The joint venture agreement shall be in writing and shall comply with the requirements of Education Code Section 17732.2 or any amended or successor statute enacted by the Legislature and in effect at the time said agreement is entered between Napa Valley Unified School District and the City of American Canyon. The terms of the agreement shall incorporate the intentions and provisions of this Paragraph.

5. **California Environmental Quality Act.**

The City of American Canyon shall be the lead agency and responsible for undertaking all required California Environmental Quality Act review of the proposed project for the School Facilities, Community Center/ Gymnasium, and Aquatic Center.

6. **California Department of Education.**

The Napa Valley Unified School District shall be responsible for coordinating the California Department of Education's approval of the school site (9.12 acres located at the Southwestern corner of West Donaldson Way and Sunset Parkway and Southeastern corner of West Donaldson Way and Elliott Drive).

7. **California Department of General Services, Office of Regulatory Services. - Division of State Architect.**

To assure student use of all facilities being considered for this project and to be in compliance with the Field Act, building plans must be reviewed and approved by the California Department of General Services, Office of Regulatory Services - Division of State Architect.

8. **Other Agency Approval(s).**

The Napa Valley Unified School District and City of American Canyon shall be responsible for contacting and coordinating any other local, state, or federal agency having jurisdiction over the Project. The assignment of responsibility shall be determined based on appropriateness of expertise and need.

9. **Financial Plan for Construction.**

The City of American Canyon and Napa Valley Unified School District shall agree to a financial plan for the completion of this project as identified in Appendix B. Attached to this agreement is the mutual disclosure of each agency's construction financial plan for the project.

10. **Construction Funding.**

- a. The City of American Canyon and Napa Valley Unified School District agree to the expenditure plan attached as Exhibit C. The City of American Canyon and Napa Valley Unified School District shall secure 100% of the total projected construction cost of the following improvements prior to the construction bid award.
- b. The Napa Valley Unified School District's construction financial commitment to the project shall not exceed the amounts identified in Exhibit C, unless amended by a subsequent agreement prior to the incursion of those costs.
- c. The City of American Canyon's construction financial commitment to the project shall not exceed the amounts identified in Exhibit C, unless amended by a subsequent agreement prior to the incursion of those costs.
- d. The City of American Canyon shall waive any fees that otherwise would be charged to the Napa Valley Unified School District in relation to this project.

11. **Off-Site Improvements.**

The City of American Canyon shall bear responsibility for one (1/2) of the cost of the extension of West Donaldson Road and for covering the storm drain located on the Middle School Site. City of American Canyon and developer shall be responsible for all other off-site improvements in conjunction with the project, including, but not limited to sewage disposal lines, road construction, and water lines.

12. Term.

- a. Napa Valley Unified School District and City of American Canyon shall use their best efforts to complete this project in a timely fashion.
- b. The term of this Agreement shall commence on the date of execution of this Agreement by both parties and shall be in force so long as these properties are under construction, are jointly used by and/or the joint venture agreement pursuant to Paragraph 4 of this agreement is implemented between Napa Valley Unified School District and City of American Canyon.

13. Use.

The property and improvements (School Facilities, Community Center/ Gymnasium, and Aquatic Center) described above shall be used by Napa Valley Unified School District and City of American Canyon exclusively for the following purposes.

- a. Education and extracurricular activities of the Napa Valley Unified School District.
- b. Community Recreation Activities
- c. Senior Activities
- d. Other activities by mutual agreement of the Napa Valley Unified School District and City of American Canyon.
- e. Under the Civic Center Act the School Facilities and Community Center/ Gymnasium will be available for public use.

The Napa Valley Unified School District and City of American Canyon shall execute a joint use agreement specifying times of use of the School Facilities and Aquatic Center by each party. The joint use agreement shall, at a minimum, include:

- a. Education and extracurricular activities will take precedence for School Facilities and Community Center/ Gymnasium use during school hours.
- b. That, subject to Education Code Section 39470, the City of American Canyon may use the School Facilities, free of charge, when they are not being used by the Napa Valley Unified School District.
- c. Provisions for shared maintenance and operating costs of the Aquatic Center based on hours of use. Napa Valley Unified School District intends to use the pool as part of its physical education program, however, such use is contingent on available financial resources and instructional/educational priorities.

- d. Use of the Aquatic Center for Civic Center purposes shall be scheduled through the City of American Canyon.

The lease agreement required under Paragraph 12.c. above shall specify times of use by each party and provide for shared maintenance and operating costs for the Community Center/Gymnasium and shall include, at a minimum:

- a. Education and extracurricular activities will take precedence for the Community Center/ Gymnasium use during school hours.
- b. Use of the Community Center/ Gymnasium for Civic Center purposes shall be scheduled through the City of American Canyon.

14. **Construction Management**

- a. Napa Valley Unified School District shall act as construction manager for construction of the Middle School and the Community Center/Gymnasium. Construction management will include developing and calling for construction bids, awarding bids, oversight of the architect and general contractor during construction, receipt of progress payment billings and approval of construction progress and payment of billings.
- b. City of American Canyon shall be the construction manager for construction of the Aquatic Center. Construction management will include developing and calling for construction bids, awarding bids, oversight of the architect and general contractor during construction, receipt of progress payment billings and approval of construction progress and payment of billings.
- c. Notwithstanding the above, the Napa Valley Unified School District and City of American Canyon shall coordinate oversight and approvals of the construction of the Community Center/Gymnasium.

15. **Construction Progress Payments for the Community Center/ Gymnasium**

- a. All general contractor progress payments for the Community Center/Gymnasium will be addressed to the Napa Valley Unified School District.
- b. Said progress payment billings shall be: (1) reviewed by the Architect, who shall determine their accuracy and proportionate share of payments between the Napa Valley Unified School District and City of American Canyon, (2) approved by the City Manager for the City of American Canyon, and (3) approved by the Administrator for General Services for the Napa Valley Unified School District. All change orders must be approved by the District Board of Education and the City Council.
- c. Upon approval, the Napa Valley Unified School District shall make its proportionate share payment to the City of American Canyon pursuant to the this agreement and the executed lease between the parties.

d. The City of American Canyon shall then make all progress payments to the general contractor.

16. **Compliance With Law.**

Napa Valley Unified School District and City of American Canyon shall each comply and conform to all laws and regulations, municipal, state, and federal, and any and all requirements, orders, and permits, of any municipal, state, or federal board of authority, present or future, in any way relating to the condition, use, or occupancy of the premises throughout the entire term of this Agreement and any extensions thereof; provided, however, Napa Valley Unified School District's construction of the School Facilities shall be governed by the provisions of the Field Act and not the local building code.

17. **Waste.**

Napa Valley Unified School District and City of American Canyon shall not commit any waste or suffer any waste to be committed upon the premises (School Facilities, Community Center/ Gymnasium, and Aquatic Center).

18. **Impact of Project.**

Napa Valley Unified School District and City of American Canyon shall mitigate any adverse environmental impact the project as specified in the mitigated Negative Declaration for the Project. The Napa Valley Unified School District and City of American Canyon shall make reasonable efforts to address any neighborhood issues related to the Project.

19. **Insurance.**

a. **Insurance for School Facilities**

1.) **General Liability and Auto Insurance**

Napa Valley Unified School District shall carry and maintain, during the construction of the school facilities, at its own cost and expense, the following types of liability insurance:

a. General liability insurance and auto insurance (if applicable) with limits of no less than \$5,000,000 combined single limit per occurrence; subject to no less than \$5,000,000 annual aggregate limit for the School Facilities.

b. Such general liability insurance and auto insurance shall:

i) Be provided by insurance companies admitted in California and rated at least A in Best's Insurance Guide or, if not admitted in California, from companies rated at least A:X in the latest Best's

Insurance Guide; or such other insurance companies, insurance pools or self-insurance programs as are acceptable to the City of American Canyon and Napa Valley Unified School District.

- ii) Provide primary and not excess coverage.
- iii) Claims made policies are not acceptable.

2.) Property Insurance

The Napa Valley Unified School District shall carry and maintain during the construction of the School Facilities:

a. Property insurance shall be maintained for the construction of School Facilities with limits of no less than the replacement cost of the buildings. Napa Valley Unified School District maintains a self-insured retention (deductible) of \$100,000 per occurrence and purchases excess coverage for \$100,000 up to \$100,000,000. If any damage or destruction to the School Facilities occurs Napa Valley Unified School District shall contribute to the full cost of the deductible for its property insurance.

b. Such property insurance shall:

- i) Be provided by insurance companies admitted in California and rated at least A in Best's Insurance Guide or, if not admitted in California, from companies rated at least A:X in the latest Best's Insurance Guide; or such other insurance companies, insurance pools or self-insurance programs as are acceptable to the City of American Canyon and Napa Valley Unified School District.
- ii) Provide primary and not excess coverage.
- iii) Claims made policies are not acceptable.

b. Insurance for the Community Center/Gymnasium

1.) General Liability and Auto Insurance

Napa Valley Unified School District and City of American Canyon shall carry and maintain, during construction of the Community Center/ Gymnasium, each at their own cost and expense, the following types of liability insurance:

a. General liability insurance and auto insurance (if applicable) with limits of no less than \$5,000,000 combined single limit per occurrence; subject to no less than \$5,000,000 annual aggregate limit for Community Center/ Gymnasium.

b. Such general liability insurance and auto insurance shall:

- i) Be provided by insurance companies admitted in California and rated at least A in Best's Insurance Guide or, if not admitted in California, from companies rated at least A:X in the latest Best's Insurance Guide; or such other insurance companies, insurance pools or self-insured programs as are acceptable to the City of American Canyon and Napa Valley Unified School District.
- ii) Provide primary and not excess coverage.
- iii) Name City of American Canyon and Napa Valley Unified School District as an additional insured on each other's policies.
- iv) Claims made policies are not acceptable.
- v) Require that City of American Canyon and Napa Valley Unified School District be given at least thirty (30) days written notice before any such insurance can be canceled or changed with respect to the party's coverage or limits of liability.

2.) Property Insurance

The Napa Valley Unified School District and City of American Canyon shall carry and maintain during the construction of the Community Center/Gymnasium:

a. Property insurance shall be maintained for the Community Center/Gymnasium with limits of no less than the replacement cost of the buildings. Napa Valley Unified School District maintains a self-insured retention (deductible) of \$100,000 per occurrence and purchases excess coverage for \$100,000 up to \$100,000,000. If any damage or destruction to the Community Center/Gymnasium occurs Napa Valley Unified School District shall contribute to the full cost of the deductible for its property insurance. Any additional cost of providing insurance for Community Center/ Gymnasium shall be borne by these two parties in equal shares.

b. Such property insurance shall:

- i) Be provided by insurance companies admitted in California and rated at least A in Best's Insurance Guide or, if not admitted in California, from companies rated at least A:X in the latest Best's Insurance Guide; or such other insurance companies, insurance pools or self-insurance programs as are acceptable to the City of American Canyon and Napa Valley Unified School District

- ii) Provide primary and not excess coverage.
- iii) Name City of American Canyon and Napa Valley Unified School District as an additional insured.
- iv) Waive subrogation rights, if any, which the insurer may have against the City of American Canyon and Napa Valley Unified School District. Napa Valley Unified School District agrees that it shall not make any claim against or seek to recover from City of American Canyon for any loss or damage to its property or the property of others resulting from fire or other hazards covered by such insurance. City of American Canyon agrees that it shall not make any claim against or seek to recover from Napa Valley Unified School District for any loss or damage to its property or the property of others resulting from fire or other hazards covered by such insurance; provided, however, this release shall not apply to damage arising from the willful misconduct of the other agency or resulting from conduct that abrogates the waiver of subrogation clause provided by insurer.
- v) Require that City of American Canyon and Napa Valley Unified School District be given at least thirty (30) days written notice before any such insurance can be canceled or changed with respect to the party's coverage or limits of liability.

c. Insurance for the Aquatic Center

1.) General Liability and Auto Insurance

The City of American Canyon shall carry and maintain, during the construction of the Aquatic Center, at its own cost and expense, the following types of liability insurance:

- a. General liability insurance and auto insurance (if applicable) with limits of no less than \$5,000,000 combined single limit per occurrence; subject to no less than \$5,000,000 annual aggregate limit for the Aquatic Center.
- b. Such general liability insurance and auto insurance shall:
  - i) Be provided by insurance companies admitted in California and rated at least A in Best's Insurance Guide or, if not admitted in California, from companies rated at least A:X in the latest Best's Insurance Guide; or such other insurance companies, insurance pools or self-insured programs as are acceptable to the City of American Canyon and Napa Valley Unified School District.

- ii) Provide primary and not excess coverage.
- iii) Claims made policies are not acceptable.

2.) Property Insurance

The City of American Canyon shall carry and maintain during the construction of the Aquatic Center:

- (a) Property insurance with limits of no less than the replacement cost of the buildings. City of American Canyon shall be responsible for securing the insurance under its policy for the Aquatic Center. In the event of damage or destruction of the building, the City of American Canyon shall contribute up to the amount of the deductible on the policy.
- b. Such property insurance shall:
  - i) Be provided by insurance companies admitted in California and rated at least A in Best's Insurance Guide or, if not admitted in California, from companies rated at least A:X in the latest Best's Insurance Guide; or such other insurance companies as are acceptable to the City of American Canyon and Napa Valley Unified School District.
  - ii) Provide primary and not excess coverage.
  - iii) Claims made policies are not acceptable.

20. Indemnification.

- a. The Napa Valley Unified School District and the City of American Canyon mutually agree to indemnify and hold each other, their agents, and employees, harmless for any and all liability to the extent caused by the negligence or omission of the Napa Valley Unified School District or the City of American Canyon, their officers, agents, or employees, arising out of the performance of this Agreement, and to pay any all claims, damages, judgments, legal costs, and attorney's fees related thereto. It is also understood and agreed that pursuant to Government Code Section 895.4, the Napa Valley Unified School District and the City of American Canyon shall fully indemnify and hold each other harmless from any liability imposed for injury as defined by Government Code Section 810.8 occurring by reasons of anything done or omitted to be done by the Napa Valley Unified School District or the City of American Canyon, their officers, agents, or employees, under this Agreement, or in connection with any work or authority delegated to the Napa Valley Unified School District or the City of American Canyon pursuant to this Agreement.

This obligation on the part of Napa Valley Unified School District includes, but is not limited to, any claims of discrimination based on any actual or claimed change in the racial composition of the student bodies of the schools which make up the Napa Valley Unified School District as a result of the construction and operation of the School Facilities with the City of American Canyon pursuant to this Agreement. Napa Valley Unified School District shall further indemnify, and defend City of American Canyon from and against all costs, attorney's fees, expenses, and liabilities incurred in the defense of any such claim or any action or proceeding brought thereon.

- b. Notwithstanding the foregoing, neither party shall indemnify the other for reckless misconduct or willful misconduct of that other party.

21. **Damage or Destruction.**

Except as set forth here, any damage or destruction to the premises shall not terminate this Agreement. If the existing laws do not permit the restoration, either party can terminate this Agreement immediately by giving notice to the other party.

The Napa Valley Unified School District and the City of American Canyon shall make every effort to sufficiently insure the premises, including the School Facilities, Community Center/Gymnasium, and the Aquatic Center to provide adequate coverage for repair and replacement in the event of damage or destruction of the premises during the construction and joint use and operation of the premises, pursuant to Paragraph 19 of this Agreement.

This section shall only apply in situations in which full insurance coverage for the particular type of damage or destruction is not available.

- a. In the event that the improvements comprising the School Facilities are damaged then Napa Valley Unified School District shall have the obligation to restore the improvements but only so long as Napa Valley Unified School District's out of pocket costs would not exceed ten percent (10%) of the replacement cost of the improvements after the Napa Valley Unified School District has met any deductible or self-insured portions of the property damage insurance.
- b. If Napa Valley Unified School District's out of pocket costs (due to the fact that the damage or destruction is not covered under an insurance policy required under this Agreement, or if the cost of the restoration exceeds the amount of insurance proceeds received by Napa Valley Unified School District and the City of American Canyon by more than ten percent (10%) of the replacement cost of those improvements after the payment of any deductibles or self-insured retention, then the Napa Valley Unified School District may elect to terminate this Agreement by giving notice to the City of American Canyon within sixty (60) days after determining that the Napa Valley Unified School District's out of pocket costs would exceed this standard and Napa Valley Unified School District is unable to contribute in excess of this amount. If Napa Valley Unified School District elects to terminate this Agreement, then City of

American Canyon, within thirty (30) days after receiving the Napa Valley Unified School District's notice to terminate, may elect to pay the difference between the amounts Napa Valley Unified School District is obligated to contribute out of pocket and the actual cost of restoration, in which case Napa Valley Unified School District shall restore the improvements constructed by it. Napa Valley Unified School District shall give City of American Canyon satisfactory evidence that all sums contributed by City of American Canyon as provided in this section have been expended by Napa Valley Unified School District in paying the cost of restoration.

- c. In the event that any improvements comprising the Aquatic Center are damaged then the City of American Canyon shall have the obligation to restore those improvements so long as City of American Canyon's out of pocket costs do not exceed ten percent (10%) of the replacement costs for all improvements constructed solely by the City of American Canyon after the payment of any deductibles or self-insured portions of the City of American Canyon's property damage insurance.
- d. If the City of American Canyon's out of pocket costs due to the fact that the damage or destruction is not covered under an insurance policy required under this Agreement, or if the cost of the restoration exceeds the amount of insurance proceeds received by it by more than ten percent (10%) of the replacement cost of those improvements after the City of American Canyon has paid the deductible or self-insured portion of its insurance, then the City of American Canyon can elect to terminate this Agreement by giving notice to the Napa Valley Unified School District within sixty (60) days after determining that its out of pocket costs would exceed this standard and it is unable to contribute in excess of this amount. If the City of American Canyon elects to terminate this Agreement, then the Napa Valley Unified School District within thirty (30) days after receiving the City of American Canyon's notice to terminate, can elect to pay the difference between the amounts the City of American Canyon is obligated to contribute out of pocket and the actual cost of restoration, in which case shall the City of American Canyon restore the improvements constructed by it after giving to the Napa Valley Unified School District satisfactory evidence that all sums contributed by Napa Valley Unified School District as provided in this section have been expended to pay the cost of restoration. If the City of American Canyon's out of pocket costs exceed this standard and Napa Valley Unified School District is unwilling to contribute to the excess, then City of American Canyon shall have the right to terminate the Agreement unless Napa Valley Unified School District agrees to bear the difference within the same time frames as are applicable for Napa Valley Unified School District's improvements not fully insured.
- e. In the event that any of the improvements comprising the Community Center/Gymnasium are damaged, and the insurance proceeds, if any, are inadequate to cover the costs of restoration, the parties shall contribute in proportion to their original contributions toward the construction costs; provided, however, if the out of pocket costs of either party would exceed twenty five percent (25%) of the replacement costs of such improvement after the payment of deductibles of self-insured portions of the property

damage insurance then such party shall have the right to terminate this Agreement unless the other party agrees to bear the excess costs under provisions set forth above.

22. **Right to Inspect.**

The Napa Valley Unified School District and City of American Canyon or representatives or agents shall have the right to enter the premises at all reasonable times during the term of this Agreement to inspect the same.

23. **Reversion of Property.**

If, at some future time, the Napa Valley Unified School District determines that a school is no longer the appropriate use of this site, the Napa Valley Unified School District shall retain ownership of the site and all improvements constructed on it. In such event, disposition of the site and improvements shall occur in accordance with the provisions prescribed by the Education Code or any subsequent statute.

24. **Entire Agreement.**

This instrument constitutes the entire agreement between the Napa Valley Unified School District and the City of American Canyon relative to the construction of premises and this agreement may be altered, amended or revoked only by an instrument in writing signed by both the Napa Valley Unified School District and the City of American Canyon except that the City of American Canyon and the Napa Valley Unified School District shall enter into a joint use agreement regarding the use of the School Facilities and Aquatic Center, a lease regarding the use of the Community Center/Gymnasium and may enter into a joint venture agreement regarding the future development of the Napa Junction Elementary School site.

The Napa Valley Unified School District and the City of American Canyon agree hereby that all prior or contemporaneous oral agreements between and among themselves and their agents or representatives are merged in or revoked by this agreement.

25. **Severability.**

If any term or provision of this Agreement shall, to any extent, be determined by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement shall not be affected thereby, and each term and provision of this Agreement shall be valid and be enforceable to the fullest extent permitted by law.

26. **Default and Dispute Resolution.**

All rights and remedies of the Napa Valley Unified School District and the City of American Canyon herein enumerated shall be cumulative and none shall exclude any other right or remedy allowed by law, or equity; and likewise, the exercise by the Napa Valley

Unified School District and the City of American Canyon of any remedy provided for herein or allowed by law or equity shall not be to the exclusion of any other remedy. The parties to this Agreement agree to mediate any dispute or claim between them arising out of this Agreement or any resulting transaction before resorting to court action. Mediation is a process in which parties attempt to resolve a dispute by submitting it to an impartial, neutral mediator who is authorized to facilitate the resolution of the dispute but who is not empowered to impose a settlement on the parties. The mediation fee, if any, shall be divided equally among the parties involved. Before the mediation begins, the parties agree to sign a document limiting the admissibility in arbitration or any civil action of anything said, any admission made, and any documents prepared, in the course of the mediation, consistent with Evidence Code §1152.5. IF ANY PARTY COMMENCES A COURT ACTION BASED ON A DISPUTE OR CLAIM TO WHICH THIS PARAGRAPH APPLIES WITHOUT FIRST ATTEMPTING TO RESOLVE THE MATTER THROUGH MEDIATION, THEN IN THE DISCRETION OF THE ARBITRATORS(S) OR JUDGE, THAT PARTY SHALL NOT BE ENTITLED TO RECOVER ATTORNEY'S FEES EVEN IF THEY WOULD BE OTHERWISE BE AVAILABLE TO THAT PARTY IN SUCH A COURT ACTION. However, the filing of a judicial action to enable the recording or preservation of an order of attachment, receivership, injunction, mechanic's liens or stop notice, or other provisional remedies, shall not in itself constitute a loss of the right to recovery attorney's fees under this provision.

27. **Time: Cumulative Remedies.**

Time is of the essence of this Agreement and each and every provision hereof, except as to the conditions relating to the delivery of possession of the premises to the Napa Valley Unified School District and the City of American Canyon. All rights and remedies of the parties shall be cumulative and non-exclusive of any other remedy at law or in equity.

28. **Waiver.**

No covenant, term, or condition or the breach thereof shall be deemed waived, except by written consent of the party against whom the waiver is claimed, and any waiver or the breach of any covenant, term or condition shall not be deemed to be a waiver of any preceding or succeeding breach of the same or any other covenant, term, or condition.

29. **Notices.**

All notices or demands of any kind required or desired to be given by the Napa Valley Unified School District and the City of American Canyon thereunder shall be either by personal delivery or in writing and shall be deemed delivered forty-eight (48) hours after depositing the notice or demand in the United States mail, certified or registered, postage prepaid, addressed to the Napa Valley Unified School District and the City of American Canyon respectively at the addresses set forth after their signatures at the end of this Agreement.

IN WITNESS WHEREOF, the Napa Valley Unified School District and the City of American Canyon have executed this Agreement on the 20th day of March, 1997.

NAPA VALLEY UNIFIED SCHOOL DISTRICT

BY: Bruce Heid

Bruce Heid, President, Board of Education

BY: David Brown

Dr. David E. Brown, Superintendent

CITY OF AMERICAN CANYON

BY: Ben Anderson

Ben Anderson, Mayor, City of American Canyon

BY: Mark Joseph

Mark Joseph, City Manager

APPROVED AS TO FORM:

BY: Sally Jensen Dutcher

Sally Jensen Dutcher, General Counsel

Napa Valley Unified School District

BY: Myra J. Prestidge

Myra J. Prestidge, Assistant City Attorney

City of American Canyon

DATE:

3/20/97

3/20/97

Exhibit A

Legal Description - American Canyon Middle School Site

All that real property situated in the City of American Canyon, County of Napa, State of California, described as follows:

Commencing at a point from which the intersection of the monument line of Carolyn Drive with the westerly boundary of that certain map "Rancho Del Mar No. 9A", filed for record in Book 6 maps at pages 63 and 64, bears south 07 degrees 19 minutes 57 seconds east 14.42 feet; thence from said point of commencement south 07 degrees 19 minutes 57 seconds east 1433.10 feet to the true point of beginning; thence south 64 degrees 18 minutes 48 seconds west 131.07 feet; thence south 61 degrees 34 minutes 47 seconds west 122.00 feet; thence south 58 degrees 36 minutes 55 seconds west 104.32 feet; thence south 55 degrees 10 minutes 01 second west 90.66 feet; thence south 57 degrees 30 minutes 41 seconds west 111.87 feet; thence south 51 degrees 51 minutes 05 seconds west 90.04 feet to a curve to the right, having a radius of 1034.00 feet, from which the center of said curve bears south 76 degrees 46 minutes 29 seconds west; thence southerly along said curve through a central angle 01 degree 14 minutes 51 seconds 22.51 feet; thence south 11 degrees 58 minutes 40 seconds east 355.15 feet to a tangent curve to the right having a radius 880.00 feet; thence along said curve through a central angle of 10 degrees 29 minutes 12 seconds 161.06 feet; thence south 45 degrees 13 minutes 11 seconds east 27.65 feet to a curve to the left having a radius of 816.00 feet, from which the center of said curve bears north 01 degree 03 minutes 06 seconds east; thence along said curve through a central angle of 23 degrees 41 minutes 11 seconds 337.34 feet to a reverse curve having a radius of 884.00 feet; thence along said curve through a central angle of 13 degrees 55 minutes 27 seconds 214.83 feet to a point on the north line of West Donaldson Way, said point also being on the westerly line of that certain map "Napa Glen - Unit 2" filed for record in Book 16 of maps at pages 40 through 46, inclusive; thence along said westerly line north 07 degrees 19 minutes, 57 seconds west 770.99 feet, to the point of beginning.

Containing 397,312 square feet or 9.12 acres more or less.

Legal Description - 7 acres of Land at the Napa Junction Elementary School Site

All that real property situated in the City of American Canyon, County of Napa, State of California, described as follows:

To be conveyed to City of American Canyon within  
one hundred eighty (180) days of the execution of this agreement.

Exhibit B  
Financial Plan

Napa Valley Unified School District

A financing plan for the American Canyon Middle School assumes the following:

Napa Valley Unified School District

<u>School Facilities Fees</u>	millions
As of 6/30/96 (currently allocated)	\$2.3

<u>General Fund</u>	millions
From 6/30/95 Ending Balance (Architectural and Engineer)	\$0.3
From 6/30/96 Unallocated Ending Balance	\$2.8
From 6/30/97 Unallocated Ending Balance	<u>\$0.6</u>
Subtotal - General Fund	\$3.7

<u>G.O. Bond 6/4/96</u>	millions
From General Obligation Bond	\$0.6

<b>SUBTOTAL-Napa Valley Unified School District</b>	<b>\$6.6</b>
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<u>School Facilities Fees</u>	millions
Future Fees Collected for 3rd Classroom Cluster	\$1.0

<b>SUBTOTAL-Napa Valley Unified School District</b>	<b>\$7.6</b>
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City of American Canyon

<u>Lease Revenue Bonds</u>	millions
Issued by the City of American Canyon	\$3.9

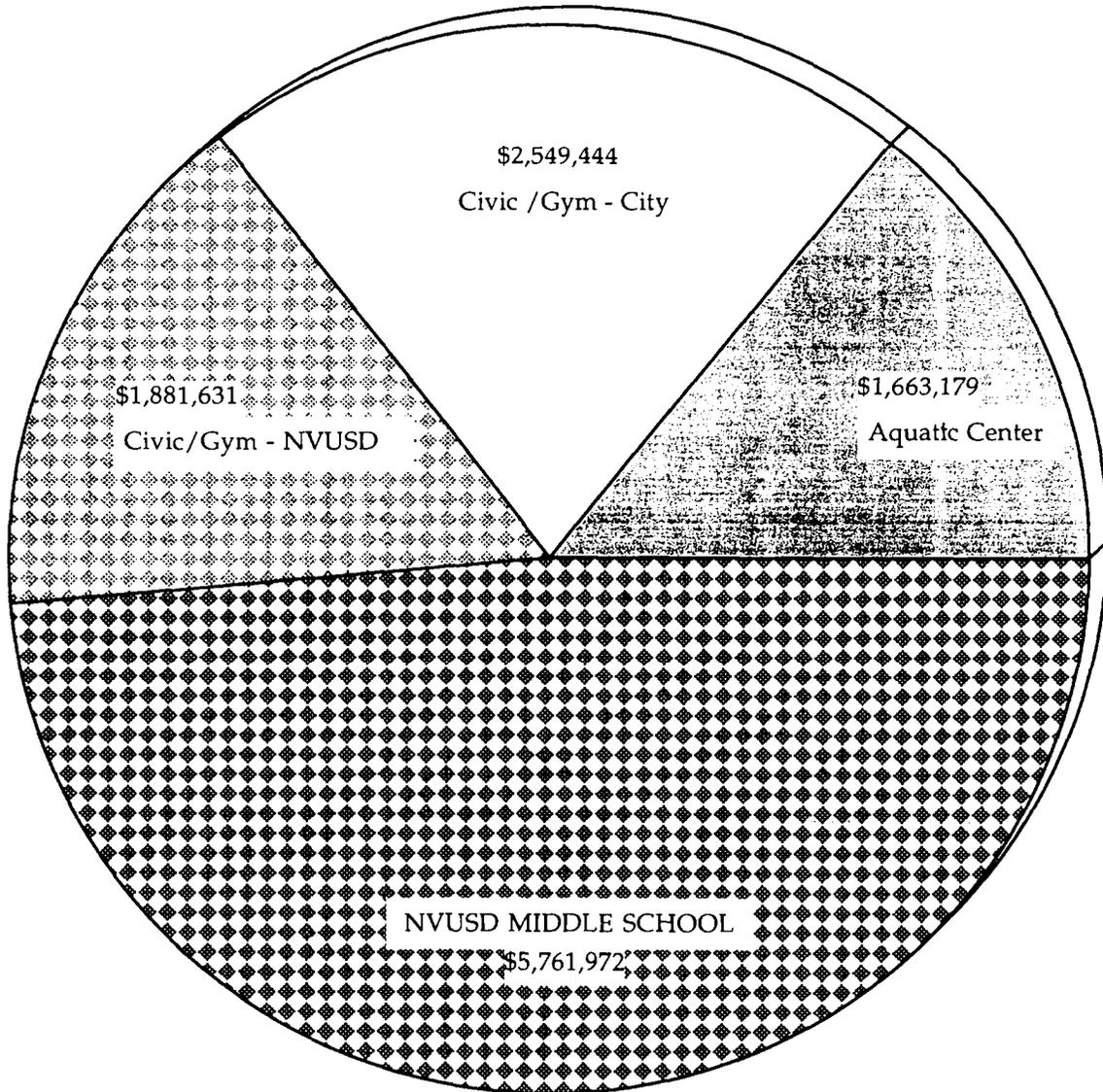
<b>SUBTOTAL-City of American Canyon</b>	<b>\$3.9</b>
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<b>TOTAL-PROJECT</b>	<b>\$11.5</b>
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City of American Canyon has purchased the land for the Middle School \$326,604.

Exhibit C  
PROJECT BUDGET

SUMMARY OF PROJECT BUDGET



American Canyon Middle School	\$5,761,972
Community Center/Gymnasium - NVUSD	\$1,881,631
Community Center/Gymnasium - City	\$2,549,444
Aquatic Center	<u>\$1,663,179</u>
<b>TOTAL</b>	<u><b>\$11,856,226</b></u>

Exhibit C  
PROJECT BUDGET

MIDDLE SCHOOL -NVUSD ONLY	2 Classroom	3/20/97
Description	<u>Cluster ONLY</u>	<u>Total Budget</u>
3 Modular Classroom Clusters	\$1,152,000	\$1,987,000
Modular Cafeteria/Kitchen Bldg.	\$500,000	\$500,000
Library Media Center (modular)	\$500,000	\$500,000
Administration Building (modular)	\$500,000	\$500,000
Modular Music/Performing Arts Bldg.	\$159,000	\$159,000
Earthwork	\$176,275	\$251,275
Water, Sewer, Storm Drain Utilities	\$159,308	\$242,433
Power and Gas Service (inc. on-site signal systems)	\$514,171	\$514,171
On-site walks and paving	\$327,828	\$327,828
Off-site work	\$0	\$0
Landscaping (includes channel revegetation)	\$141,399	\$141,399
Signal system within buildings	\$100,142	\$120,142
Contingency	\$20,000	\$20,000
DSA and Design Fees	\$201,177	\$206,177
Geotechnical Engineering	\$39,047	\$39,047
Inspector	\$22,000	\$22,000
Testing Lab	\$25,000	\$25,000
Kitchen Equipment	\$25,250	\$25,250
Furniture and Equipment	\$150,000	\$150,000
3% escalation for construction start	\$0	\$0
Energy Management System	\$31,250	\$31,250
<b>SUBTOTAL-NVUSD Only</b>	<b>\$4,743,847</b>	<b>\$5,761,972</b>

Exhibit C  
 PROJECT BUDGET continued . . .

AQUATIC CENTER CITY COSTS ONLY		3/20/97
Description	<u>Total Budget</u>	
Comm. Serv. Building/Pool/Concession	\$693,370	
Pool Mechanical Equipment Bldg.	\$78,750	
25 Meter Pool	\$324,166	
Pool Structures	\$30,000	
Pool Deck Trellis	\$20,000	
Pool Deck & Fencing	\$70,000	
Tot Lot Allowance	\$30,000	
Parking Lot Lighting	\$62,500	
Contingency	\$125,000	
DSA and Design Fees	\$166,454	
3% escalation for construction start	\$62,939	
<b>SUBTOTAL - City of American Canyon Only</b>	<b>\$1,663,179</b>	

Exhibit C  
PROJECT BUDGET continued . . .

COMMUNITY CENTER					
JOINT COSTS	3/20/97 TOTAL BUDGET		NVUSD		American Canyon
Description					
Gymnasium/Locker Bldg. (site built)	\$2,186,270	50%	\$1,093,135	50%	\$1,093,135
City Library	\$0	0%	\$0	0%	\$0
Land Acquisition	\$326,604	0%	\$0	100%	\$326,604
Covered Walks and Entry	\$100,000	50%	\$50,000	50%	\$50,000
Earthwork	\$153,320	50%	\$76,660	50%	\$76,660
Water, Sewer, Storm Utilities	\$78,025	40%	\$31,210	60%	\$46,815
Power and Gas Service	\$52,000	40%	\$20,800	60%	\$31,200
On-site walks and paving	\$340,340	20%	\$68,068	80%	\$272,272
Off-site work	\$0	0%	\$0	0%	\$0
Landscaping (includes channel revegetation)	\$235,000	19%	\$44,000	81%	\$191,000
Basketball and Tennis	\$20,000	50%	\$10,000	50%	\$10,000
Parking Lot Lighting		0%	\$0	100%	\$0
Contingency	\$375,000	50%	\$187,500	50%	\$187,500
DSA and Design Fees (includes DSA for pool)	\$323,140	52%	\$167,070	48%	\$156,070
Geotechnical Engineering	\$15,946	50%	\$7,973	50%	\$7,973
Estimated Appraisal	\$5,000	50%	\$2,500	50%	\$2,500
Topographic Survey	\$10,430	50%	\$5,215	50%	\$5,215
Inspector	\$25,000	100%	\$25,000	0%	\$0
Testing Lab	\$35,000	50%	\$17,500	50%	\$17,500
Furniture and Equipment	\$150,000	50%	\$75,000	50%	\$75,000
3% escalation construction start	\$0	0%	\$0	0%	\$0
<b>SUBTOTAL</b>	<b>\$4,431,075</b>		<b>\$1,881,631</b>		<b>\$2,549,444</b>
<b>GRAND TOTAL - PROJECT</b>	<b>\$11,856,226</b>		<b>\$7,643,603</b>		<b>\$4,212,623</b>

WHEREAS, the Napa Valley Unified School District and City of American Canyon wish to apply for such funding by including in this agreement the terms required by Section 17751 and the State Allocation Board Joint Use Policy of June 30, 1997. These terms include (1) that the parties will each deposit an amount equal to the total cost of the Community Center/ Gymnasium that is calculated to be beyond the needs of the district, prior to signing the construction contract; (2) staffing, maintenance, materials acquisition, and other matters related to the administration and operating costs of the joint-use facility; (3) procedures for amendment or termination of the contract, including the disposition of materials housed in the joint-use facility should termination of the contract occur; (4) the district is the sublessee of a lease from the City for the site and building for a term of forty (40) years.

NOW, THEREFORE, Napa Valley Unified School District and the City of American Canyon hereby mutually covenant and agree as follows:

This "Sublease and Joint Use Agreement" is entered into by and between the City of American Canyon and Napa Valley Unified School District,

Each party hereto agrees to the following terms and conditions:

1. **Premises.**

City of American Canyon hereby subleases to the Napa Valley Unified School District, upon the terms and conditions herein set forth, the land and building to be constructed and located in the City of American Canyon, delineated on the map attached hereto as Exhibit A, hereinafter referred as the Community Center/ Gymnasium.

2. **Term.**

a. The term of this Sublease and Joint Use Agreement for the site and building shall commence on August 1, 1997 and end on July 31, 2037. The term "Lease Year" shall be defined as the annual anniversary of the commencement date of the Lease. It is the intent of the parties that the term of this sublease be amended, as provided in Paragraph 20 of this agreement, to exclude the building and include only the underlying real property, at such time as the City of American Canyon has repaid its Lease Revenue Bonds in full, which is expected to occur in twenty-five (25) years, or June 1, 2022.

- b. This Sublease and Joint Use Agreement shall be automatically renewed at the expiration of the term set forth above for an additional ten (10) years, and for an additional ten year period thereafter and at the end of each successive term, unless Napa Valley Unified School District or the City of American Canyon gives written notice to the other party of its intent not to renew this Sublease and Joint Use Agreement at least ninety (90) days before expiration of the initial or any extended term.

3. **Rental.**

The City of American Canyon and Napa Valley Unified School District agree that the District's obligation to pay rent to the City for use of the **Community Center/ Gymnasium** shall be fully satisfied by District's payment of its share of the construction costs for the **Community Center/ Gymnasium** as set forth in Paragraph 10 and Exhibit C of the Agreement between the Napa Valley Unified School District and the City of American Canyon for the construction and development of the American Canyon Middle School, **Community Center/ Gymnasium**, and Aquatic Center executed by the parties on March 20, 1997.

4. **Construction Funding**

The City of American Canyon and Napa Valley Unified School District have agreed to a construction funding plan for the **Community Center/ Gymnasium** and have agreed to secure 100% of the total projected construction costs prior to the award of construction bids for the project, in their Construction and Development Agreement dated March 20, 1997 at Paragraph 10 and Exhibit C. Should the District be successful in its application for state joint use facility funding, the parties agree to deposit in a county school lease-purchase fund, an amount equal to the total cost of any space in the **Community Center/ Gymnasium** (that is calculated to be beyond the needs of the district based on a state formula for school construction) prior to signing the construction contract for the project, as required by Education Code Section 17751.

5. Use.

During the term of this Sublease and Joint Use Agreement, the property and improvements known as the Community Center/ Gymnasium as described above shall be used by Napa Valley Unified School District and City of American Canyon exclusively for the following purposes.

- a. Education and extracurricular activities of the Napa Valley Unified School District will take precedence for Community Center/ Gymnasium use during school hours.
- b. Community Recreation Activities
- c. Senior Activities
- d. Other activities by mutual agreement of the Napa Valley Unified School District and City of American Canyon.
- e. Under the Civic Center Act the Community Center/ Gymnasium will be available for public use. Use of the Community Center/ Gymnasium for these purposes shall be scheduled through the City of American Canyon.

6. Operating Costs

a. Instructional and City Personnel.

- 1) Napa Valley Unified School District shall pay for the costs of site-assigned instructional and other personnel including but not limited to teachers, instructional aides, principals, etc. for the District's programs operated at the Community Center/ Gymnasium. The Napa Valley Unified School District shall provide appropriate personnel to directly provide and supervise Napa Valley Unified School District's program at the facility.
- 2) City of American Canyon shall pay for the costs of site-assigned City of American Canyon personnel for the Community Center/ Gymnasium, for the City's programs operated at the Community Center/ Gymnasium and during the hours the facility is used by City of American Canyon.

b. Clerical and Office Personnel.

- 1) Napa Valley Unified School District shall pay for the costs of site-assigned clerical and office personnel for its programs operated at the **Community Center/ Gymnasium.**
- 2) City of American Canyon shall pay for the costs of site-assigned clerical and office personnel for its programs operated at the **Community Center/ Gymnasium.**

c. Custodial and Groundskeeping Personnel.

City of American Canyon and the Napa Valley Unified School District shall share the costs of site-assigned custodial and groundskeeping personnel for the **Community Center/ Gymnasium** in an equitable manner based on their proportional use of the facility.

d. Cleaning and Housekeeping Supplies

- 1) Napa Valley Unified School District and City of American Canyon shall share the costs of cleaning and housekeeping supplies for buildings used jointly by each agency in the **Community Center/ Gymnasium** in an equitable manner based on their proportional use of the facility.
- 2) City of American Canyon may contract with Napa Valley Unified School District to acquire cleaning and housekeeping supplies. In this case, Napa Valley Unified School District shall provide cleaning and housekeeping supplies to City of American Canyon on a cost only basis.
- 3) Graffiti removal shall be a priority of both agencies. Graffiti removal shall occur as soon as practical and generally within 24 hours of discovery. The City of American Canyon shall be responsible for the removal of graffiti at the **Community Center/ Gymnasium.**

e. Utilities.

- 1) Napa Valley Unified School District and City of American Canyon shall pay a prorated share for the costs of the following utilities: water, gas, electricity, heat, light, phone and alternative power source for buildings used jointly by each agency (Community Center/ Gymnasium). The method of allocation shall be based on hours of the proportional use of the facility by each agency.
- 2) City of American Canyon shall provide water services to the Community Center/ Gymnasium on a metered rate basis at the applicable American Canyon Municipal Code rates or at a rate mutually agreed to by the parties. The City shall also provide sewer services to the District at the applicable American Canyon Municipal Code rates, or at a rate mutually agreed to by the parties, based on a proportional basis to the District's usage of the facility.

f. Maintenance and Repairs.

Napa Valley Unified School District shall maintain all heating ventilation, air conditioning equipment, all mechanical maintenance, electrical facilities, security systems, exterior painting, the exterior walls and roofs of the buildings, and communication systems of the Community Center/ Gymnasium and City of American Canyon shall maintain or cause to be maintained all concrete and asphalt surfaces and areas, and all common areas including, but not limited to, parking areas, sidewalks, roadways, play areas and fields, the water system, all plumbing and sewage systems, lighting and landscaping relating to the Community Center/ Gymnasium.

g. Garbage Service.

City of American Canyon shall provide all garbage service for the Community Center/ Gymnasium.

h. Other Supplies.

Napa Valley Unified School District and City of American Canyon shall provide all other supplies for their own programs operated at the Community Center/ Gymnasium which have not been provided for in this Paragraph.

i. **Equipment and Furnishings Replacement.**

- 1) Napa Valley Unified School District shall provide school related equipment and furnishings for its programs operated at the Community Center/ Gymnasium at its cost. City of American Canyon shall provide City related equipment and furnishings for its programs operated at the Community Center/ Gymnasium at its cost.
- 2) Each agency shall determine its own replacement schedule for equipment and furnishings replacement. Equipment and furnishings shall be replaced in a timely manner so as not to contribute to a safety hazard or interfere with the efficient operation of the Community Center/ Gymnasium.
- 3) Napa Valley Unified School District and the City of American Canyon may agree, when practicable to do so, to jointly provide equipment and furnishings for use in either of their programs in the Community Center/ Gymnasium. Both agencies shall replace equipment and furnishings jointly provided on an equitable basis.

7. **Building Fixtures**

- a. Napa Valley Unified School District may install at its sole cost school related building fixtures for its programs operated at the Community Center/ Gymnasium. City of American Canyon may install at its sole cost City related building fixtures for its programs operated at the Community Center/ Gymnasium. The parties may, by mutual agreement, share the costs of building fixtures to be used by the City of American Canyon and Napa Valley Unified School District and the costs shall be shared by the parties on an equitable basis.
- b. Each agency shall review and approve a replacement schedule for their respective building fixtures and the shared building fixtures in the Community Center/ Gymnasium.
- c. Each party shall engage in a reasonable preventive maintenance program to assure long-life from its building fixtures. Any malfunction of fire and life safety fixture components shall be repaired or replaced immediately.

d. At the expiration of or amendment pursuant to Paragraph 20, to this Sublease and Joint Use Agreement, the Napa Valley Unified School District and the City of American Canyon may remove, at its discretion, building fixtures installed by it on the premises, unless, by mutual agreement, the parties agree to have the fixtures become and remain a part of the building. Any removal of such fixtures shall be effected solely at the expense of the party who installed the fixture and without injury or damage to the premises. Each party covenants to repair immediately, at its own expense, any injury or damage caused by such removal. This subparagraph shall survive the termination of this Sublease and Joint Use Agreement.

8. **Alterations**

Napa Valley Unified School District and City of American Canyon shall meet and confer prior to any alterations of the facility. All alterations shall meet the relevant laws, building codes or regulations pertaining to school and City facilities. In the event that a conflict arises between the legal standards applicable to school and those applicable to City facilities, the most rigorous standard shall prevail. In the event that costs are shared, the City of American Canyon and Napa Valley Unified School District shall determine in advance each agencies contribution to proposed alteration.

9. **Assignment and Subletting**

Except as provided herein, the City of American Canyon shall not assign or sublet this sublease to any other person, firm or corporation. This sublease shall be assigned to the American Canyon Joint Powers Financing Authority or its assignees if the City of American Canyon is in default of its Lease Agreement between the City of American Canyon and the American Canyon Joint Powers Financing Authority dated May 1, 1997 and said Lease Agreement is terminated pursuant to Paragraph 9.2(b) of that agreement. It is understood between the parties that the District's right to possession shall be superior to any default remedies of the agreement between the City of American Canyon and the American Canyon Joint Powers Financing Authority and that default by the City of American Canyon of that agreement shall not permit any party to eject the Napa Valley Unified School District and relet the premises to convert the use of the Community Center/ Gymnasium to other than a public school and recreational facility operated by the Napa Valley Unified School District as provided herein and in Paragraph 9.2 of that agreement.

10. Insurance.

a. General Liability and Auto Insurance

Napa Valley Unified School District and City of American Canyon shall carry and maintain, during operation of the **Community Center/ Gymnasium**, each at their own cost and expense, the following types of liability insurance:

- 1) General liability insurance and auto insurance (if applicable) with limits of no less than \$5,000,000 combined single limit per occurrence; subject to no less than \$5,000,000 annual aggregate limit for **Community Center/ Gymnasium**.
  
- 2) Such general liability insurance and auto insurance shall:
  - i) Be provided by insurance companies admitted in California and rated at least A in Best's Insurance Guide or, if not admitted in California, from companies rated at least A:X in the latest Best's Insurance Guide; or such other insurance companies, insurance pools or self-insured programs as are acceptable to the City of American Canyon and Napa Valley Unified School District.
  
  - ii) Provide primary and not excess coverage.
  
  - iii) Name City of American Canyon and Napa Valley Unified School District as an additional insured on each other's policies.
  
  - iv) Claims made policies are not acceptable.
  
  - v) Require that City of American Canyon and Napa Valley Unified School District be given at least thirty (30) days written notice before any such insurance can be canceled or changed with respect to the party's coverage or limits of liability.

b. Property Insurance

The Napa Valley Unified School District and City of American Canyon shall carry and maintain during the operation of the **Community Center/ Gymnasium**:

- 1) Property insurance shall be maintained for the **Community Center/ Gymnasium** with limits of no less than the replacement cost of the buildings. Napa Valley Unified School District maintains a self-insured retention (deductible) of \$100,000 per occurrence and purchases excess coverage for \$100,000 up to \$100,000,000. If any damage or destruction to the **Community Center/ Gymnasium** occurs Napa Valley Unified School District shall contribute to the full cost of the deductible for its property insurance. Any additional cost of providing insurance for **Community Center/ Gymnasium** shall be borne by these two parties in equal shares.
- 2) Such property insurance shall:
  - i) Be provided by insurance companies admitted in California and rated at least A in Best's Insurance Guide or, if not admitted in California, from companies rated at least A:X in the latest Best's Insurance Guide; or such other insurance companies, insurance pools or self-insurance programs as are acceptable to the City of American Canyon and Napa Valley Unified School District.
  - ii) Provide primary and not excess coverage.
  - iii) Name City of American Canyon and Napa Valley Unified School District as an additional insured.

- iv) Waive subrogation rights, if any, which the insurer may have against the City of American Canyon and Napa Valley Unified School District. Napa Valley Unified School District agrees that it shall not make any claim against or seek to recover from City of American Canyon for any loss or damage to its property or the property of others resulting from fire or other hazards covered by such insurance. City of American Canyon agrees that it shall not make any claim against or seek to recover from Napa Valley Unified School District for any loss or damage to its property or the property of others resulting from fire or other hazards covered by such insurance; provided, however, this release shall not apply to damage arising from the willful misconduct of the other agency or resulting from conduct that abrogates the waiver of subrogation clause provided by insurer.
  
- v) Require that City of American Canyon and Napa Valley Unified School District be given at least thirty (30) days written notice before any such insurance can be canceled or changed with respect to the party's coverage or limits of liability.

c. Annual Review of Insurance Coverage

The City of American Canyon and the Napa Valley Unified School District shall jointly review all insurance coverage for the Community Center/ Gymnasium on at least an annual basis in order to ensure that the facility and the activities of each agency at the facility are sufficiently insured.

11. **Indemnification.**

- a. The Napa Valley Unified School District and the City of American Canyon mutually agree to indemnify, defend and hold each other, their agents, and employees, harmless for any and all liability to the extent caused by the negligence or omission of the Napa Valley Unified School District or the City of American Canyon, their officers, agents, or employees, arising out of this agreement, or any other liability or claims of same arising out of this Agreement, and to pay any and all claims, damages, judgments, legal costs, and attorney's fees related thereto. It is also understood and agreed that pursuant to Government Code Section 895.4, the Napa Valley Unified School District and the City of American Canyon shall fully indemnify and hold each other harmless from any liability imposed for injury as defined by Government Code Section 810.8 occurring by reasons of anything done or omitted to be done by the Napa Valley Unified School District or the City of American Canyon, their officers, agents, or employees, under this Agreement, or in connection with any work or authority delegated to the Napa Valley Unified School District or the City of American Canyon pursuant to this Agreement.

The Napa Valley Unified School District and the City of American Canyon shall reasonably cooperate in the defense of any claims, actions, or proceedings, brought against either agency by third parties. All actions brought against either the City of American Canyon or the Napa Valley Unified School District shall be defended by competent legal counsel approved by both parties.

This obligation on the part of Napa Valley Unified School District includes, but is not limited to, any claims of discrimination based on any actual or claimed change in the racial composition of the student bodies of the schools which make up the Napa Valley Unified School District as a result of the construction and operation of the School Facilities with the City of American Canyon pursuant to this Agreement. Napa Valley Unified School District shall further indemnify, and defend City of American Canyon from and against all costs, attorney's fees, expenses, and liabilities incurred in the defense of any such claim or any action or proceeding brought thereon.

- b. Notwithstanding the foregoing, neither party shall indemnify the other for reckless misconduct or willful misconduct of that other party.

12. Damage or Destruction.

Except as set forth here, any damage or destruction to the premises shall not terminate this Agreement. If the existing laws do not permit the restoration, either party can terminate this Agreement immediately by giving notice to the other party.

The Napa Valley Unified School District and the City of American Canyon shall make every effort to sufficiently insure the premises to provide adequate coverage for repair and replacement in the event of damage or destruction of the premises.

This section shall only apply in situations in which full insurance coverage for the particular type of damage or destruction is not available.

In the event that any of the improvements comprising the Community Center/ Gymnasium are damaged, and the insurance proceeds, if any, are inadequate to cover the costs of restoration, the parties shall contribute in proportion to their original contributions toward the construction costs; provided, however, if the out of pocket costs of either party would exceed twenty five percent (25%) of the replacement costs of such improvement after the payment of deductibles or self-insured portions of the property damage insurance then such party shall have the right to terminate this Agreement unless the other party agrees to bear the excess costs under provisions set forth above.

13. Default and Dispute Resolution

All rights and remedies of the Napa Valley Unified School District and the City of American Canyon herein enumerated shall be cumulative and none shall exclude any other right or remedy allowed by law, or equity; and likewise, the exercise by the Napa Valley Unified School District and the City of American Canyon of any remedy provided for herein or allowed by law or equity shall not be to the exclusion of any other remedy. The parties to this Agreement agree to mediate any dispute or claim between them arising out of this Agreement or any resulting transaction before resorting to court action. Mediation is a process in which parties attempt to resolve a dispute by submitting it to an impartial, neutral mediator who is authorized to facilitate the resolution of the dispute but who is not empowered to impose a settlement on the parties. The mediation fee, if any, shall be divided equally among the parties involved. Before the mediation begins, the parties agree to sign a document limiting the admissibility in arbitration or any civil action of anything said, any admission made, and any documents prepared, in the course of the mediation, consistent with Evidence Code §1152.5. IF ANY PARTY COMMENCES A COURT ACTION BASED ON A DISPUTE OR CLAIM TO WHICH THIS PARAGRAPH APPLIES WITHOUT FIRST ATTEMPTING TO RESOLVE THE MATTER THROUGH MEDIATION, THEN IN THE DISCRETION OF THE ARBITRATORS(S) OR JUDGE, THAT PARTY SHALL NOT BE ENTITLED TO RECOVER ATTORNEY'S FEES EVEN IF THEY WOULD BE OTHERWISE BE AVAILABLE TO THAT PARTY IN SUCH A COURT ACTION. However, the filing of a judicial action to enable the recording or preservation of an order of attachment, receivership, injunction, mechanic's liens or stop notice, or other provisional remedies, shall not in itself constitute a loss of the right to recovery attorney's fees under this provision.

14. Right to Inspect.

The Napa Valley Unified School District and City of American Canyon or representatives or agents shall have the right to enter the premises at all reasonable times during the term of this Agreement to inspect the same.

15. **Entire Agreement.**

This Lease constitutes the entire agreement between the Lessor and Lessee relative to the Premises and this agreement may be altered, amended or revoked only by an instrument in writing signed by both Lessor and Lessee. Lessor and Lessee agree hereby that all prior or contemporaneous oral agreements between and among themselves and their agents or representatives relative to the leasing of the Premises are merged in or revoked by this agreement.

16. **Time: Joint and Several Liability.**

Time is of the essence in the performance of this Sublease and Joint Use Agreement and each and every provision hereof, except to the conditions relating to the delivery of possession of the Premises to Lessee. All the terms, covenants, and conditions contained in this Lease to be performed by either party, if such party shall consist of more than one person or organization, shall be deemed to be joint and several, and all rights and remedies of the parties shall be cumulative and non-exclusive of any other remedy at law or in equity.

17. **Binding Effect: Choice of Law.**

The parties hereto agree that all the provisions hereof are to be construed as both covenants and conditions as though the words imparting such covenants and conditions were used in each separate paragraph hereof; subject to any provisions hereof restricting assignment or subletting by Lessee all of the provisions hereof shall bind and inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and assigns. This Lease shall be governed by the laws of the of the State of California.

18. **Waiver.**

No covenant, term, or condition or the breach thereof shall be deemed waived, except by written consent of the party against whom the waiver is claimed, and any waiver or the breach of any covenant, term or condition shall not be deemed to be a waiver of any preceding or succeeding breach of the same or any other covenant, term or, condition. Acceptance by Lessor of any performance by Lessee after the time the same shall have become due shall not constitute a waiver by Lessor of the breach or default of any covenant, term, or condition unless otherwise expressly agreed to by Lessor in writing.

19. Notices.

All notices or demands of any kind required or desired to be given by Lessor or Lessee hereunder shall be in writing and shall be deemed delivered forty-eight (48) hours after depositing the notice or demand in the United States mail, certified or registered, postage prepaid, addressed to the Lessor or Lessee respectively at the addresses set forth after their signatures at the end of this Lease.

20. Amendments

This Sublease and Joint Use Agreement may be amended or any of its terms modified, upon written consent of the Napa Valley Unified School District and the City of American Canyon.

It is the intent of the parties that the term of this sublease be amended to exclude the Community Center/ Gymnasium building and include only the underlying real property at such time as the City of American Canyon has repaid its Lease Revenue Bonds in full. It is expected the repayment will be completed in twenty-five (25) years, or June 1, 2022.

It is further the intent of the parties that, upon repayment of the City's Lease Revenue Bonds, title to the building shall be reconveyed to the Napa Valley Unified School District and City of American Canyon in joint ownership in proportion to their respective contributions to the construction costs of the Community Center/ Gymnasium as specified in the Agreement between the District and City for Construction and Development of the American Canyon Middle School, Community Center/ Gymnasium and Aquatic Center Paragraph 10 and Exhibit C, dated March 20, 1997.

21. Termination

This Sublease and Joint Use Agreement may not be terminated by either the Napa Valley Unified School District and the City of American Canyon in the absence of default of the other party under the terms of this agreement or the Agreement between the Napa Valley Unified School District and the City of American Canyon for the Construction and Development of the American Canyon Middle School, Community Center/ Gymnasium and Aquatic Center entered into by the parties on March 20, 1997 during the initial term of this Sublease and Joint Use Agreement as set forth in Paragraph 2.

After July 31, 2037, this agreement may be terminated by the Napa Valley Unified School District or the City of American Canyon in the event of default of either party, or upon mutual written agreement of the parties.

In the event of an alleged default, the party making the claim of default shall give written notice to the other party of the nature of the default, the Paragraph(s) of this Sublease and Joint Use Agreement and/or the Agreement between the Napa Valley Unified School District and the City of American Canyon for the Construction and Development of the American Canyon Middle School, Community Center/ Gymnasium and Aquatic Center entered into by the parties on March 20, 1997 that have been violated and the relief sought.

The party against whom the claim of default is asserted shall be given written notice of and at least thirty (30) days in which to cure the default, in the absence of an immediate threat to the health and safety of persons using the Community Center/ Gymnasium facility, in which case the default shall be cured as quickly as practicable.

If the default is not cured within the applicable time period or if either party notifies the other that the claimed default is disputed, the claim of default will be considered disputed and shall be subject to mediation pursuant to Paragraph 13 of this Agreement. If mediation cannot resolve the dispute within sixty (60) days after notice to cure the default has been given, the Agreement may be terminated.

Should this agreement be terminated for cause, disposition of materials housed in the facility shall be in a manner prescribed in the Education Code, Government Code, or other manner determined by federal, state, or local statute.

Disposition of materials housed in the facility shall revert to the original agency. In the event, the materials were jointly purchased, the either agency may elect to keep the materials by mutual consent of the other agency. In the event mutually acquired materials are sold, the sale proceeds shall revert to the original agency in the same proportion as the original contribution.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the 31st day of July, 1997.

NAPA VALLEY UNIFIED SCHOOL DISTRICT

By: David Brown  
David Brown, Superintendent,  
Secretary to the Board of Education

Countersigned by: Michael G. Dencavage  
Michael G. Dencavage, Assistant Superintendent/Business Services

Napa Valley Unified School District  
2425 Jefferson Street  
Napa, California 94558

APPROVED AS TO FORM: Sally Jensen Dutcher  
General Counsel

CITY OF AMERICAN CANYON

By: Ben Anderson  
Ben Anderson, Mayor  
City of American Canyon

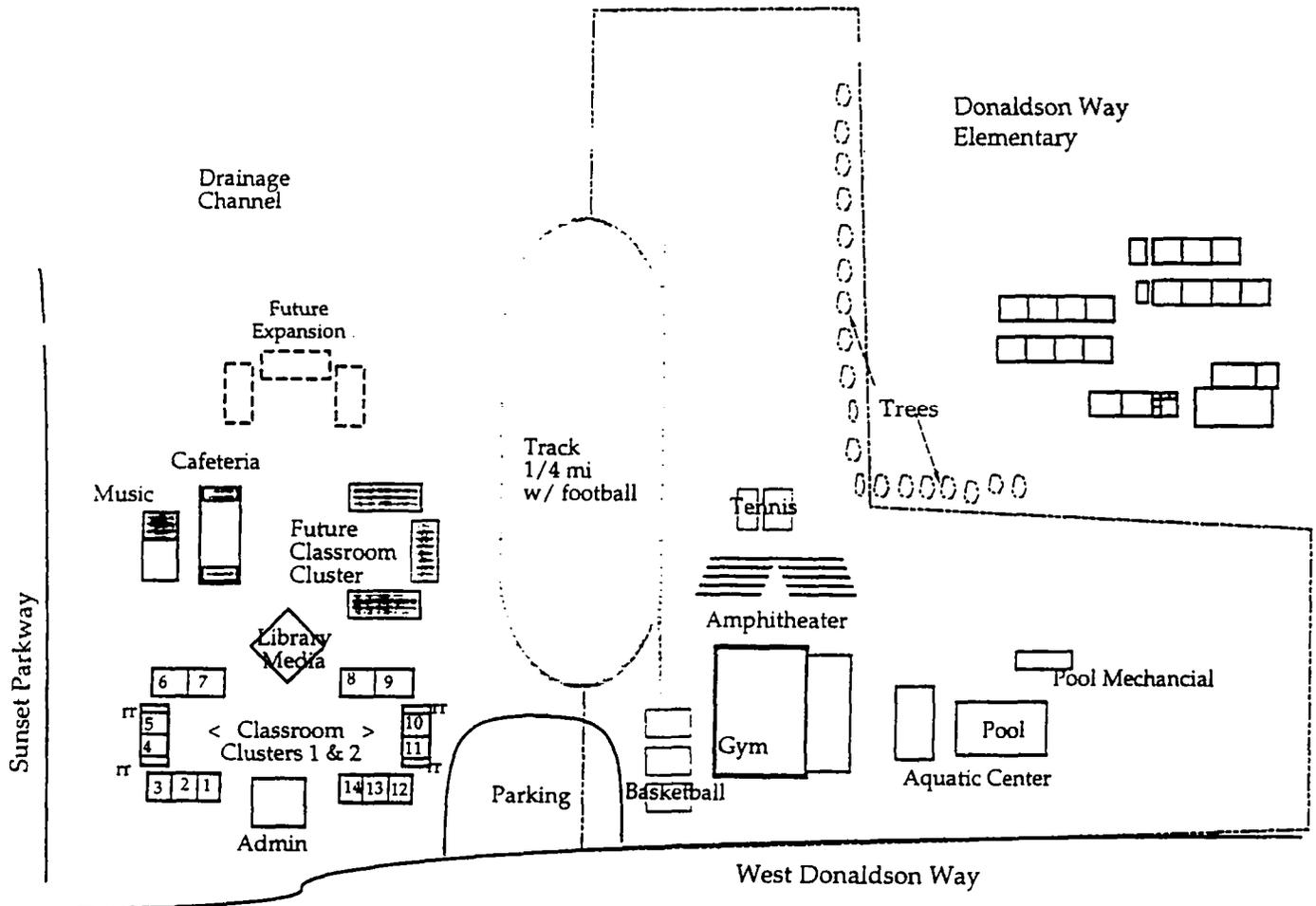
Countersigned by: Mark Joseph  
Mark Joseph, City Manager  
City of American Canyon

City of American Canyon  
2185 Elliott Drive  
American Canyon, CA 94589-1331

APPROVED AS TO FORM: William D. ...  
City Attorney

NAPA VALLEY UNIFIED SCHOOL DISTRICT  
 and  
 CITY OF AMERICAN CANYON  
**American Canyon Middle School  
 Community Center/ Gymnasium  
 Aquatic Center**

American Canyon, CA 94559  
 Exhibit A



- NVUSD
- Future Phases
- NVUSD
- City/NVUSD
- City
- City Land

- Admin Bldg 3,855 s.f.
- Cafeteria 2,880/4,800 s.f.
- Classrooms 1-14 16,640 s.f.
- Gym 14,168 s.f.
- Library Media 3,855 s.f.
- Music 1,920/3,840 s.f.
- Aquatic Center 3,125 s.f.
- Pool Mechanical 1,120 s.f.

**RESOLUTION NO. 2022-\_\_\_\_\_**

**A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF AMERICAN CANYON DETERMINING GENERAL PLAN CONFORMITY PURSUANT TO GOVERNMENT CODE SECTION 65402 FOR THE PROPOSED PROPERTY EXCHANGE OF THE COMMUNITY CENTER/AMERICAN CANYON MIDDLE SCHOOL GYM PROPERTY AND THE NAPA JUNCTION ELEMENTARY SCHOOL SITE PROPERTY**

**WHEREAS**, City is the fee owner of 9.66 acres of real property (APN 058-040-026) known as the Community Center/American Canyon Middle School Gym/Track property ("Community Center/ACMS Gym Property"), which the City uses for community and recreation purposes, located in the City in Napa County, California; and

**WHEREAS**, the District is the fee owner of 6.57 acres of real property (APN 058-320-0015) which is the site of the (former) Napa Junction Elementary School ("Napa Junction Rd. Property"), located in the City in Napa County, California; and

**WHEREAS**, the City processing a Lot Line Adjustment whereby approximately 4.6 acres of APN 058-040-026 consisting of portions of the Community Center/ACMS Gym Property will be transferred the District ("Transferred ACMS Gym Property") in exchange for specific real property from the District; and

**WHEREAS**, all referenced properties have a General Plan Land Use Designation of "P" (Public Use); and

**WHEREAS**, the City desires to acquire the Napa Junction Rd. Property for public community and recreation purposes and to continue vehicle access to implement, consistent with Government Code section 65103(b) of its General Plan, 2018 Circulation Element (Pps. 11, 13, designating Napa Junction Road as a minor and major collector) and to meet General Plan Land Use Element Goal 1A and Parks and Recreation Element Goal 7 to provide for a wide variety of land uses and supporting services to enrich the lives of the existing and future American Canyon residents; and

**WHEREAS**, District desires fee ownership of the Transferred ACMS Gym Property to better manage and provide District educational activities, and to continue to allow members of the American Canyon Public to use the property for community purposes subject to District fee schedules; and

**WHEREAS**, the City and District are negotiating a Property Exchange Agreement to exchange the Transferred ACMS Gym Property for the Napa Junction Rd. Property; and

**WHEREAS**, California Government Code Section 65402 requires the Planning Commission to review the proposed exchange of public properties conformity with the adopted General Plan; and

**WHEREAS**, the Transferred ACMS Gym Property to be exchanged to the District will be unnecessary for the City as it will be gaining the Napa Junction Rd. Property from the District intended for community and recreation purposes and to continue vehicle access to implement, consistent with Government Code section 65103(b) its General Plan, 2018 Circulation Element (Pps. 11, 13), designating Napa Junction Road as a minor and major collector ; and

**WHEREAS**, the City of American Canyon Planning Commission considered the properties to be exchanged at the regularly scheduled public meeting of May 26, 2022, at which time all those in attendance were given the opportunity to speak on the proposal; and

**WHEREAS**, the determination of conformity with the General Plan pursuant to Government Code Section 65402 is not considered a "project" under the California Environmental Quality Act (CEQA); and

**WHEREAS**, all legal prerequisites to the adoption of this Resolution have occurred.

**NOW, THEREFORE, BE IT RESOLVED** the Planning Commission does hereby find that the exchange of the Transferred ACMS Gym Property and Napa Junction Rd. Property is in conformity with the adopted City of American Canyon General Plan.

**PASSED, APPROVED and ADOPTED** at a regularly scheduled meeting of the Planning Commission held on the 26<sup>th</sup> day of May, 2022, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
Crystal Mallare, Chair

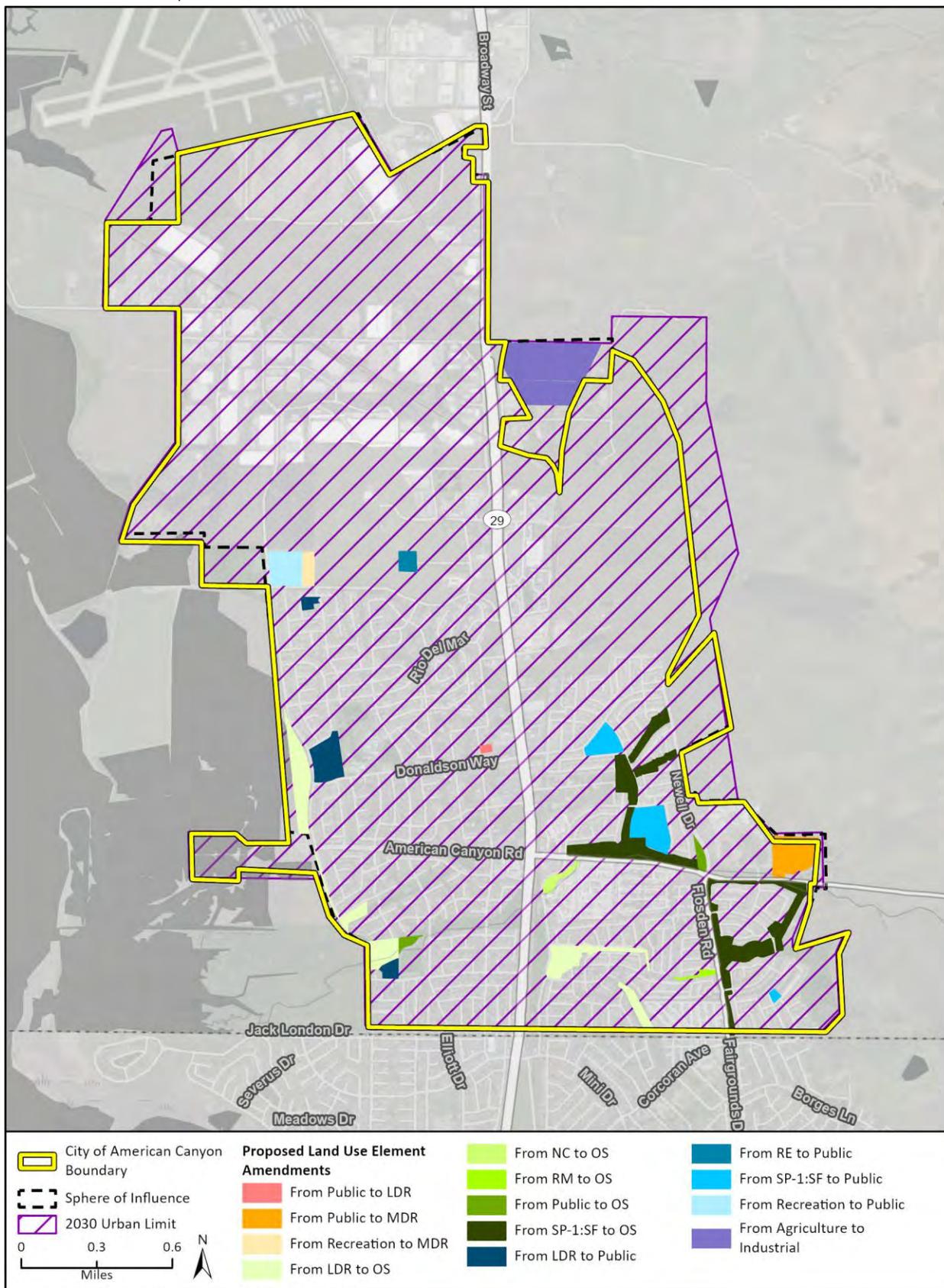
ATTEST:

APPROVED AS TO FORM:

\_\_\_\_\_  
Nicolle Jones, Administrative Technician

\_\_\_\_\_  
William D. Ross, City Attorney

Figure 3 Area of Proposed Land Use Element Amendments



Basemap provided by Microsoft Bing, Esri and their licensors © 2022.  
 Additional data provided by the City of American Canyon, 2022.

American Canyon GIS and GIS  
 GIS & Research Unit - The Planning Department



## TITLE

2021 Annual Napa Airport Corporate Center Development Agreement Review

## RECOMMENDATION

Adopt a Resolution finding that, during calendar year 2021, Napa Airport Corporate Center I, LLC ("Owner") has provided "Good Faith Efforts" to comply with its obligations in conjunction with the Napa Airport Corporate Center ("NACC") Development Agreement.

## CONTACT

Brent Cooper, AICP, Community Development Director

## BACKGROUND & ANALYSIS

On August 4, 2020, the Council approved the Napa Airport Corporate Center (Project) Development Agreement (DA) with, Napa Airport Corporate Center I, LLC (Ordinance No. 2020-03, Agreement 2020-08). The DA provides the owner with a 5-year vested right to develop the "Project Approvals" for the following entitlements that accommodate up to 193,741 square feet as follows:

1. A Tentative Subdivision Map for subdivision of the Property into five lots, including public road rights-of-way;
2. Conditional Use Permits approving a Conditional Use Permit for Buildings A and B on Lots 1 and 2);
3. Conditional Use Permit and Design Permit for Building E on Lot 4;
4. Conditional Use Permit and Design Permit for Building G on Lot 5. These approvals allowed development of the Property with up to 261,541 square feet of industrial uses (warehouse, distribution, and/or E-commerce with accessory retail/office uses), and allowed the relaxation of certain lot size, front yard setbacks, and side yard landscaping requirements. The City conditioned the approval of the Project on the Owner's agreement to provide public infrastructure and other benefits to the City; and
5. On July 10, 2020, the Owner obtained approvals from the City for modifications of the Conditional Use Permit/Design Permit for Building E on Lot 4 and Building G on Lot 5, which increased the area of preserved wetlands on Lot 4 and Lot 5, reduced the square footage and building site coverage of Building E and Building G, adjusted parking and loading consistent with the revised buildings and reduced overall development on the Property from approximately 261,541 square feet to approximately 193,741 square feet.

Furthermore, the Owner consented to the inclusion of the Property in the Green Island Road Community Facilities District.

### **Standards of Review**

Annual review of Development Agreements is required by State law and Chapter 19.47 of the American Canyon Municipal Code. This annual report represents the 2021 Calendar Year monitoring report.

The burden of demonstrating good faith compliance is dependent on the Owner. On August 1, 2022, the Owner transmitted a letter to the City explaining the Project's entitlement status and progress made in substantial compliance with the Development Agreement's terms. A copy of this letter is included as Attachment 2 and is included in the Resolution as Exhibit A.

### **Development Agreement Public Benefits**

Section 3.3 of the Development Agreement describes substantial public benefits the City will receive from the NACC Project. A table explaining each public benefit and its status is included as Attachment 3.

## **COUNCIL PRIORITY PROGRAMS AND PROJECTS**

Economic Development and Vitality: "Attract and expand diverse business and employment opportunities."

### **FISCAL IMPACT**

The fiscal impacts of the Projects were addressed as part of the Tentative Parcel Map, Conditional Use Permits and Development Agreement.

## **ENVIRONMENTAL REVIEW**

The annual Development Agreement monitoring report is categorically exempt from California Environmental Quality Act (CEQA) in accordance with Government Code 15321 – Enforcement Actions by Regulatory Agencies (Class 21). Class 21 applies as an exemption because the annual Development Agreement monitoring report is intended to serve as a tool to enforce the Napa Logistics Park Phase 2 Development Agreement.

### **ATTACHMENTS:**

- [1. Resolution - NACC DA Annual Report](#)
- [2. Exhibit A - NACC DA Annual Report](#)
- [3. Development Agreement Public Benefit Status](#)

RESOLUTION NO. 2022- \_\_\_\_\_

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AMERICAN CANYON, CALIFORNIA, FINDING THAT NAPA AIRPORT CORPORATE CENTER L, LLC HAS DEMONSTRATED “GOOD FAITH EFFORTS” TO COMPLY WITH THE NAPA AIRPORT CORPORATE CENTER DEVELOPMENT AGREEMENT OBLIGATIONS DURING CALENDAR YEAR 2021 (PL22-0019)**

**WHEREAS**, pursuant to Section 65300 of the State Planning and Zoning Law, the City of American Canyon has adopted a General Plan to provide comprehensive long-range planning and a blueprint of the city’s future form, including land use and circulation maps that specify the roadway network and the distribution of types and intensities of land; and

**WHEREAS**, on August 4, 2020, the City Council City approved the Napa Airport Corporate Center Development Agreement between the City of American Canyon and the “Owner”, Napa Airport Corporate Center I, LLC (Ordinance 2020-03, Agreement 2020-08); and

**WHEREAS**, the Napa Airport Corporate Center Development Agreement provides the Owner with a 5-year vested right to develop the Napa Airport Corporate Center “Project Approvals”; and

**WHEREAS**, the Development Agreement contributes to achieving the City Council’s strategies to provide diverse employment opportunities, enhance the City’s transportation network, and provide jobs and tax revenue; and

**WHEREAS**, an annual review of the Napa Airport Corporate Center Development Agreement is required by Government Code section 65865.1 and American Canyon Municipal Code section 19.47.100; and

**WHEREAS**, during the 2021 Calendar period, the Development Agreement was reviewed to ensure compliance to the terms and provisions of the Agreement; and

**WHEREAS**, the burden of demonstrating good faith compliance with the Development Agreement is on the Owner; and

**WHEREAS**, Owner has submitted a communication, attached as Exhibit A, detailing the status of Owner’s compliance, to date, with the Development Agreement and the status of remaining obligations and necessary conditions precedent, which have been reviewed by City Staff as set forth in the Staff Report accompanying this Resolution; and

**WHEREAS**, the annual Development Agreement monitoring report is categorically exempt from California Environmental Quality Act (CEQA) in accordance with Government Code 15321 – Enforcement Actions by Regulatory Agencies (Class 21). Class 21 applies as an exemption because the annual Development Agreement monitoring report is intended to serve as a tool to enforce the Napa Airport Corporate Center Development Agreement.

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of American Canyon hereby has concluded its review of the Napa Airport Corporate Center Development Agreement for Calendar Year 2021 and finds that the Owner has, to date, demonstrated “Good Faith” efforts toward meeting its Development Agreement obligations for the 2021 Calendar Year.

**PASSED, APPROVED and ADOPTED** at a regularly scheduled meeting of the City Council of the City of American Canyon held on the 6th day of September, 2022, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
Leon Garcia, Mayor

ATTEST:

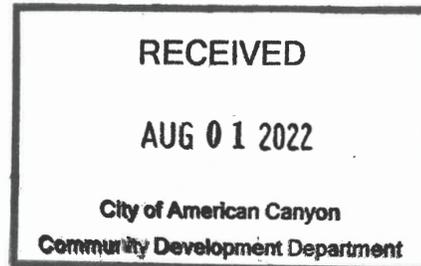
APPROVED AS TO FORM:

\_\_\_\_\_  
Taresa Geilfuss, CMC, City Clerk

\_\_\_\_\_  
William D. Ross, City Attorney

Exhibit A:

NACC Annual Report 01-08-22



Wednesday, July 20, 2022

City of American Canyon  
4381 Broadway Suite 201  
American Canyon, CA 94503  
Attn: Mr. Jason Holley, City Manager

Re: Annual Report for Development Agreement (the "Development Agreement") by and between the City of American Canyon and Napa Airport Corporate Center, I, LLC

Dear Mr. Holley,

The undersigned is the Owner of the Napa Airport Corporate Center I (the "Project"), which is subject of the above-described Development Agreement. Owner submits this letter to the City as the Annual Report required by Section 4.1 of the Development Agreement, and to demonstrate good faith compliance with the terms of the Development Agreement (Gov't Code § 65865.1).

Development Agreement Section 3.1: Project Summary

On July 31, 2018, the Owner obtained approval from the City for: 1) a Tentative Subdivision Map for subdivision of the Property into five lots, including public road rights-of-way; 2) Conditional Use Permits approving a Conditional Use Permit for Buildings A and B on Lots 1 and 2); 3) Conditional Use Permit and Design Permit for Building E on Lot 4; 4) Conditional Use Permit and Design Permit for Building G on Lot 5. These approvals allowed development of the Property with up to 261,541 square feet of industrial uses (warehouse, distribution, and/or E-commerce with accessory retail/office uses), and allowed the relaxation of certain lot size, front yard setbacks, and side yard landscaping requirements. The City conditioned the approval of the Project on the Owner's agreement to provide public infrastructure and other benefits to the City.

On July 10, 2020, the Owner obtained approvals from the City for modifications of the Conditional Use Permit/Design Permit for Building E on Lot 4 and Building G on Lot 5, which increased the area of preserved wetlands on Lot 4 and Lot 5, reduced the square footage and building site coverage of Building E and Building G, adjusted parking and loading consistent with the revised buildings and reduced overall development on the Property from approximately 261,541 square feet to approximately 193,741 square feet.

The Owner consented to the inclusion of the Property in the Green Island Road Community Facilities District.

Development Agreement Section 3.2 and Section 3.5: Vested Rights and Subsequent Approvals

In addition to the vested rights described in Section 3.2 of the Development Agreement, Owner has obtained one Subsequent Approval from the City: A grading permit to allow for the export of stockpiled soil at the site (permit #DV21-0006, dated 7/13/21). This grading is not in preparation for the development of the Project. Owner has not requested any other Subsequent Approvals from the City.

After the Development Agreement was completed in August of 2020, Owner continued to work with its wetlands consultant and design team to obtain all requisite approvals and permits, related to the on-site wetlands, from the United States Army Corps of Engineers ("USACE") and the San Francisco Bay Regional Water Quality Control Board ("SFBRWQB"). The SFBRWQB issued its Clean Water Act section 401 Water Quality Certification and Order on February 14, 2022. USACE issued its permit pursuant to section 404 of the Clean Water Act on May 27, 2022.

As a condition of the approvals for the on-site wetlands, Owner will be required to construct wetlands mitigation at the neighboring Napa Logistics Wetland Preserve. In preparation for that construction, Owner executed an Endowment Funding Agreement with DWF IV NLP II, LLC (Napa Logistics) and Golden State Land Conservancy, and also provided 100% of its required funding for that endowment, totaling \$200,890.06, in June of 2021. Owner is working with its wetlands consultant and design team to complete the construction documents for the wetlands mitigation.

The Use Permits for Lots 1, 2, 4, and 5 require that Owner reimburse Napa Logistics Phase 2 and/or the City for its fair-share of the costs of two offsite projects: 1) sewer and pump station improvements, which are currently nearing completion; and 2) various road improvements at S. Kelly Road, including its intersections with SR-29 and Devlin Road, the design for which has not yet been completed. Owner understands that the City is in the process of confirming Owner's fair-share percentage of these costs.

#### Development Agreement Section 3.3: Public Benefits

The Project has and will continue to provide substantial public benefits to the City as described in Section 3.3 of the Development Agreement. The following sets forth the status of each required public benefit:

- a) Owner will provide to the City: (1) the Irrevocable Offers of Dedication for the right-of-way necessary to accommodate the planned widening of South Kelly Road and the planned improvements to the intersection of South Kelly Road with both Devlin Road and SR 29 as shown on the final approved plans for these improvements; and, (2) the offers for public utility and public access easements, within thirty (30) days of receiving a notice from the City that approval of the final plans for the construction of the improvements associated with the particular requested right-of way and easement has been obtained from Caltrans, the City, and all other necessary governmental agencies and that construction of the improvements will proceed within sixty (60) days of the date of the notice.
- b) Pursuant to Section 2.10 of the Development Agreement, Owner has agreed to pay applicable City fees at the rates in existence at the time of the applicable application submittal or permit issuance as required by the terms of such fees. Owner paid applicable fees for the grading permit described above, and will continue to pay applicable fees for future submittals and approvals.
- c) The Project will provide additional substantial financial benefits to the City through increased taxes, sales, jobs, business license fees, and other sources. These financial benefits will accrue once the project is constructed and operational.

#### Development Agreement Section 3.4: Timing

As described above, Owner has received the wetlands approvals and permits, which will allow Owner to proceed with the development of the Project. Owner intends to commence the construction permitting process in 2022, and to develop the project in a single phase. However, as recognized by Section 3.4 of the Development Agreement, market conditions and demand, interest rates and competition, among other factors, will impact any decision by Owner with respect to timing and completion of construction.

Owner looks forward to continuing to proceed with the development of the Project as contemplated and permitted by the Project Approvals.

Sincerely,

**NAPA AIRPORT CORPORATE CENTER 1, LLC, a Delaware limited liability company**

By: Napa Airport Corporate Centre PG, LLC,  
a California limited liability company  
Its: Managing Member

By: PDC SACRAMENTO, LLC  
a Delaware limited liability company  
Its Managing Member

By:   
Name: Timothy Schaedler  
Its: Local Partner

**Table 1 - Status of Napa Airport Commerce Center  
Development Agreement Public Benefits**

DA Section	Public Benefit	Status
3.3(a)	Owner will provide to the City: (1) the Irrevocable Offers of Dedication for the right-of-way necessary to accommodate the planned widening of South Kelly Road and the planned improvements to the intersection of South Kelly Road with both Devlin Road and SR 29 as shown on the final approved plans for these improvements; and, (2) the offers for public utility and public access easements, within thirty (30) days of receiving a notice from the City that approval of the final plans for the construction of the improvements associated with the particular requested right-of way and easement has been obtained from Caltrans, the City, and all other necessary governmental agencies and that construction of the improvements will proceed within sixty (60) days of the date of the notice.	<b>IN PROGRESS:</b> Owner awaiting notice to proceed from the City.
3.3(b)	Pursuant to Section 2.10 of the Development Agreement, Owner has agreed to pay applicable City fees at the rates in existence at the time of the applicable application submittal or permit issuance as required by the terms of such fees.	<b>IN PROGRESS:</b> Owner paid applicable fees for the grading permit described above, and will continue to pay applicable fees for future submittals and approvals.
3.3(c)	The Project will provide additional substantial financial benefits to the City through increased taxes, sales, jobs, business license fees, and other sources.	<b>IN PROGRESS:</b> These financial benefits will accrue once the project is constructed and operational.



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## TITLE

GHD Staff Augmentation - Encroachment

## RECOMMENDATION

Adopt a Resolution authorizing the City Manager to execute Amendment #1 to Task Order #11 (2022-66) with GHD, Inc. for Encroachment Permit Processing and Construction Observation Services in an amount not to exceed \$75,000.

## CONTACT

Erica Ahmann Smithies, P.E., Public Works Director/City Engineer

## BACKGROUND & ANALYSIS

Encroachment Permit services are required to maintain the integrity of City infrastructure. Public Works provides Encroachment Permit services to Developers, Utilities and Residents. On June 21, 2022, City Council approved a new Engineering Technician position in the City budget that will allow for Encroachment Permit services and inspections to be handled internally. The City's consultant for Encroachment Permit Services retired on June 30, 2022 and in order to maintain the current level of service the City brought on GHD through the City's on-call contract agreement.

GHD's contract has been necessary to bridge the gap between the recent retirement and City recruitment process for a new Engineering Technician. Staff anticipates the City position will be filled within the next couple of months and the proposed amendment will provide for the additional coverage.

The initial task order with GHD was for a not to exceed amount of \$25,020 and the amendment will increase this to a total not to exceed amount of \$75,000.

## COUNCIL PRIORITY PROGRAMS AND PROJECTS

Organizational Effectiveness: "Deliver exemplary government services."

## FISCAL IMPACT

The FY22/23 budget is sufficient for the recommended action. Line item 100-50-515-42160 for non-reimbursable or flat rate encroachment permits and 105-60-660-42165, \$15,020 will be offset by a

corresponding increase in revenue from major encroachment permits and developers who will reimburse the City for these costs.

### **ENVIRONMENTAL REVIEW**

15378(b) - The action is not a "Project" subject to the California Environmental Quality Act ("CEQA") because it does not qualify as a "Project" under Public Resources Code Sections 21065 and 21080 and in Section 15378(b) of Title 14 of the California Code of Regulations.

### **ATTACHMENTS:**

1. [Resolution - GHD Contract Amendment](#)
2. [Amend #1 to Task Order # 11](#)

RESOLUTION NO. 2022-\_\_\_\_\_

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AMERICAN CANYON AUTHORIZING THE CITY MANAGER TO EXECUTE AN AMENDMENT # 1 TO TASK ORDER #11 (2022-66) WITH GHD, INC. FOR ENCROACHMENT PERMIT PROCESSING AND CONSTRUCTION OBSERVATION SERVICES IN AN AMOUNT NOT TO EXCEED \$75,000**

**WHEREAS**, the City of American Canyon has specific and highly technical requirements regarding the development and maintenance of utilities and infrastructure; and

**WHEREAS**, GHD has been providing Encroachment Permit assistance to the City for private development and residential since June 2022; and

**WHEREAS**, GHD’s contract has been necessary to bridge the gap between a recent retirement and the City’s recruitment process for hiring a new Engineering Technician position; and

**WHEREAS**, GHD continues to meet the needs of the City and provides excellent service to City staff, Developers and Residents; and

**WHEREAS**, GHD’s initial task order in an amount of \$25,020 is exhausted and needs to be increased to \$75,000 to maintain service levels to the community; and

**WHEREAS**, the existing budget in 100-50-515-42160 and 105-00-000-20192 is sufficient to pay for anticipated Services.

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of American Canyon hereby authorizes the City Manager to execute Amendment #1 with GHD, Inc. for encroachment permit processing and construction observation services in an amount not to exceed \$75,000.

**PASSED, APPROVED and ADOPTED** at a regularly scheduled meeting of the City Council of the City of American Canyon held on the 6<sup>th</sup> day of September, 2022 by the following vote:

- AYES:
- NOES:
- ABSTAIN:
- ABSENT:

\_\_\_\_\_  
Leon Garcia, Mayor

ATTEST:

APPROVE AS TO FORM:

\_\_\_\_\_  
Taresa Geilfuss, CMC, City Clerk

\_\_\_\_\_  
William D. Ross, City Attorney



**AMENDMENT #1, TO TASK ORDER #11 AGREEMENT # 2022-66, TO THE ORIGINAL ON-CALL AGREEMENT # 2018-108 FOR ON-CALL DEVELOPMENT REVIEW SERVICES, DESIGN SERVICES, CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES, ENVIRONMENTAL SERVICES AND WATER AND WASTEWATER ENGINEERING SERVICES CONTRACT WITH GHD, INC. FOR ENCROACHMENT PERMIT PROCESSING AND CONSTRUCTION OBSERVATION**

**RECITALS**

1. The City of American Canyon ("CITY") and GHD, Inc., ("CONSULTANT") have entered into an Agreement dated July 3, 2018, for on-call engineering services July 3, 2018 to June 30, 2021.
2. The City of American Canyon ("CITY") and GHD, Inc., ("CONSULTANT") have entered into Amendment #1, 2021-A102, extending the term of the original agreement, 2018-108 to June 30, 2023.
3. The Agreement provides for amendments to perform specific tasks under a specific scope of services that may arise during the term of the agreement.

**NOW, THEREFORE, CITY and CONSULTANT** agree as follows:

**1.00 SERVICES AND COMPENSATION**

CONSULTANT agrees to provide services as listed in Attachment "A" to increase the contract amount for additional services in the amount of \$25,020 for a total not to exceed contract amount of \$75,000.

**2.00 TIME OF PERFORMANCE**

The services covered by this Amendment shall be performed or provided by June 30, 2023.

**3.00 REMAINING PROVISIONS**

All other terms of the July 3, 2018 Agreement remain in full force and effect.

**Executed on** \_\_\_\_\_, at American Canyon, California.

**CITY:**

**CONSULTANT:**

By: \_\_\_\_\_  
Jason B. Holley  
City Manager

By: \_\_\_\_\_  
William Silva, PE  
Project Principal



2235 Mercury Way, Suite 150  
Santa Rosa, CA 95405  
USA  
www.ghd.com

Our ref: 12577626

29 July 2022

**Mrs. Erica Ahman-Smithies, Public Works Director**  
**City of American Canyon**  
**4381 Broadway Street**  
**American Canyon, CA 94503**

**RE: Proposal for Amendment to Encroachment Permit Processing and Construction  
Observation Task Order 2022-66/PO 22-00190**

Dear Erica

GHD is pleased to provide this proposal for an amendment to our existing task order for professional engineering services to perform encroachment permit application processing, review and field observation pertaining to utility, private development and/or items requiring City of American Canyon (City) encroachment permits. This proposal is submitted in accordance with GHD's current on-call for professional services with the City.

### **Project Team**

- Matt Wargula, PE, Project Manager
- Bryan Vrba, EIT, Staff Engineer
- Hugo Orozco, EIT, Staff Engineer (Backup)
- Richard Maddock, LS, Map Reviewer
- John Hanser, LS, Map Reviewer (Backup)

Other GHD staff will be used, depending on expertise and availability.

### **Understanding**

Bryan Vrba, EIT, will continue serving the primary role of encroachment permit processor and construction observer. It is anticipated that the encroachment permits will continue to be processed in a combined/hybrid method, with some remote work and some in-office (City office) time.

Based on discussion with the City, the full-time position has now been advertised, but the City will need to extend the task order another eight (8) weeks. It is expected that the position will be filled by mid- to late-September.

The current task order has a remaining budget of approximately \$16,000 as of July 27, 2022. At the current utilization rate of approximately 28 to 30 hours/week, there is approximately 3 to 4 weeks of budget remaining.

Our scope of services and fee estimate is outlined below for your consideration.

## Scope of Services

### Task 1 - Project Management and Coordination

This task includes project initiation, administration, coordination, and assistance with oversight of GHD staff as stated in the following sub-sections through the duration of design and construction:

#### Task 1.1 Internal Coordination and Administration

- Budget and schedule tracking
- Provide project and contract oversight

*Deliverables: Prepare as-needed progress reports.*

#### Task 1.2 Oversight by GHD Staff

This subtask includes general oversight and assistance as-needed by GHD staff.

### Task 2 – Encroachment Permit Processing, Review and Construction Observation

#### Task 2.1 Process Encroachment Permits

GHD will receive and process encroachment permits remotely via e-mail and telephone, following the process as outlined in the City’s Encroachment Permit application and as directed by City staff. GHD staff will work with City staff for City review of encroachment permit processing, prior to contact with the applicant. Encroachment permit processing is budgeted for up to 14 hours per week for a period of 8 weeks.

*Deliverables: Per City process for Encroachment Permits and including an internal memo (Word and PDF) for each Encroachment Permit, including recommendations/changes to meet City requirements and determined amount of permit fees.*

#### Task 2.2 Encroachment Permit Construction Observation

GHD will schedule encroachment permit construction observation during key times and milestones of construction as required and up to two (2) field days per week or 16 hours total per week for a total duration of 8 weeks. GHD will review construction for consistency with approved plans and encroachment permits and will document observations in “daily” reports. Construction observation will conclude with a recommendation to City staff of acceptance of the work and will follow the City’s process for acceptance of the work.

*Deliverables: Per City process for Encroachment Permits*

## Project Schedule

The duration of the assignment is extended another 8 weeks from July 25, 2022, with a new end date of September 23, 2022. If the City permanently fills and hires for the position, the actual end date may be sooner.

## Fee Estimate

The total cost for the additional services is estimated at \$39,277. However since there is approximately \$16,000 remaining in the original contract, the net additional estimated time and materials (not to exceed) fee

for professional services is \$23,277. A summary of the contract budget amount with Amendment No. 1 is shown in Table 1. The estimated fee summary is attached.

Table 1: Project Budget Summary

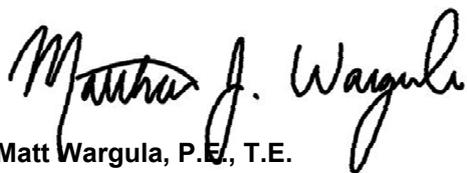
Original Contract Amount (TO 2022-66)/ PO 22-00190	\$49,980.00
Budget Remaining (TO 2022-66)	-\$16,000
Amendment No. 1 – Extension	\$39,277
Total Contract Amount (with Amendment No. 1)	\$73,257.00

## Closing

It is assumed that upon agreement of the scope of services, the City and GHD will execute a task order amendment to 2022-066, which is from our current agreement for on-call professional services between the City and GHD, dated 8/14/2018.

If you have any questions or comments regarding this proposal, please feel free to call me at 540-9689.

Sincerely,  
GHD Inc.



**Matt Wargula, P.E., T.E.**

Project Manager | A GHD Associate

(707) 540-9689

Attachment: Fee Estimate Spreadsheet  
Encroachment Permit Application



Encroachment Permit Processing and Construction Observation Amendment No. 1  
12585692

Description	PD	PM	Staff Engineer	PA	Total Hours	Labor Total	Disb.	Disb. Markup	Disb. Fee	Total Disb.	Estimated Project Total
	Bill Silva	Matt Wargula	Bryan Vrba	Nicole Garza							
	\$280	\$210	\$135	\$110							
<b>Task1</b> <i>Project Management, Coordination and QA/QC</i>	<b>1</b>	<b>4</b>	<b>0</b>	<b>6</b>	<b>11</b>	<b>\$1,780</b>	<b>\$0</b>	<b>\$0</b>	<b>\$116</b>	<b>\$116</b>	<b>\$1,896</b>
Subtask 1.1 Internal Coordination and Administration	1	4	0	6	11	\$1,780	\$0	\$0	\$116	\$116	\$1,896
<b>Task2</b> <i>Preliminary Design</i>	<b>0</b>	<b>0</b>	<b>240</b>	<b>0</b>	<b>240</b>	<b>\$32,400</b>	<b>\$2,500</b>	<b>\$375</b>	<b>\$2,106</b>	<b>\$4,981</b>	<b>\$37,381</b>
Subtask 2.1 Process Encroachment Permits	0	0	112	0	112	\$15,120	\$0	\$0	\$983	\$983	\$16,103
Subtask 2.2 Encroachment Permit Construction Ob.	0	0	128	0	128	\$17,280	\$2,500	\$375	\$1,123	\$3,998	\$21,278
<b>Total Labor Hours</b>	<b>1</b>	<b>4</b>	<b>240</b>	<b>6</b>							
<b>Estimated Project Total</b>	<b>\$280</b>	<b>\$840</b>	<b>\$32,400</b>	<b>\$660</b>	<b>251</b>	<b>\$34,180</b>	<b>\$2,500</b>	<b>\$375</b>	<b>\$2,222</b>	<b>\$5,097</b>	<b>\$39,277</b>



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
06/15/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Willis Towers Watson Northeast, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	<b>CONTACT NAME:</b> Willis Towers Watson Certificate Center <b>PHONE (A/C No. Ext):</b> 1-877-945-7378 <b>FAX (A/C No.):</b> 1-888-467-2378 <b>E-MAIL ADDRESS:</b> certificates@willis.com
	<b>INSURER(S) AFFORDING COVERAGE</b>
	<b>INSURER A:</b> Allied World Assurance Company US Inc <b>INSURER B:</b> Zurich American Insurance Company <b>INSURER C:</b> Beazley Insurance Company Inc <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>
<b>INSURED</b> GHD Inc. 2235 Mercury Way, Suite 150 Santa Rosa, CA 95407	<b>NAIC #</b> 19489 16535 37540

**COVERAGES**                      **CERTIFICATE NUMBER:** W25067912                      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	Y Y	0310-4497	12/01/2021	12/01/2022	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 25,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
B	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> AUTOS ONLY SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY <input checked="" type="checkbox"/> AUTOS ONLY Comp Ded: \$250	Y Y	BAP 3757423-07	07/01/2022	07/01/2023	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Hired Physical Damage \$ 100,000.00
A	<input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$	Y Y	0310-4498	12/01/2021	12/01/2022	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
B	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N No	WC 0380936-07	07/01/2022	07/01/2023	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	<b>Professional Liability</b>	Y	V29594210301	12/01/2021	12/01/2022	Each Claim: \$1,000,000 Aggregate: \$2,000,000

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)**  
 Project: On-Call Engineering Services.

Umbrella/Excess Liability Follows Form over General Liability, Auto Liability and Employer's Liability.

Severability of Interest applies.

<b>CERTIFICATE HOLDER</b>  City of American Canyon 4381 Broadway, Ste. 201 American Canyon, CA 94503	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	<b>AUTHORIZED REPRESENTATIVE</b>  <i>Jula M Powers</i>

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**ADDITIONAL REMARKS SCHEDULE**

AGENCY Willis Towers Watson Northeast, Inc.		NAMED INSURED GHD Inc. 2235 Mercury Way, Suite 150 Santa Rosa, CA 95407	
POLICY NUMBER See Page 1		EFFECTIVE DATE: See Page 1	
CARRIER See Page 1	NAIC CODE See Page 1		

**ADDITIONAL REMARKS**

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,  
 FORM NUMBER: 25 FORM TITLE: Certificate of Liability Insurance

City of American Canyon is included as an Additional Insured as respects to General Liability, Auto Liability and Umbrella/Excess Liability, where required by contract or agreement.

General Liability policy shall be Primary and Non-contributory with any other insurance in force for or which may be purchased by Additional Insureds, where required by contract or agreement.

Waiver of Subrogation applies in favor of Additional Insured with respects to General Liability, Auto Liability, Umbrella/Excess Liability and Professional Liability, where required by contract or agreement.

Waiver of Subrogation applies in favor of Additional Insured with respects to Workers Compensation, Where required by written contract, agreement or permit where permissible by law or statute.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED – OWNERS, LESSEES OR  
CONTRACTORS – SCHEDULED PERSON OR  
ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

**SCHEDULE**

<p><b>Name of Person or Organization:</b></p> <p><b>Where required by written contract</b></p>
---

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

**A. Section II – Who Is An Insured** is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.

**B.** With respect to the insurance afforded to these additional insureds, the following exclusion is added:

**2. Exclusions**

This insurance does not apply to "bodily injury" or "property damage" occurring after:

- (1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or
- (2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED – OWNERS, LESSEES OR  
CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

**SCHEDULE**

<p><b>Name of Person or Organization:</b> <b>Where required by written contract</b></p>
<p><b>Location And Description of Completed Operations:</b> <b>Where required by written contract</b></p>
<p><b>Additional Premium:</b> <b>N/A</b></p>

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

**Section II – Who Is An Insured** is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" at the location designated and described in the schedule of this endorsement performed for that insured and included in the "products-completed operations hazard".

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **PRIMARY AND NON-CONTRIBUTORY**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

Notwithstanding any other provision of this policy to the contrary, the insurance afforded to an additional insured under this policy will be primary to, and non-contributory with, any other insurance available to that person or organization in the event a contract or agreement you enter into requires you to furnish insurance to that person or organization of the type provided by this policy.

# WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

### SCHEDULE

<p><b>Name Of Person Or Organization:</b></p> <p><b>Where required by written contract</b></p>
<p>Where required by written contract Information required to complete this Schedule, if not shown above, will be shown in the Declarations.</p>

The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us** of Section IV – Conditions:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.



ZURICH

# Coverage Extension Endorsement

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
BAP 3757423-07	07/01/2022	07/01/2023	07/01/2022		---	---

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

This endorsement modifies insurance provided under the:

**Business Auto Coverage Form  
Motor Carrier Coverage Form**

### A. Amended Who Is An Insured

1. The following is added to the **Who Is An Insured** Provision in **Section II – Covered Autos Liability Coverage**:

The following are also "insureds":

- a. Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow for acts performed within the scope of employment by you. Any "employee" of yours is also an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.
- b. Anyone volunteering services to you is an "insured" while using a covered "auto" you don't own, hire or borrow to transport your clients or other persons in activities necessary to your business.
- c. Anyone else who furnishes an "auto" referenced in Paragraphs **A.1.a.** and **A.1.b.** in this endorsement.
- d. Where and to the extent permitted by law, any person(s) or organization(s) where required by written contract or written agreement with you executed prior to any "accident", including those person(s) or organization(s) directing your work pursuant to such written contract or written agreement with you, provided the "accident" arises out of operations governed by such contract or agreement and only up to the limits required in the written contract or written agreement, or the Limits of Insurance shown in the Declarations, whichever is less.

2. The following is added to the **Other Insurance** Condition in the Business Auto Coverage Form and the **Other Insurance – Primary and Excess Insurance Provisions Condition** in the Motor Carrier Coverage Form:

Coverage for any person(s) or organization(s), where required by written contract or written agreement with you executed prior to any "accident", will apply on a primary and non-contributory basis and any insurance maintained by the additional "insured" will apply on an excess basis. However, in no event will this coverage extend beyond the terms and conditions of the Coverage Form.

All other terms, conditions, provisions and exclusions of this policy remain the same.

## **M. Temporary Substitute Autos – Physical Damage**

1. The following is added to **Section I – Covered Autos**:

### **Temporary Substitute Autos – Physical Damage**

If Physical Damage Coverage is provided by this Coverage Form on your owned covered "autos", the following types of vehicles are also covered "autos" for Physical Damage Coverage:

Any "auto" you do not own when used with the permission of its owner as a temporary substitute for a covered "auto" you do own but is out of service because of its:

1. Breakdown;
  2. Repair;
  3. Servicing;
  4. "Loss"; or
  5. Destruction.
2. The following is added to the Paragraph **A. Coverage** Provision of the **Physical Damage Coverage** Section:

### **Temporary Substitute Autos – Physical Damage**

We will pay the owner for "loss" to the temporary substitute "auto" unless the "loss" results from fraudulent acts or omissions on your part. If we make any payment to the owner, we will obtain the owner's rights against any other party.

The deductible for the temporary substitute "auto" will be the same as the deductible for the covered "auto" it replaces.

## **N. Amended Duties In The Event Of Accident, Claim, Suit Or Loss**

Paragraph **a.** of the **Duties In The Event Of Accident, Claim, Suit Or Loss** Condition is replaced by the following:

- a.** In the event of "accident", claim, "suit" or "loss", you must give us or our authorized representative prompt notice of the "accident", claim, "suit" or "loss". However, these duties only apply when the "accident", claim, "suit" or "loss" is known to you (if you are an individual), a partner (if you are a partnership), a member (if you are a limited liability company) or an executive officer or insurance manager (if you are a corporation). The failure of any agent, servant or employee of the "insured" to notify us of any "accident", claim, "suit" or "loss" shall not invalidate the insurance afforded by this policy.

Include, as soon as practicable:

- (1) How, when and where the "accident" or "loss" occurred, and if a claim is made or "suit" is brought, written notice of the claim or "suit" including, but not limited to, the date and details of such claim or "suit";
- (2) The "insured's" name and address; and
- (3) To the extent possible, the names and addresses of any injured persons and witnesses.

If you report an "accident", claim, "suit" or "loss" to another insurer when you should have reported to us, your failure to report to us will not be seen as a violation of these amended duties provided you give us notice as soon as practicable after the fact of the delay becomes known to you.

## **O. Waiver of Transfer Of Rights Of Recovery Against Others To Us**

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us** Condition:

This Condition does not apply to the extent required of you by a written contract, executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of operations contemplated by such contract. This waiver only applies to the person or organization designated in the contract.

**WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT**

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

**Schedule**

ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THIS POLICY FOR WORK PERFORMED BY YOU FOR THAT PERSON AND/OR ORGANIZATION.



## **TITLE**

Amendment of 2015 Urban Water Management Plan (UWMP) and Adoption of 2020 Urban Water Management Plan (UWMP)

## **RECOMMENDATION**

Conduct a Public Hearing and take the following actions:

1. Adopt a Resolution of the City Council of the City of American Canyon adopting the City's amendment to the 2015 Urban Water Management Plan - Appendix G Demonstration of Reduced Delta Reliance
2. Adopt a Resolution of the City Council of the City of American Canyon adopting the City's 2020 Urban Water Management Plan

## **CONTACT**

Felix Hernandez, III, Maintenance and Utilities Director  
Dominic Patrick, Water Systems Manager

## **BACKGROUND & ANALYSIS**

### Background

In 1983, the State of California Legislature enacted the Urban Water Management Planning (UWMP) Act. The law required an urban water supplier, providing water for municipal purposes to more than 3,000 customers or serving more than 3,000 acre-feet annually, to adopt an Urban Water Management Plan every five years demonstrating water supply reliability in normal, single dry, and multiple dry water years. These plans support the suppliers' long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs. Within UWMPs, urban water suppliers must: assess the reliability of water sources over a 20-year planning time frame, describe demand management measures and water shortage contingency plans, report progress meeting a targeted 20 percent reduction in per-capita urban water consumption by the year 2020, and discuss the use and planned use of recycled water. The information collected from the submitted UWMPs is useful for local, regional, and statewide water planning. (Attachment 4)

Starting May 2016 Governor Brown's executive order B-37-16 directs an increased focus on improved water usage planning. In 2017, the California Department of Water Resources and several other agencies developed an implementation framework titled "Making Conservation a California Way of Life" (Framework) Senate Bill 606 and Assembly Bill 1668 put forth requirements that were

adopted in the California Water Code to advance the goals of the order/framework including; use water more wisely, eliminate water waste, strengthen local drought resilience, improve agricultural water use efficiency and drought planning. (Attachment 5).

### Analysis

New 2020 UWMP requirements are expected to cover a greater scope and increase the level of details as compared to the requirements for past rounds. Some of the biggest changes for municipal water purveyors include; more specific water conservation requirements aimed at meeting water use efficiency, standards for indoor residential use, outdoor residential use, commercial outdoor irrigation and water loss. Enhanced requirements for evaluating water supply reliability including consideration of climate change, impacts on supplies and demands, and developing a drought risk assessment to establish shortage conditions for a five-year drought. A Demonstration of Reduced Delta Reliance (Attachment 2) serves as a purpose to demonstrate compliance with the Sacramento-San Joaquin Delta Reform Act of 2009 and provide an analysis of the City's reduced reliance on the Delta and expected outcomes in accordance with State protocols.

## **COUNCIL PRIORITY PROGRAMS AND PROJECTS**

Infrastructure: "Develop and maintain infrastructure resources to support sustainable growth."

## **FISCAL IMPACT**

No fiscal impact.

## **ENVIRONMENTAL REVIEW**

Providing the Water Conservation Plan ordinance is not a "project" under the California Environmental Quality Act ("CEQA"). Further, the item is categorically exempt from CEQA review as an action by an agency for the protection of natural resources (pursuant to CEQA Guidelines section 15307) and for the protection of the environment (pursuant to CEQA Guidelines section 15308).

## **ATTACHMENTS:**

1. [Resolution - Amendment of 2105 UWMP](#)
2. [Exhibit A - Appendix G Reduced Delta Reliance](#)
3. [Resolution - 2020 UWMP](#)
4. [Exhibit A - 2020 UWMP](#)
5. [Executive Order B-37-16](#)

**RESOLUTION NO. 2022-\_\_\_\_\_**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AMERICAN  
ADOPTING THE CITY'S AMENDMENT TO THE 2015 URBAN WATER MANAGEMENT PLAN –  
DEMONSTRATION OF REDUCED DELTA RELIANCE**

**WHEREAS**, the Sacramento-San Joaquin Delta Reform Act of 2009 requires State and local public agencies with a “covered action” to submit a written certification of consistency to the Delta Stewardship Council as to whether the covered action is consistent with applicable policies; and

**WHEREAS**, the City of American Canyon receives water supply that impacts the Sacramento-San Joaquin Delta; and

**WHEREAS**, the City, in accordance with applicable law including requirements of the Delta Plan Policy WR P1 (Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance) has prepared a Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP and has undertaken certain agency coordination, public notice, public involvement and outreach, public comment, and other procedures in relation to its 2020 UWMP; and

**WHEREAS**, the City has prepared its Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP with its own staff, with the assistance of consulting professionals, and in cooperation with other governmental agencies and has utilized and relied upon industry standards and the expertise of industry professionals in preparing its Demonstration of Reduced Delta Reliance and has utilized and relied upon the Department of Water Resources *2020 Urban Water Management Plans Guidebook for Urban Water Suppliers* (March 2021); and

**WHEREAS**, in accordance with applicable law, including Water Code sections 10608.26 and 10642, and Government Code section 6066, the City made its Draft Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP available for public inspection, and caused to be published within the jurisdiction of the City at least two notices of public hearing regarding the Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP, which publication dates included March 23, 2022 and April 6, 2022; and

**WHEREAS**, pursuant to the public hearing on the Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP the City encouraged the active involvement of diverse social, cultural, and economic elements of the population within the City’s service area with regard to the preparation and adoption of the Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP, encouraged input by members of the public and any other interested party regarding all aspects of the Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP, encouraged

community input regarding the City’s plan for complying with the Sacramento-San Joaquin Delta Reform Act of 2009; and

**WHEREAS**, the City Council has reviewed and considered the purposes and requirements of the Sacramento-San Joaquin Delta Reform Act of 2009, the contents of the Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP, the documentation contained in the administrative record in support of the Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP, and all public and agency input received with regard to the Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP, and has determined that the factual analyses and conclusions set forth in the Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP are supported by substantial evidence.

**NOW, THEREFORE, BE IT RESOLVED**, that the City Council of the City of American Canyon hereby adopts the Demonstration of Reduced Delta Reliance Appendix for its 2015 UWMP, with the intention of revising said plan at such times as may be appropriate to ensure effective water management program.

**PASSED, APPROVED and ADOPTED** at a regularly scheduled meeting of the City Council of the City of American Canyon held on the 6<sup>th</sup> day of September, 2022 by the following vote:

AYES:  
NOES:  
ABSTAIN:  
ABSENT:

\_\_\_\_\_  
Leon Garcia, Mayor

ATTEST:

APPROVE AS TO FORM:

\_\_\_\_\_  
Taresa Geilfuss, CMC, City Clerk

\_\_\_\_\_  
William D. Ross, City Attorney



City of American Canyon

## DEMONSTRATION OF REDUCED DELTA RELIANCE

REVISED DRAFT | August 2022







City of American Canyon

## DEMONSTRATION OF REDUCED DELTA RELIANCE

REVISED DRAFT | August 2022

This document is released for the purpose of information exchange review and planning only under the authority of Nicola A. Fontaine, August 2022, California PE No. 76863.



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## Abbreviations

AF	acre-feet
AFY	acre-feet per year
CCR	California Code of Regulations
City	City of American Canyon
Delta	Sacramento-San Joaquin Delta
DWR	California Department of Water Resources
FCWCD	Flood Control and Water Conservation District
SWP	State Water Project
SWRCB	State Water Resources Control Board
UWMP	Urban Water Management Plan



## Section 1

# INTRODUCTION

The Sacramento-San Joaquin Delta Reform Act of 2009 requires State and local public agencies with a “covered action” to submit a written certification of consistency to the Delta Stewardship Council as to whether the covered action is consistent with applicable policies. The City of American Canyon (City) receives supply through the State Water Project (SWP) by contract with Napa County Flood Control and Water Conservation District (FCWCD) and through an agreement with Vallejo for Delta water. Both supplies impact the Sacramento-San Joaquin Delta (Delta). Covered actions can include a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta. Therefore, the City is required to demonstrate consistency with Delta Plan Policy WR P1 (Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance). Delta Plan Policy WR P1 identifies Urban Water Management Plans (UWMP) as the tool to demonstrate consistency with State policy to reduce reliance on the Delta for a Supplier that carries out or takes part in a covered action.

The purpose of this document is to demonstrate compliance with the Sacramento-San Joaquin Delta Reform Act of 2009 and provide an analysis of the City’s reduced reliance on the Delta and expected outcomes in accordance with State protocols. The analysis provided herein includes the WR P1 requirements needed in a water supplier’s UWMP to support a certification of consistency for covered actions. The inclusion of this document as an appendix in the 2015 and 2020 UWMPs fulfills the requirements of WR P1. Future projects under evaluation will fulfill the requirements of WR P1.

## Section 2

# DELTA PLAN POLICY WR P1 REQUIREMENTS

WR P1 details the requirements for a covered action to demonstrate consistency with reduced reliance on the Delta and improved regional self-reliance. WR P1 subsection (a) states that: Water shall not be exported from, transferred through, or used in the Delta if all of the following apply:

- One or more water suppliers that would receive water as a result of the export, transfer, or use have failed to adequately contribute to reduced reliance on the Delta and improved regional self-reliance consistent with all of the requirements listed in paragraph (1) of subsection (c).
- That failure has significantly caused the need for the export, transfer, or use.
- The export, transfer, or use would have a significant adverse environmental impact in the Delta.

WR P1 subsection (c)(1) further defines what adequately contributing to reduced reliance on the Delta means in terms of (a) above. Water suppliers that have done all the following are contributing to reduced reliance on the Delta and improved regional self-reliance and are therefore consistent with this policy:

- Completed a current UWMP which has been reviewed by the California Department of Water Resources (DWR) for compliance with the applicable requirements of Water Code Division 6, Parts 2.55, 2.6, and 2.8;
- Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta; and
- Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code section 1011(a).

California Code of Regulations (CCR), Title 23, § 5003(c) is followed by a description of programs and projects that reduce reliance on the Delta. Programs and projects that reduce reliance could include, but are not limited to, improvements in water use efficiency, water recycling, stormwater capture and use, advanced water technologies, conjunctive use projects, local and regional water supply and storage projects, and improved regional coordination of local and regional water supply efforts.

## Section 3

# DEMONSTRATION OF REDUCED DELTA RELIANCE

The approach to determine the City's reduced Delta reliance and improved regional self-reliance is consistent with the approach detailed by the California DWR in Appendix C of their "Urban Water Management Plan Guidebook 2020" (DWR Guidebook), issued in March 2021. The data used in the reduced reliance analysis for demands and supplies is detailed below. All data represent average or normal water year conditions and were obtained from the 2020 UWMP, previously adopted UWMPs, and City records.

The data inputs used in the reduced reliance analysis include:

- Water Years:
  - Baseline (2010) – The analysis uses a normal water year representation of 2010 as the baseline, which is consistent with the approach described in the DWR

- Guidebook. Data for the City's 2010 baseline are taken from City records and information presented in the City's 2015 UWMP.
- 2015 and 2020 Conditions – The actual conditions for 2015 and 2020 are based on data reported in the City's 2015 and 2020 UWMPs, respectively.
  - 2025-2045 Conditions – Normal year projections for 2025 through 2045 are taken from the City's 2020 UWMP.
  - Service Area Water Demands with Water Use Efficiency Accounted For – These values reflect the City's actual and projected water use, including potable water demands, agricultural raw water, and losses.
  - Non-Potable Water Demands – These values consist of agricultural raw water that is not treated.
  - Population – Population data for 2010 and 2015 are taken from previous UWMPs. The population for 2020 and projected populations are taken from the 2020 UWMP.
  - Water Supplies Contributing to Regional Self-Reliance:
    - Water Use Efficiency – This amount is calculated by DWR's spreadsheet tool based on the City's baseline demand, actual demands, and projected demands. Calculated by multiplying the reduction in per capita water demand from the baseline (2010) for a year by the actual or projected population for the same year. For example, in 2025 there would be a gain of 481 acre-feet (AF) in supply from water use efficiency.
    - Water Recycling – Reflects the actual or projected recycled water delivered to customers within the City's drinking water service area. Recycled water contributes to regional self-reliance by reducing the demand for potable water. Note that there was no recycled water delivered within the service area in 2010. For example, in 2025 there would be a gain of 625 AF in supply from water recycling.
    - Other Programs – Distribution loss reductions are anticipated due to City programs. The 2020 UWMP assumed a water loss of 7.5 percent of potable demands. If this was reduced to 5.0 percent, it would contribute to reduced reliance. The difference between the losses estimated at 7.5 percent and 5.0 percent are included in the table for 2025-2045. For example, in 2025 the difference between 7.5 percent and 5.0 percent losses would be a gain of 63 AF in supply.
    - Other categories in the table do not currently apply to the City's supply portfolio. Supply options the city is evaluating include surface water storage at Lake Curry, groundwater production wells outside of City limits, and potable reuse of recycled water.
  - Water Supplies from the Delta Watershed:
    - The City sub-contracts with the Napa County FCWCD for imported surface water from the SWP.
    - The City has an agreement with Vallejo to purchase raw and treated water. Vallejo has an appropriative water right for Delta water from the State Water Resources Control Board (SWRCB) pre-dating the construction of the SWP.

Tables 1 and 2 contain demand calculations. Table 3 contains the regional self-reliance analysis and Table 4 contains the analysis of the City's reduced Delta reliance. The tables were generated using DWR's spreadsheet tool and fulfill the requirements of WR P1 subsection (c)(1) Paragraph C.

## Section 4

# EXPECTED OUTCOMES FOR REDUCED RELIANCE ON THE DELTA

As stated in WR P1(c)(1)(C), commencing in 2015, UWMPs are required to include expected outcomes for measurable reduction in Delta reliance and improved regional self-reliance. WR P1 further states that those outcomes shall be reported in the UWMP as the reduction in the amount or percentage of water used from the Delta. The following provides a summary of the near-term (2025) and long-term (2045) expected outcomes for the City's Delta reliance and regional self-reliance based on the assumptions described in the previous section and DWR's analysis tool. The results show that the City is measurably reducing reliance on the Delta and improving regional self-reliance, based on the percentage of the City's water supplies from the Delta watershed.

Expected Outcomes for Regional Self-Reliance (Table 3):

- Near-term (2025) – Normal water year regional self-reliance is expected to increase from 358 acre-feet per year (AFY) in 2015 to 1,169 AFY in 2025. This is achieved through water use efficiency, increased recycled water use, and distribution system loss reductions.
- Long-term (2045) – Normal water year regional self-reliance is expected to increase from 1,169 AFY in 2025 to 2,149 AFY in 2045. This is achieved through water use efficiency, increased recycled water use, and distribution system loss reductions.

Expected Outcomes for Percent of Water Supplies from the Delta Watershed (Table 4):

- Near-term (2025) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 45 percent relative to the 2010 baseline.
- Long-term (2045) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 6.6 percent relative to the 2010 baseline.

## Section 5

# NEW APPENDIX TO 2015 UWMP

The information contained in this document is also included as a new Appendix G to the City's 2015 UWMP, consistent with WR P1 subsection (c)(1)(C) (CCR, Title 23, Section 5003). As described in Chapter 10 of its 2020 UWMP, the City followed the required public notification, public review and hearing, and adoption processes required by the Urban Water Management Planning Act. Appendix G to the City's 2015 UWMP, the 2020 UWMP (including this Appendix), and the City Municipal Code Water Conservation Plan Chapter 13.14 were adopted by the City Council on August 16, 2022 (see Appendix K of the 2020 UWMP).

Table 1 Calculation of Water Use Efficiency

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	3,024	2,976	2,613	2,918	3,160	3,339	3,581	3,834
Non-Potable Water Demands	33	56	63	63	63	-	-	-
Potable Service Area Demands with Water Use Efficiency Accounted For	2,991	2,920	2,550	2,855	3,097	3,339	3,581	3,834

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Population	19,392	20,315	19,524	21,628	23,732	25,836	27,940	30,170

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Per Capita Water Use (GPCD)	138	128	117	118	117	115	114	113
Change in Per Capita Water Use from Baseline (GPCD)		(9)	(21)	(20)	(21)	(22)	(23)	(24)
Estimated Water Use Efficiency Since Baseline		213	461	481	563	646	728	819

Table 2 Calculation of Service Area Water Demands Without Water Use Efficiency

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	3,024	2,976	2,613	2,918	3,160	3,339	3,581	3,834
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline	-	213	461	481	563	646	728	819
Service Area Water Demands without Water Use Efficiency Accounted For	3,024	3,189	3,074	3,399	3,723	3,985	4,309	4,653

Table 3 Calculation of Supplies Contributing to Regional Self-Reliance

<b>Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Water Use Efficiency		213	461	481	563	646	728	819
Water Recycling	-	145	208	625	625	1,241	1,241	1,241
Stormwater Capture and Use	-	-	-	-	-	-	-	-
Advanced Water Technologies	-	-	-	-	-	-	-	-
Conjunctive Use Projects	-	-	-	-	-	-	-	-
Local and Regional Water Supply and Storage Projects	-	-	-	-	-	-	-	-
Other Programs and Projects the Contribute to Regional Self-Reliance	-	-	-	63	69	78	83	89
<b>Water Supplies Contributing to Regional Self-Reliance</b>	<b>-</b>	<b>358</b>	<b>669</b>	<b>1,169</b>	<b>1,257</b>	<b>1,965</b>	<b>2,052</b>	<b>2,149</b>
<b>Service Area Water Demands without Water Use Efficiency</b>								
<b>(Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Service Area Water Demands without Water Use Efficiency Accounted For	3,024	3,189	3,074	3,399	3,723	3,985	4,309	4,653
<b>Change in Regional Self Reliance</b>								
<b>(Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Water Supplies Contributing to Regional Self-Reliance	-	358	669	1,169	1,257	1,965	2,052	2,149
Change in Water Supplies Contributing to Regional Self-Reliance		358	669	1,169	1,257	1,965	2,052	2,149
<b>Percent Change in Regional Self Reliance</b>								
<b>(As Percent of Demand w/out WUE)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Percent of Water Supplies Contributing to Regional Self-Reliance	0.0%	11.2%	21.8%	34.4%	33.8%	49.3%	47.6%	46.2%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		11.2%	21.8%	34.4%	33.8%	49.3%	47.6%	46.2%

Table 4 Calculation of Reliance on Water Supplies from the Delta Watershed

Water Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
CVP/SWP Contract Supplies	2,373	2,346	2,051	3,205	3,205	3,205	3,205	3,205
Delta/Delta Tributary Diversions								
Transfers and Exchanges								
Other Water Supplies from the Delta Watershed	570	566	558	1,629	1,629	1,629	1,629	1,629
<b>Total Water Supplies from the Delta Watershed</b>	<b>2,943</b>	<b>2,912</b>	<b>2,609</b>	<b>4,834</b>	<b>4,834</b>	<b>4,834</b>	<b>4,834</b>	<b>4,834</b>
<b>Service Area Water Demands without Water Use Efficiency</b>								
Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	3,024	3,189	3,074	3,399	3,723	3,985	4,309	4,653
<b>Change in Supplies from the Delta Watershed</b>								
Change in Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Supplies from the Delta Watershed	2,943	2,912	2,609	4,834	4,834	4,834	4,834	4,834
Change in Water Supplies from the Delta Watershed		(31)	(334)	1,891	1,891	1,891	1,891	1,891
<b>Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)</b>								
Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Percent of Water Supplies from the Delta Watershed	97.3%	91.3%	84.9%	142.2%	129.8%	121.3%	112.2%	103.9%
Change in Percent of Water Supplies from the Delta Watershed		-6.0%	-12.5%	44.9%	32.5%	24.0%	14.8%	6.6%



**RESOLUTION NO. 2022-\_\_\_\_\_**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AMERICAN  
ADOPTING THE CITY'S 2020 URBAN WATER MANAGEMENT PLAN**

**WHEREAS**, the California Urban Water Management Planning Act, Water Code section 10610 et seq. (the Act) mandates that every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare and adopt an updated Urban Water Management Plan (UWMP) at least once every five years; and

**WHEREAS**, the City of American Canyon is an urban water supplier for the purposes of the Act, and approved and adopted its most recent 2015 UWMP and submitted that UWMP to the California Department of Water Resources in June 2016; and

**WHEREAS**, the City, in accordance with applicable law including requirements of the Act and the Water Conservation Act of 2009 has prepared its 2020 UWMP and has undertaken certain agency coordination, public notice, public involvement and outreach, public comment, and other procedures in relation to its 2020 UWMP; and

**WHEREAS**, the City has prepared its 2020 UWMP with its own staff, with the assistance of consulting professionals, and in cooperation with other governmental agencies and has utilized and relied upon industry standards and the expertise of industry professionals in preparing its UWMP and has utilized and relied upon the Department of Water Resources *2020 Urban Water Management Plans Guidebook for Urban Water Suppliers* (March 2021); and

**WHEREAS**, in accordance with applicable law, including Water Code sections 10608.26 and 10642, and Government Code section 6066, the City made its Draft 2020 UWMP available for public inspection, and caused to be published within the jurisdiction of the City at least two notices of public hearing regarding the City's 2020 UWMP, which publication dates included March 23, 2022 and April 6, 2022.

**WHEREAS**, pursuant to the public hearing on the 2020 UWMP the City encouraged the active involvement of diverse social, cultural, and economic elements of the population within the City's service area with regard to the preparation and adoption of the 2020 UWMP, encouraged input by members of the public and any other interested party regarding all aspects of the 2020 UWMP, encouraged community input regarding the City's plan for complying with the Water Conservation Act of 2009, considered the economic impacts of complying with the Water Conservation Act of 2009; and

**WHEREAS**, the City Council has reviewed and considered the purposes and requirements of the Urban Water Management Planning Act and the Water Conservation Act of 2009, the contents of the 2020 UWMP, the documentation contained in the administrative record in support of the 2020 UWMP, and all public and agency input received with regard to the 2020 UWMP, and has determined that the factual analyses and conclusions set forth in the 2020 UWMP are supported by substantial evidence.

**NOW, THEREFORE, BE IT RESOLVED**, that the City Council of the City of American Canyon hereby adopts the 2020 Urban Water Management Plan, with the intention of revising said plan at such times as may be appropriate to ensure effective water management program.

**PASSED, APPROVED and ADOPTED** at a regularly scheduled meeting of the City Council of the City of American Canyon held on the 6<sup>th</sup> day of September, 2022 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
Leon Garcia, Mayor

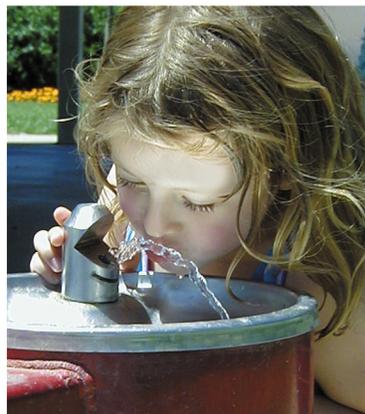
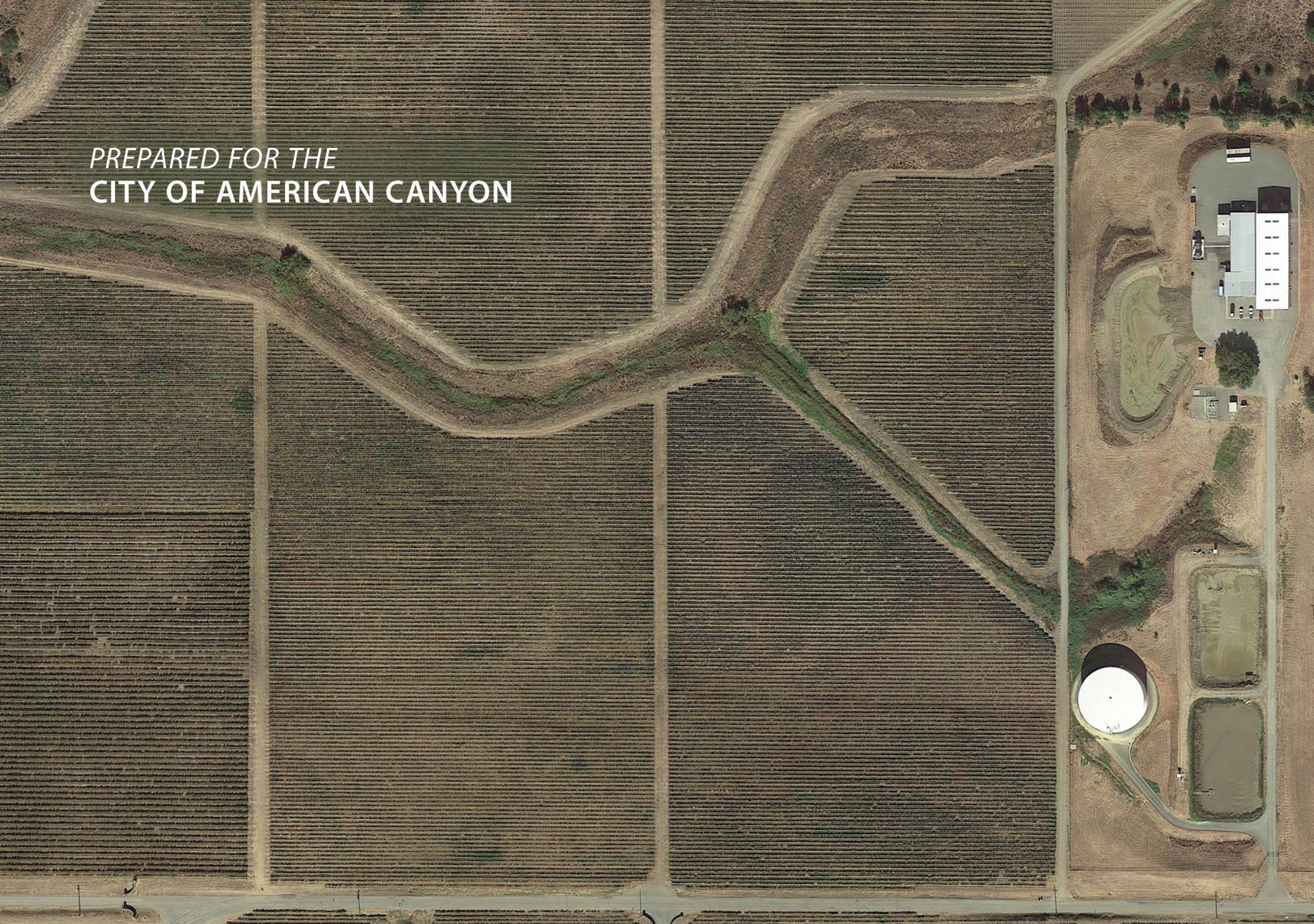
ATTEST:

APPROVE AS TO FORM:

\_\_\_\_\_  
Taresa Geilfuss, CMC, City Clerk

\_\_\_\_\_  
William D. Ross, City Attorney

PREPARED FOR THE  
CITY OF AMERICAN CANYON



# 2020 URBAN WATER MANAGEMENT PLAN (UWMP)

REVISED PUBLIC REVIEW DRAFT / AUGUST 2022

**carollo**<sup>®</sup>





City of American Canyon

## 2020 URBAN WATER MANAGEMENT PLAN

REVISED DRAFT | August 2022

This document is released for the purpose of information exchange review and planning only under the authority of Nicola A. Fontaine, August 2022, California PE No. 76863.

This document is released for the purpose of information exchange review and planning only under the authority of Brianna L. Barton, August 2022, California PE No. 86633.



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## Abbreviations

°F	degrees Fahrenheit
AB	Assembly Bill
AF	acre-feet
AFY	acre-feet per year
ADU	accessory dwelling unit
AWWA	American Water Works Association
BMP	best management practice
Carollo	Carollo Engineers, Inc.
CCR	California Code of Regulations
CCR	Consumer Confidence Report
CII	commercial, industrial, and institutional
CIMIS	California Irrigation Management Information System
City	City of American Canyon
CREAT	Climate Resilience Evaluation and Awareness Tool
CWC	California Water Code
DDW	Division of Drinking Water
Delta	Sacramento-San Joaquin Delta
DOF	California Department of Finance
DMM	demand management measure
DRA	drought risk assessment
DWR	California Department of Water Resources
EDD	California Employment Development Department
EPA	United States Environmental Protection Agency
ERP	emergency response plan
ET, ETo	evapotranspiration
ETSSA	Extra Territorial Sewer Service Area
FCWCD	Flood Control and Water Conservation District
GHG	greenhouse gas
GPAD	gallons per acre per day
gpcd	gallons per capita per day
HOA	homeowner's association
IRWMP	Integrated Regional Water Management Plan
kWh	kilowatt hours
MBR	membrane bioreactor
MFR	multi-family residential
MG	million gallons

mgd	million gallons per day
NBA	North Bay Aqueduct
NMFS	National Marine Fisheries Service
No.	number
NPDES	National Pollutant Discharge Elimination System
NSD	Napa Sanitation District
PDA	priority development area
PFAS	Per- and polyfluoroalkyl substances
PVC	polyvinyl chloride
RCP	Representative Concentration Pathway
RHNA	Regional Housing Needs Assessment
SB	Senate Bill
sf	square foot
SFR	single-family residential
SWP	State Water Project
SWRCB	State Water Resources Control Board
USFWS	United States Fish and Wildlife Service
UV	ultraviolet
UWMP	Urban Water Management Plan
UWMPA	Urban Water Management Planning Act
WDR	waste discharge requirements
WRF	Water Reclamation Facility
WRF	Water Recycling Facility
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant
ZWF	zero water footprint

## Chapter 1

# INTRODUCTION AND LAY DESCRIPTION

### 1.1 Lay Description

The City of American Canyon (City) is located at the southern end of Napa County, just north of Solano County and the City of Vallejo. The City is located approximately 45 miles west of Sacramento along Interstate I-80 and is approximately 5.5 square miles in size. American Canyon incorporated in 1992 from Napa County. Since its incorporation, the City has increased residential development and added a large amount of business and commercial expansion along the Highway 29 corridor.

The City's potable water service area is approximately 30 square miles and encompasses the City limits and its sphere of influence and extends from the Napa River to the west to the Napa/Solano County line to the east and from the Napa/Solano County line to the south to Soscol Ridge north of the airport.

The City water supply is purchased or imported water sources, mainly State Water Project (SWP) water purchased from the Napa County Flood Control and Water Conservation District (FCWCD) and the City of Vallejo. The City owns, maintains, and operates the Water Treatment Plant (WTP) which has a maximum capacity of 5.5 million gallons per day (mgd) with an average daily demand of approximately 3 mgd. Treated water is delivered by gravity to the 2.5 million gallon (MG) water storage tank located at the WTP and flows from the tank to the distribution system. The potable water distribution system consists of approximately 102 miles of water mains, 3 storage tanks, and 2 booster pump stations.

Water demands served by the City are primarily residential, including single-family residential (SFR) and multi-family residential (MFR), commercial, industrial, and institutional (CII), and landscape irrigation. All connections in the City are metered. The total demand (potable and non-potable) in 2020 was approximately 2,613 acre-feet (AF). Residential demands account for 1,454 AF (56 percent) of the total demand, while CII demands account for 763 AF (29 percent), and landscape irrigation demands account for 139 AF (5 percent). Raw water for agricultural irrigation was 63 AF (2 percent). The remaining balance is attributed to other uses (private fire protection services, temporary watering of construction sites) at 73 AF (3 percent) and water loss of 121 AF (5 percent). Based on the projected population growth rate, demands under normal conditions are anticipated to be 3,834 AF by the year 2045 with passive conservation. "Passive" savings are water savings from codes, standards, ordinances, or transportation and land use plans.

The per capita water demand was 116 gallons per capita per day (gpcd) in 2020. Although the City was able to meet the 2020 target of 162 gpcd, the year 2020 did not represent a typical year due to the impacts of the COVID-19 pandemic. Since the 2020 per capita demand of 116 gpcd was below the 2020 goal, adjustments for extraordinary events were not made.

Supply availability was reviewed under a single-dry year and a five-consecutive-year drought, in addition to a drought risk assessment (DRA) from 2021 through 2025. The City anticipates it can supply all its water demands by purchasing supplemental imported water through existing agreements through the planning horizon (2045) for all water year scenarios.

The City Water Conservation Plan Chapter 13.14 was also updated to address the latest requirements set forth by California Department of Water Resources (DWR) for drought planning, which now includes six supply shortage stages, response actions for demand reduction, supply augmentation, operational changes, and mandatory prohibitions to address shortage levels.

## 1.2 Background and Purpose

The California Water Code (CWC) requires urban water suppliers within the state to prepare and adopt an Urban Water Management Plan (UWMP) for submission to the DWR. The UWMP, which must be filed every five years, must satisfy the requirements of the Urban Water Management Planning Act (UWMPA) of 1983, including amendments that have been made to the Act. The UWMPA requires urban water suppliers servicing 3,000 or more connections, or supplying more than 3,000 AF of water annually, to prepare a UWMP.

The purpose of the UWMP is to maintain efficient use of urban water supplies, continue to promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a mechanism for response during water drought conditions. This document, which was prepared in compliance with the CWC, and as set forth in the 2020 Urban Water Management Plan Guidebook for Urban Water Suppliers (March 2021) established by the DWR, constitutes the City 2020 UWMP.

This 2020 UWMP was prepared in compliance with the UWMPA (CWC §10610 et seq.) and the Water Conservation Bill of 2009 (Senate Bill [SB] X7-7) by Carollo Engineers, Inc. (Carollo). Contact information for the City and Carollo is included in the Contact Sheet provided at the beginning of this document.

The City recognizes the importance of maintaining a high-quality reliable water supply. Although water is a renewable resource, it is limited. A long-term reliable supply of water is essential to protect the local and state economy. The main focus for the City is to provide high quality water, maximize the efficient use of water, and promote conservation.

### 1.2.1 Previous Urban Water Management Plan

The City previously prepared an UWMP in 2015, which was approved and adopted on June 21, 2016. Following adoption, the 2015 UWMP was submitted to and formally approved by the DWR. The 2020 UWMP report serves as an update to the 2015 UWMP and pulls extensively from that report.

## 1.3 Urban Water Management Planning and the California Water Code

The CWC sections applicable to UWMPs are summarized in the sections below.

### 1.3.1 Urban Water Management Planning Act

In 1983, State Assembly Bill (AB) 797 modified the CWC Division 6 by creating the UWMPA. Several amendments to the original UWMPA, which were introduced since 1983, have increased the data requirements and planning elements to be included in the UWMPs.

Initial amendments to the UWMPA required that total projected water use be compared to water supply sources over the next 20 years, in 5-year increments. DWR guidelines also suggest projecting through a 25-year planning horizon to maintain a 20-year timeframe until the next UWMP update has been completed.

Other amendments require that UWMPs include provisions for recycled water use, demand management measures (DMMs), and a Water Shortage Contingency Plan (WSCP). The UWMPA requires a WSCP which meets the specifications set forth therein. Recycled water was added in the reporting requirements for water usage and figures prominently in the requirements for evaluation of alternative water supplies, when future projections predict the need for additional water supplies. Each urban water purveyor must coordinate the preparation of the WSCP with other urban water purveyors in the area, to the extent practicable. Water suppliers must also describe their water DMMs that are being implemented or are scheduled for implementation.

In addition to the UWMPA and its amendments, there are several other regulations that are related to the content of the UWMP. In summary, the key relevant regulations are:

- [AB 1420](#): Requires implementation of DMMs/best management practices (BMPs) and meeting the 20-by-2020 targets to qualify for water management grants or loans.
- [AB 1420](#): Requires a plan to quantify and report on distribution system water loss.
- [AB 1420](#): Provides for water use projections to display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans, when that information is available and applicable to an urban water supplier.
- [AB 1465](#): Requires water suppliers to describe opportunities related to recycled water use and stormwater recapture to offset potable water use.
- [Amendments SB 610 \(Costa, 2001\) and AB 901 \(Daucher, 2001\)](#): Require counties and cities to consider information relating to the availability of water to supply new large developments by mandating the preparation of further water supply planning (Daucher) and Water Supply Assessments (Costa).
- [SB 1087](#): Requires water suppliers to report SFR and MFR projected water use for lower income areas separately.
- [Amendment SB 318 \(Alpert, 2004\)](#): Requires the UWMP to describe the opportunities for development of desalinated water, including but not limited to, ocean water, brackish water, and groundwater, as long-term supply.
- [AB 105 \(Wiggins, 2004\)](#): Requires urban water suppliers to submit their UWMPs to the California State Library.
- [SB X7-7](#): Requires development and use of new methodologies for reporting population growth estimates, base per capita use, and water conservation. An agency can choose from four methods to establish their interim (2015) and year 2020 water conservation targets.
- [AB 2067](#): Requires water suppliers to provide narratives of water DMMs.
- [SB 1036](#): Provides for an urban water supplier to include certain energy-related information, including, but not limited to, and estimate of the amount of energy used to extract or divert water supplies.
- [AB 2409](#): Requires urban water suppliers to analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains separately from swimming pools and spas.

### 1.3.2 New Requirements to the Water Code since the 2015 UWMPs

The major new requirements to the CWC since 2015 UWMPs are summarized in Table 1-1.

Table 1-1: Applicable Changes to the Water Codes since 2015 UWMPs	
Topic	Summary
Five Consecutive Dry-Year Water Reliability Assessment	The Legislature modified the dry-year water reliability planning from a “multiyear” time period to a “drought lasting five consecutive water years” designation.
Drought Risk Assessment (DRA)	The DRA requires a Supplier to assess water supply reliability over a five-year period from 2021 to 2025 that examines water supplies, water uses, and the resulting water supply reliability under a reasonable prediction for five consecutive dry years.
Seismic Risk	Requires Suppliers to specifically address seismic risk to various water system facilities and to have a mitigation plan.
Energy Use	Requires Suppliers to include readily obtainable information on estimated amounts of energy for their water supply extraction, treatment, distribution, storage, conveyance, and other water uses.
Water Loss Reporting for Five Years	The Water Code added the requirement to include the past five years of water loss audit reports as part of this UWMP.
WSCP	New requirements are more prescriptive than previous versions.
Groundwater Supplies Coordination	Water Code now requires Suppliers’ 2020 UWMPs to be consistent with Groundwater Sustainability Plans, in areas where those plans have been completed by Groundwater Sustainability Agencies.
Lay Description	Suppliers to include a lay description of the fundamental determinations of the UWMP, especially regarding water service reliability, challenges ahead, and strategies for managing reliability risks. This section of the UWMP could be viewed as a go-to synopsis for new staff, new governing members, customers, and the media, and it can ensure a consistent representation of the Supplier’s detailed analysis.

### 1.3.3 Water Conservation Act of 2009 (SB X7-7)

Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. Refer to Chapter 5 for detailed information on SB X7-7.

## 1.4 Demonstration of Reduced Delta Reliance

*Urban water suppliers that anticipate participating in or receiving water from a proposed project (i.e., "covered action"), such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Sacramento-San Joaquin Delta (Delta) should provide information in their 2015 and 2020 UWMPs that can then be used in the certification of consistency process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code of Regulations, Title 23, Section 5003).*

The City receives supply through the SWP which includes covered actions. Therefore, the City is required to demonstrate reduced Delta reliance. Appendix A of this plan demonstrates the City's consistency with Delta Plan Policy WR P1.

## 1.5 Report Organization

This UWMP contains ten chapters, followed by appendices that provide supporting documentation for the information presented in the report. The chapters are briefly described below:

- **Chapter 1 – Introduction and Lay Description:** This chapter presents a lay description and the purpose of this UWMP stressing the importance and extent of the water management planning efforts.
- **Chapter 2 – Plan Preparation:** This chapter provides information on the process for developing the UWMP as well as coordination efforts with appropriate local agencies and discusses the measures used to solicit public participation during the development of the UWMP.
- **Chapter 3 – System Description:** This chapter presents a description of the water purveyor's service area and its characteristics including climate, population, and other demographic factors.
- **Chapter 4 – Water Use Characterization:** This chapter presents a description of the water purveyor's current and projected water uses within the service area in five-year increments.
- **Chapter 5 – SB X7-7 Baselines, Targets, and 2020 Compliance:** This chapter presents information on the water purveyor's compliance with the 2020 per-capita water conservation mandate. Demonstrate that the 2020 target adopted in the 2015 UWMP was met in 2020. This chapter provides analyses and calculations associated with the water conservation target pursuant to SB X7-7.
- **Chapter 6 – Water Supply Characterization:** This chapter presents a description of the water purveyor's current and projected potable and non-potable water supply sources including information on the usage of surface water, groundwater, imported water and an overview of usage of recycled water. This chapter includes information on the water purveyor's future considerations of a recycled water system.
- **Chapter 7 – Water Service Reliability and Drought Risk Assessment:** This chapter presents the reliability of the water purveyor's water system. This includes a discussion on future water reliability. In addition, there is an analysis of supply availability in a normal, single dry year and in five consecutive dry years. This chapter also includes the DRA.

- **Chapter 8 – Water Shortage Contingency Plan:** This chapter includes an urban water shortage contingency analysis that includes stages of action to be undertaken in the event of water supply shortages; prohibitions consumption reduction methods and penalties; actions to be taken during a catastrophic interruption of service; and a mechanism for measuring water use reduction.
- **Chapter 9 – Demand Management Measures:** This chapter communicates the water purveyor’s efforts to promote conservation and to reduce demand. The chapter includes narratives on each DMM.
- **Chapter 10 – Plan Adoption, Submittal, and Implementation:** This chapter describes the steps taken to adopt, submit, and implement the UWMP and make it publicly available.

## Chapter 2

# PLAN PREPARATION

This section includes specific information on how the UWMP was developed, including efforts in coordination and outreach.

### 2.1 Basis for Plan Preparation

CWC 10617 requires that urban water suppliers with 3,000 or more service connections or supplying 3,000 or more AF of water per year prepare an UWMP every five years.

*10617 "Urban water supplier" means a supplier, either publicly, or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems...*

#### 2.1.1 Public Water Systems

*California Health and Safety Code 116275 (h) "Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.*

To demonstrate the basis of reporting, the Public Water Systems services by the City are listed in Table 2-1. As listed in Table 2-1, the City served 1 public water system with a total of 5,341 connections and a total of 2,613 acre-feet per year (AFY) in year 2020.

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
<i>Add additional rows as needed</i>			
CA2810005	City of American Canyon	5,341	2,613
<b>TOTAL</b>		<b>5,341</b>	<b>2,613</b>
<b>* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</b>			
NOTES: Units of measure in this UWMP are acre-feet (AF). Sources: Large Water System 2020 Annual Report to the Drinking Water Program for Year Ending December 31, 2020, and 2020 AWWA Water Audit.			

## 2.2 Individual Planning and Compliance

This UWMP reports solely on the City service area, as shown in Table 2-2. The City has notified and coordinated with appropriate regional agencies and constituents.

Submittal Table 2-2: Plan Identification		
Select Only One	Type of Plan	Name of RUWMP or Regional Alliance <i>if applicable</i> (select from drop down list)
<input checked="" type="checkbox"/>	<b>Individual UWMP</b>	
<input type="checkbox"/>	Water Supplier is also a member of a RUWMP	
<input type="checkbox"/>	Water Supplier is also a member of a Regional Alliance	
<input type="checkbox"/>	<b>Regional Urban Water Management Plan (RUWMP)</b>	

## 2.3 Calendar Year and Units of Measure

CWC 1608.20 (a) (1) Urban retail water suppliers...may determine the targets on a fiscal year or calendar year basis.

The City is reporting on a calendar year basis and therefore, 2020 data includes the months of January to December 2020. Table 2-3 indicates the City type of reporting year, and the units of measure for reporting water volumes throughout the 2020 UWMP.

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
<input type="checkbox"/>	Supplier is a wholesaler
<input checked="" type="checkbox"/>	Supplier is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables are in calendar years
<input type="checkbox"/>	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP * (select from drop down)	
Unit	AF
* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.	

**2.4 Coordination and Outreach**

The UWMPA requires that the UWMP identify the water agency’s coordination with appropriate nearby agencies.

The City coordinated its efforts with relevant agencies and parties to ensure that the data and issues discussed in the plan are presented accurately.

**2.4.1 Wholesale and Retail Coordination**

Retail agencies that receive a water supply from one or more wholesalers are required to provide wholesalers with projected water demand from that source, in five-year increments for 20 years.

The wholesale suppliers from which the City receives water supplies, as shown in Table 2-4, were provided 60-day notification (prior to the public hearing) that the City was in the process of preparing the 2020 UWMP. The 60-day notification letters are included in Appendix B. The wholesale suppliers were provided a notice of public hearing, including the time and location. The notice of public hearing to wholesale suppliers is included in Appendix B.

<b>Submittal Table 2-4 Retail: Water Supplier Information Exchange</b>	
The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.	
Wholesale Water Supplier Name	
<i>Add additional rows as needed</i>	
Napa County Flood Control and Water Conservation District	
City of Vallejo	
City of Napa	

The City meets regularly with other water suppliers. The City meets monthly with Napa County FCWCD and with other SWP contractors who purchase water from the Napa County FCWCD (i.e., Cities of Napa and Calistoga). The City also meets with the City of Vallejo for the purchase of Vallejo water.

**2.4.2 Coordination with Other Agencies and the Community**

*10620 (d)(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.*

*10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan...*

The City solicited participation from other agencies, organizations, and the community for the preparation of the 2020 UWMP.

### 2.4.3 Notice to Cities and Counties

CWC 10621 (b) requires that agencies notify cities and counties to which they serve water that the City's UWMP is being updated and reviewed.

*10621(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify a city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*

The City provided formal written notification to the following cities, county, and agencies that the City's UWMP was being updated:

- City of Rio Vista.
- City of Dixon.
- City of Calistoga.
- City of Benicia.
- City of Vacaville.
- City of Fairfield.
- Local Agency Formation Commission.
- Napa County Conservation, Development and Planning.
- Napa Sanitation District (NSD).
- Reclamation District 2068.
- Solano County Water Agency.
- Solano Irrigation District.

The City also provided formal written notification to the following top five water users that the City's UWMP was being updated:

- Napa Valley Unified School District.
- Amcan Beverages, Inc.
- G. L. Mezzetta, Inc.
- American Canyon Mobile Home Park.
- Wal-Mart Stores, Inc.

In accordance with the UWMPA, this notification was provided at least 60 days prior to the public hearing of the plan. Appendix B contains copies of outreach documents. The cities and counties were provided a notice of public hearing, including the time and location. The notice of public hearing to cities and counties is included in Appendix B.

Notices were published informing interested parties that the draft 2020 UWMP was available for review. Pursuant to California Code Section 6066, a notification of the time and place of the public hearing was published in the local newspaper on March 23, 2022, and April 6, 2022. A notice was also posted on the City's website ([www.cityofamericancanyon.org](http://www.cityofamericancanyon.org)). Copies of these notifications are included in Appendix B.

The Final Draft 2020 UWMP was presented on August 16, 2022, for adoption by resolution following a public hearing. This hearing provided an opportunity for the City's customers, residents, and employees to learn and ask questions about the current and future water supply of the City.

## Chapter 3

# SYSTEM DESCRIPTION

The UWMPA requires that the UWMP include a thorough description of the water system, service area, and various aspects of the area served including climate, population, and other demographic factors.

*10631. (a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*

### 3.1 General Description

The City is located at the southern end of Napa County, just north of Solano County and the City of Vallejo. The City is located approximately 45 miles west of Sacramento along I-80 and is approximately 5.5 square miles in size. American Canyon incorporated in 1992 from Napa County. Since its incorporation, the City has increased residential development and added a large amount of business and commercial expansion along the Highway 29 corridor.

The City's potable water service area is approximately 30 square miles and encompasses the City limits and its sphere of influence and extends from the Napa River to the west to the Napa/Solano County line to the east and from the Napa/Solano County line to the south to Soscol Ridge north of the airport.

Figure 3-1 shows the City limits and the City's water service area. As shown in Figure 3-1, the City's water service area includes both the City limits as well as surrounding areas of unincorporated Napa County.

#### 3.1.1 Description of Transmission, Treatment, and Distribution Facilities

The City's WTP (see Figure 3-1) has a maximum capacity of 5.5 mgd with an average daily demand of approximately 3 mgd. Treated water is delivered by gravity to the 2.5 MG water storage tank located at the WTP and flows from the tank to the distribution system.

The potable water distribution system consists of approximately 102 miles of water mains, 3 storage tanks, and 2 booster pump stations. The principal water transmission mains in the distribution system range in size from 14 to 20 inches. The distribution system in the older sections of the City range in size from 2 to 6 inches with the newer areas served by pipes 8 to 12 inches in diameter. Distribution system pipelines are constructed primarily of polyvinyl chloride (PVC), asbestos cement, and cast iron. The water distribution system contains five pressure zones.

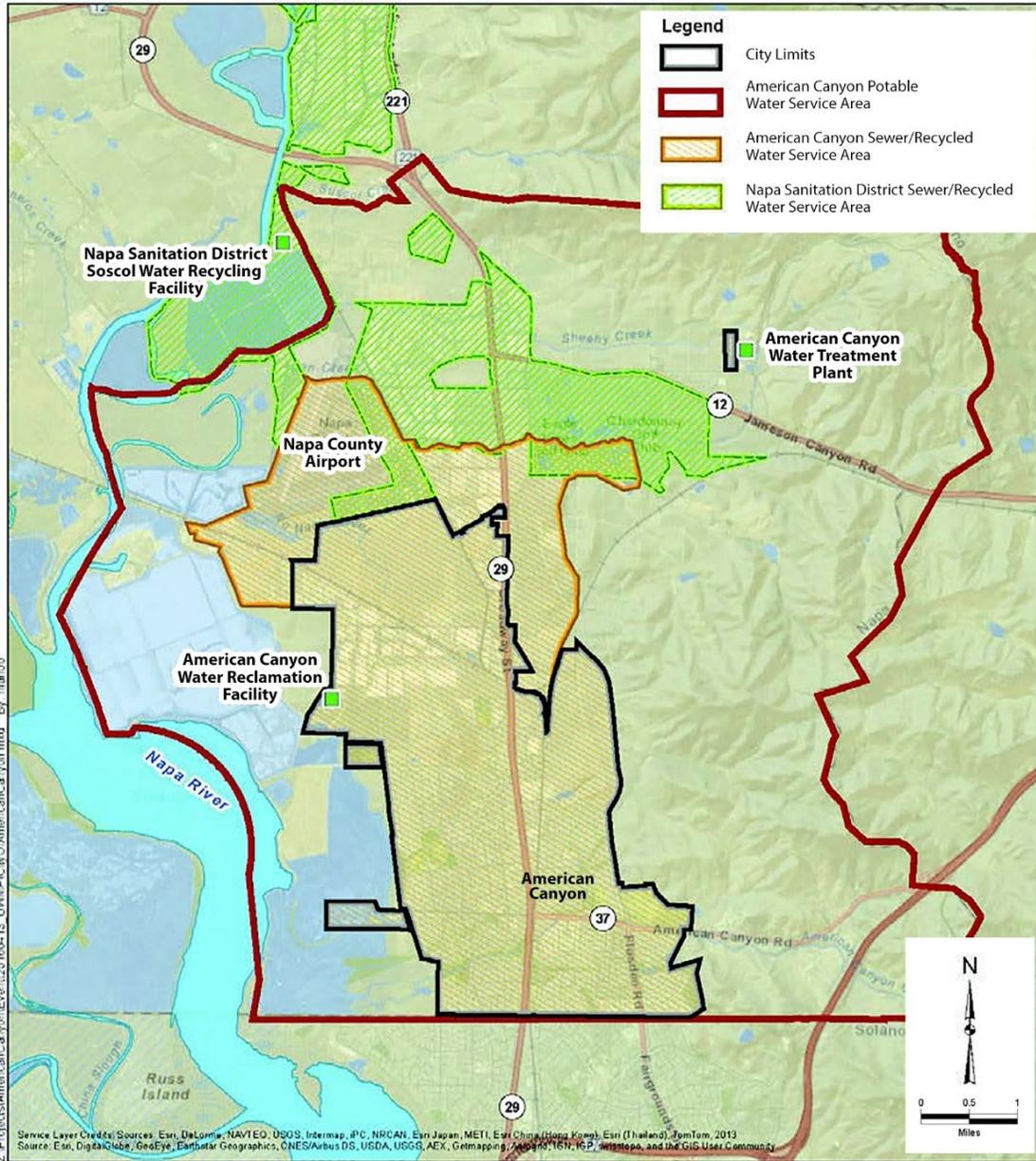


Figure 3-1: Water Service Area

### 3.2 Service Area Climate

10631(a). A plan shall... Describe the service area of the supplier, including ... climate...

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning... while accounting for impacts of climate change.

The City’s service area climate is characterized by warm dry summers and mild winters. Average monthly evapotranspiration (ET<sub>o</sub>) rates, rainfall, and temperature are summarized in Table 3-0.

**Table 3-0: Climate Characteristics<sup>(1)</sup>**

Month	Monthly Average ETo (inches)	Monthly Average Rainfall (inches)	Monthly Average Temperature (degrees Fahrenheit, °F)		
			Average	Minimum	Maximum
January	1.25	3.88	47.06	37.59	57.78
February	1.86	3.78	49.69	38.68	61.72
March	3.14	2.52	52.42	40.30	65.38
April	4.41	1.32	54.81	41.53	68.41
May	5.61	0.70	58.73	44.89	72.91
June	6.20	0.15	63.00	47.95	78.83
July	6.30	0.01	63.98	50.35	80.01
August	5.46	0.03	64.13	50.23	81.11
September	4.60	0.05	63.09	47.70	81.27
October	3.23	1.18	58.40	43.41	75.52
November	1.68	2.26	51.22	38.80	65.26
December	1.08	4.05	46.57	36.43	57.88
<b>Annual</b>	<b>44.82</b>	<b>19.94</b>			

**NOTES:**

(1) Source: California Irrigation Management Information System (CIMIS) Station 109 Carneros. Represents monthly average from March 1993 to November 2021.

Climate data is from the CIMIS Gerber South Station Number (No.) 109 (activated in March 1993). ETo values, which serve as indicators of how much water is required to maintain healthy agriculture and landscaping, range from 1.08 inches (December) to 6.30 inches (July). Average annual rainfall is approximately 19.94 inches (value reflects the sum of monthly average rainfall). The majority of rainfall occurs from November through March. Monthly precipitation has been as high as 13.16 inches (January 1995). Average monthly temperature ranges from about 46.6 to 64.1 °F.

### 3.3 Service Area Population and Demographics

*10631(a). Describe the service area of the supplier, including current and projected population... The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*

This section summarizes historical, current, and projected population trends in the City. Population projections are essential to the planning process and form the basis for most planning decisions, yet projecting future growth is far from an exact science given the complex set of variables that can affect the rate of growth. Typically, projections are developed by taking past patterns and combining them with assumptions regarding the future to obtain an estimate of future growth rates. These projections serve to provide the City insight on the type and

quantity of future growth as well as guidance regarding future planning activities; therefore, such planning activities can only be as effective as the ability to anticipate population growth.

### 3.3.1 Service Area Population

The current and projected population within the City’s water service area is summarized in Table 3-1 and includes the total populations within the City limits and outside of the City limits as described in the following sections.

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045(opt)
	19,524	21,628	23,732	25,836	27,940	30,170
NOTES: 2020 population is per SB X7-7 Method for Population Finances 1 (Department of Finance [DOF] Table E-5) for population within City limits and per SB X7-7 Method for Population Finances 2 (Persons-per-Connection Method) for population outside of City limits. Refer to Sections 3.3.1.1 and 3.3.1.2 for projected populations methodologies.						

#### 3.3.1.1 Population within City Limits

The City experienced rapid growth between 2000 and 2008 with an average annual growth rate of over 8 percent. Population growth has slowed in recent years, and the annual growth rate since 2010 has been around 1 percent (2015-2023 Housing Element).

The California Department of Finance (DOF) estimates population each year based on the number of building permits issued, residential units destroyed, requests for new electrical connections, etc. The City had a population of 19,454 in 2020 according to the most recent DOF estimates.

The projected population within the City limits was estimated based on the following specific plans for new developments which are expected to contribute to housing growth in the City:

- **Watson Ranch Project:** Approximately 1,253 housing units are expected to be added in the northeastern portion of the City.
- **Broadway District Priority Development Area (PDA):** Approximately 1,200 housing units are expected to be added along the Highway 29 corridor.

Other proposed development projects in planning and approval phases were not incorporated in the population projections.

To estimate the new population within the City limits, the total number of new housing units (2,453) was multiplied by the number of persons per household for the City for 2020, which was 3.43 according to the most recent DOF estimates. Based on this calculation, the new population within the City limits is estimated to be 8,414. Assuming that this population growth is distributed between 2020 and 2040, this results in a population increase of 2,104 every 5 years. For 2040 to 2045, it was assumed that the population growth rate would remain at 8 percent every 5 years (same rate as 2035 to 2040).

### 3.3.1.2 Population Outside of City Limits

Less than 1 percent of the City's single-family residential customers are located outside of the City limits in unincorporated Napa County in areas that have not experienced any housing development. These "legacy" accounts were originally connected and served by the American Canyon County Water District, a predecessor to the City.

To estimate the population outside of the City limits, the number of residential accounts in 2020 (28) was multiplied by the number of persons per household for unincorporated Napa County for 2020, which was 2.48 according to the most recent DOF estimates. Based on this calculation, the population outside of the City limits is estimated to be 70. For 2025 to 2045, it was assumed that there would be no change to the population outside of the City limits.

### 3.3.2 Other Social, Economic and Demographic Factors

*10631. Describe the service area of the supplier, including... other social, economic and demographic factors affecting the supplier's water management planning.*

Analyzing demographic data can yield important information about possible shifts in demand for City water service.

According to the 2015-2023 Housing Element, the largest employment sectors are educational services (28.1 percent), Manufacturing (12.1 percent), and art, entertainment, and recreational services (10.1 percent).

The 2015-2023 Housing Element indicates that the majority of housing units are single-family detached homes (81.8 percent) and the number of housing units was 6,071 in 2014.

74.3 percent of the population is over 18 years of age and the population is split 49.8 to 50.2 percent male to female, respectively (United States Census Bureau QuickFacts).

Table 4-C.4 of the SB X7-7 Compliance Form (Appendix C) shows that the California Median Household Income in 2020 was \$75,235. The median household income for the City from 2015-2019 in 2019 dollars was \$101,792 (United States Census Bureau QuickFacts).

The California Employment Development Department (EDD) reported a 5.5 percent unemployment rate for 2015 and a 10.0 percent unemployment rate for 2020.

## 3.4 Land Uses within Service Area

*10631(a). The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities...*

The City's existing General Plan was adopted in 1992. The City is in the process of completing a comprehensive General Plan update. The Land Use Element in the General Plan sets forth the City's policies for guiding local development. The existing land uses within the City Limits are summarized in Table 3-2.

Table 3-2: Land Uses within City Limits		
Land Use Type	Acres	Percent
Residential	1,116.16	30 percent
Agriculture	362.36	10 percent
Industrial	520.87	14 percent
Commercial	157.71	4.0 percent
Public, Parks, and Open Space	582.52	16 percent
Vacant	945.79	26 percent
<b>Total</b>	<b>3,685.41</b>	<b>100 percent</b>
NOTES: (1) Source: <a href="https://storymaps.arcgis.com/stories/d84fc6d10134ae4bebad0a8d027902b">https://storymaps.arcgis.com/stories/d84fc6d10134ae4bebad0a8d027902b</a>		

### 3.5 Climate Change

Climate change mitigation and adaptation efforts are being implemented as part of the 2020 UWMP Guidebook update. Projected climate change trends for California include increasing temperature and increasing precipitation as rainfall rather than snow. Water suppliers are now having to assess local climate challenges and plan for vulnerabilities within their systems. As these risks are identified, methods of adaption and mitigation can be employed to increase sustainability of water resources.

In the past decade, there has been a significant increase in tools and models to help identify potential impacts of climate change. The various resources differ in the information available in each service area, scenario assumptions, and parameters potentially impacted by climate change. The following tools were evaluated for this UWMP and are described in further detail in the sections below:

- Climate Resilience Evaluation and Awareness Tool (CREAT).
- Cal-Adapt Extended Drought Scenarios Tool.
- Cal-Adapt Wildfire Tool.

#### 3.5.1 EPA Climate Resilience Evaluation and Awareness Tool

The United States Environmental Protection Agency (EPA) created an online resource called CREAT to assist water agencies in preparing for potential future impacts on their systems caused by climate change. This tool utilizes model simulation to estimate changes in temperature, precipitation, storms, extreme heat, and sea level rise. For the purposes of this UWMP, the Cal-Adapt tool was used, which is consistent with the tool presented by DWR.

#### 3.5.2 Cal-Adapt Extended Drought Scenarios Tools

Cal-Adapt is an online resource created by the State of California's scientific and research community to provide visualization tools and high-quality data regarding climate change at a local level. This resource allows the user to explore charts, maps, data, and projected climate variables for the State of California, and is a key recommendation of the 2009 California Climate Adaptation Strategy and the DWR. All projections generated include two possible climate outcomes; one scenario where greenhouse gas (GHG) emissions peak near year 2040 and decline

beyond 2040 (medium, Representative Concentration Pathway [RCP] 4.5), and another in which GHG emissions continue to rise throughout the 21st century (high, RCP 8.5). The tool allows the user to search by watershed, grid, counties, census tracts, and incorporated and census designated places. Thus, this tool was used to evaluate the impacts of climate change within the City’s service area using the medium, RCP 4.5, and high, RCP 8.5, GHG emission scenarios.

The Extended Drought tool was used to evaluate early- and late-century variable climate impacts for the City watershed over a 20-year drought including 5 years prior and 4 years following. This two-decade extended drought period is often referred to as a “mega-drought.” The results, which include minimum and maximum temperature, precipitation, ETo, and runoff, are summarized in Table 3-3.

Parameter	Observed Historical (1961 - 1990)	Early-Century (2023 - 2042)	Late-Century (2051 - 2070)
Maximum Temperature (°F)	70.8	74.3	77.4
Minimum Temperature (°F)	45.5	48.0	51.2
Precipitation (inch)	22.6	19.2	19.2
Evapotranspiration (inch)	15.3	14.3	14.4
Runoff (inch)	2.7	2.4	2.3
NOTES: (1) Retrieved using Cal-Adapt Extended Drought tool.			

The projected increase in maximum temperature from historical years to late-century is 6.6°F (9.3 percent), whereas the projected increase in minimum temperature is 5.7°F (12.5 percent). Precipitation is projected to decrease by 3.4 inches by late-century (15.0 percent), ETo by 0.9 inches (5.9 percent), and runoff by 0.4 inches (14.8 percent).

### 3.5.3 Cal-Adapt Wildfire

The Cal-Adapt Wildfire tool utilizes four models identified by the California Climate Action Team as priority models contributing to the 2018 California Fourth Climate Change Assessment. The models listed below describe the scenarios used in area burned wildfire projections.

- Warm/dry scenario (HadGEM2-ES).
- Cooler/wetter scenario (CNRM-CM5).
- Average scenario (CanESM2).
- A scenario that is unlike the first three models, the “complement” scenario (MIROC5).

The model projections generated include the same two possible climate outcomes: RCP 4.5 and RCP 8.5. Time periods for the wildfire analysis include historical (1961-1990), mid-century (2035-2064), and end of the century (2051-2070). The population growth scenario for the City service area was identified as central, or median. Summary statistics of all four priority models under medium and high RCP conditions are below in Table 3-4.

<b>Table 3-4: Summary of Projected Wildfire Area Burned</b>			
<b>Parameter</b>	<b>Observed Historical (1961 - 1990)</b>	<b>Mid-Century (2035 - 2064)</b>	<b>End of the Century (2051 - 2070)</b>
<b>RCP 4.5 Conditions</b>			
Minimum Area Burned (hectares)	63.0	59.0	82.0
Average Area Burned (hectares)	151.8	165.4	167.6
Maximum Area Burned (hectares)	273.0	323.0	262.0
<b>RCP 8.5 Conditions</b>			
Minimum Area Burned (hectares)	64.0	70.0	68.0
Average Area Burned (hectares)	156.1	165.6	158.1
Maximum Area Burned (hectares)	341.0	266.0	274.0
NOTES: (1) Retrieved using Cal-Adapt Wildfire tool.			

Based on these statistics, the probability of wildfires in the City watershed is anticipated to be fairly steady, while the average area burned is anticipated to increase under both the RCP 4.5 and RCP 8.5 conditions.

## Chapter 4

# WATER USE CHARACTERIZATION

The UWMPA requires that the UWMP identify the quantity of water supplied to the agency's customers including a breakdown by user classification. This section describes the water system demands and water demand projections.

### 4.1 Non-Potable Versus Potable Water Use

This chapter covers potable and raw water demand. Recycled water is addressed comprehensively in Chapter 6.

### 4.2 Past, Current, and Projected Water Use by Sector

*10631(d). (1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following...*

*(2). The water use projections shall be in the same five-year increments described in subdivision (a).*

*(4)(A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.*

*(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections. (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.*

The following water use sectors and associated metered deliveries, as shown in Table 4-0, were reported in the 2015 UWMP.

Use Type	Metered Volume
SFR	1,102
MFR	142
CII	854
Landscape	175
Agricultural Irrigation	56
Other Potable <sup>(1)</sup>	16

Table 4-0: 2015 Water Deliveries	
Use Type	Metered Volume
Losses	631
<b>Total</b>	<b>2,976</b>
NOTES: Units of measure in this UWMP are AF. (1) Private fire protection services and temporary watering of construction sites.	

The actual demands for potable and non-potable water are presented in Table 4-1 for the 2020 calendar year. All connections in the City are metered.

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable <sup>1</sup> Water - Actual			
Use Type	2020 Actual		
<b>Drop down list</b> May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume <sup>2</sup>
Add additional rows as needed			
Single Family		Drinking Water	1,276
Multi-Family		Drinking Water	178
Commercial	Includes industrial/ institutional	Drinking Water	763
Landscape		Drinking Water	139
Agricultural irrigation		Raw Water	63
Other Potable	Private fire protection services, temporary watering of construction sites	Drinking Water	73
Losses	Estimated	Drinking Water	121
<b>TOTAL</b>			<b>2,613</b>
<sup>1</sup> Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4. <sup>2</sup> Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.			
NOTES: Units of measure in this UWMP are acre-feet (AF). The metered demand for the 2020 calendar year is based on the City’s water bills from February 2020 to January 2021 to account for the 1-month lag time between meter reading and billing.			

Table 4-2 contains the projected potable and raw water demands from 2025 through 2045. The demand projections are based on the following assumptions for each use type.

- SFR and MFR:** In 2020, the total residential (single-family and multi-family) demand was 1,455 AFY (see Table 4-1) and the estimated population was 19,524 (see Table 3-1). The projected population (see Table 3-1) was multiplied by the 2020 residential demand

factor (67 gallons per person per day). SFR demands were assumed to be 90 percent of the total residential demand.

- **Commercial and Industrial:** Assumed net 50 percent increase from 2020 demand (685 AFY) by 2045 (build-out). Application materials have been received by the City for a proposed South Napa Industrial Project. The project's annual potable water demand is estimated to be a maximum of 109 AFY. The commercial and industrial potable water demand projection assumption will be revisited during preparation of the 2025 UWMP when more information about this project, such as planned implementation year, is available.
- **Institutional:** Assumed to remain at the 2020 water use through 2045 (78 AFY).
- **Landscape:** Assumed to remain at the 2020 water use through 2045. Potable water demand for landscape irrigation is expected to decrease as conversion to recycled water occurs (see Table 6-6). The Water Waste Prohibitions Ordinance (City Municipal Code Section 13.14.060) and City Municipal Code Chapters 16.14 and 19.22 may also contribute to "passive" water savings (see Section 9.1).
- **Agricultural Irrigation:** Assumed to remain at the 2020 water use through 2030 and be 0 AF by 2035 as conversion to recycled water occurs (see Table 6-6 Project RW13).
- **Other Potable (private fire protection services, temporary watering of construction sites):** Assumed to remain at the 2020 water use through 2045.
- **Losses:** Assumed to be 7.5 percent of the total projected potable water use.

Submittal Table 4-2 Retail: Use for Potable and Non-Potable <sup>1</sup> Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use <sup>2</sup> <i>Report To the Extent that Records are Available</i>				
		2025	2030	2035	2040	2045 (opt)
<p><b>Drop down list</b> May select each use multiple times These are the only Use Types that will be recognized by the WUedata online submittal tool</p>						
Add additional rows as needed						
Single Family		1,451	1,592	1,733	1,874	2,024
Multi-Family		161	177	193	208	225
Commercial	Includes industrial/ institutional	832	900	969	1,037	1,106
Landscape		139	139	139	139	139
Agricultural irrigation		63	63	0	0	0
Other Potable	Private fire protection services, temporary watering of construction sites	73	73	73	73	73
Losses		199	216	233	250	267
<b>TOTAL</b>		<b>2,918</b>	<b>3,160</b>	<b>3,339</b>	<b>3,581</b>	<b>3,834</b>
<p><sup>1</sup> Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4. Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</p>						
<p>NOTES: Units of measure in this UWMP are acre-feet (AF).</p>						

The customer sector water deliveries in Table 4-2 are only general estimates of projected use and may vary significantly based on future development and water conservation measures taken by each customer sector. Ultimately, the implementation, magnitude, and type of future development will determine the distribution of water use per customer sector.

The City total water demands for potable and raw water, and recycled water demand, based on the figures presented in Table 4-1, Table 4-2, and Table 6-4, are summarized in Table 4-3. Refer to Section 6.5 for additional details on the City’s recycled water demand.

<b>Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)</b>						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable <i>From Tables 4-1R and 4-2 R</i>	2,613	2,918	3,160	3,339	3,581	3,834
Recycled Water Demand <sup>1</sup> <i>From Table 6-4</i>	208	625	625	1,241	1,241	1,241
Optional Deduction of Recycled Water Put Into Long-Term Storage <sup>2</sup>	0	0	0	0	0	0
<b>TOTAL WATER USE</b>	<b>2,821</b>	<b>3,543</b>	<b>3,785</b>	<b>4,580</b>	<b>4,822</b>	<b>5,075</b>
<sup>1</sup> Recycled water demand fields will be blank until Table 6-4 is complete <sup>2</sup> Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier <b>may</b> deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.						
NOTES: Units of measure in this UWMP are acre-feet (AF).						

### 4.3 Distribution System Water Losses

10631(e)(1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

(J) Distribution system water loss.....

10631(d)(3)(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34

Distribution system water losses ("real" losses) are the physical water losses from the water distribution system and the supplier's storage facilities, up to the point of customer consumption. The City’s distribution system losses are quantified using the American Water Works Association (AWWA) Method Guidance "Water Resources Water Audit Manual." The distribution system water loss for the last five years (2016 through 2020 calendar years) is reported in Table 4-4.

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss <sup>1,2</sup>
01/2016	342
01/2017	247
01/2018	138
01/2019	120
01/2020	121
<sup>1</sup> Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.	
<sup>2</sup> Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.	
NOTES: Units of measure in this UWMP are acre-feet (AF). Losses in 2019/2020 are estimated as the audit is in progress.	

As shown in Table 4-4, the City has estimated approximately 121 AFY of water loss in 2020. The state standard will be met for each of the last five years of water loss audit reporting.

#### 4.4 Estimating Future Water Savings

"Passive" savings are water savings from codes, standards, ordinances, or transportation and land use plans. As shown in Table 4-5, future water savings are included in the water use projections for landscape irrigation (Table 4-2).

Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections	
<b>Are Future Water Savings Included in Projections?</b> (Refer to Appendix K of UWMP Guidebook) <i>Drop down list (y/n)</i>	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found.	Section 4.2
<b>Are Lower Income Residential Demands Included In Projections?</b> <i>Drop down list (y/n)</i>	Yes

#### 4.5 Water Use for Lower Income Households

The UWMPA requires that the UWMP identify planned low-income housing developments within the agency's service area and develop demand projections for those units. A lower income household is defined as one with an income below 80 percent of area median income, adjusted for family size.

*10631.1(a). The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.*

As shown in Table 4-5, lower income household demand projections are included in the total water use projections (Table 4-2 and Table 4-3).

The Regional Housing Needs Assessment (RHNA) is mandated by State Housing Law as part of the periodic process of updating local housing elements of the General Plan. The RHNA for the City for the 2014 to 2022 projection period is 392 new housing units, including 116 very low-income units, 54 low-income units, 58 moderate-income units, and 164 above moderate-income units (2015-2023 Housing Element). It should also be noted, State legislation in 2017 made Accessory Dwelling Units (ADU) legal in all California cities. Homeowners can decide to build either a detached ADU in their backyard, an attached ADU that is part of a home addition, or an ADU conversion. Although the State has determined ADU's contribute no additional stress on utilities, the addition of another dwelling unit, another family occupant, on a single-family property does impact water usage.

#### **4.6 Climate Change Considerations**

As temperature rises, water demands from various types of users will likely increase. Daily heat patterns, such as the duration of daytime heat prior to nighttime cooling, will change the diurnal demand patterns and peaking factors for activities, such as landscaping and other outdoor water use features (e.g., pools, fountains, open water bodies), due to increased ET values. The altered climate patterns in California creating hotter days and longer heat waves will increase customer water use and evaporative water losses. Extended drought periods are expected to become both more frequent, and more severe, which could lead to reduced rainfall and snowpack.

The combination of a long-term reduction in water supply availability with a long-term increase in water demand and higher summer demand peaks will increase pressure on the City to meet demands. Technology and devices to increase monitoring through the distribution system will help the City prepare for, and respond to, changes in supply and demand due to climate change. Creating redundancy through backup systems, the addition of pipes to connect dead ends or areas only served by one main line or water source, will help the City achieve efficiencies required in the face of climate change considerations. Getting localized, region specific data on climate change forecasts and impacts would also help the City for planning purposes.

The City's service area is predicted to have declining precipitation and increasing temperatures. The increasing temperatures may change demand levels and patterns. Continued reduction in per capita demand with water conservation will become more challenging as BMP saturation levels climb. It can be concluded that climate change will likely put more strain on the City's ability to meet demands long-term. If per capita water demand were to increase with temperature, or the population were to increase at a higher rate, or purchased or imported water supplies were to decrease due to extended droughts, or water availability were to be impacted due to wildfires, the effects could have serious and devastating consequences.

## Chapter 5

# SB X7-7 BASELINES, TARGETS, AND 2020 COMPLIANCE

The UWMPA requires that the UWMP identify the baseline water demand, urban water use target, and interim urban water use target for the City. In the 2015 UWMP, water use targets were determined per the DWR Methodologies. The daily per capita water use, expressed in gpcd, is the total water use within the service area divided by the population. These targets are necessary to judge compliance with the 2020 use reductions set forth in the Water Conservation Bill of 2009 (SB X7-7).

The purpose of this section in the 2020 UWMP is to determine whether the City has met the 20 percent conservation mandate. All SB X7-7 forms are included in Appendix C.

### 5.1 2015 UWMP Baseline and Targets

A supplier may update the baseline and target water use if there were changes to their distribution area. The City's distribution area has not changed since 2015. Therefore, the baseline and target gpcd values from the 2015 UWMP are utilized in this UWMP to determine compliance with the 2020 target.

In the 2015 UWMP, a 10-year baseline and a 5-year baseline were calculated to establish the minimum criteria for the City water use reduction targets. A summary of the 2008 total and recycled water deliveries, 10-year baseline range (1999 to 2008), and 5-year baseline range (2003 to 2007) is included in Table 1 of the SB X7-7 Verification Forms (Appendix C).

### 5.2 Service Area Population

*10608.20. (e) An urban retail water supplier shall include in its urban water management plan due in 2010... the baseline per capita water use... along with the bases for determining those estimates, including references to supporting data.*

*(f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.*

*10644. (a)(2) The plan... shall include any standardized forms, tables or displays specified by the department.*

As shown in Table 2 of the SB X7-7 Verification and Compliance Forms (Appendix C), the 2020 population is per SB X7-7 Method for Population Finances 1 (DOF Table E-5) and per SB X7-7 Method for Population Finances 2 (Persons-per-Connection Method). Refer to Section 3.3.1 for additional details.

Service area population is reported for each year in the baseline periods as well as 2015 in Table 3 of the SB X7-7 Verification Form (Appendix C). Service area population is reported for 2020, the compliance year, in Table 3 of the SB X7-7 Compliance Form (Appendix C).

### 5.3 Gross Water Use

*10608.12 (g) "Gross Water Use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*

- (1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
- (2) The net volume of water that the urban retail water supplier places into long term storage*
- (3) The volume of water the urban retail water supplier conveys for use by another urban water supplier*
- (4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.*

"Gross Water Use" is the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier with certain acceptable exclusions. Gross water use is reported for each year in the baseline periods as well as 2015 and 2020, the compliance year, in Table 4 of the SB X7-7 Verification and Compliance Forms (Appendix C).

### 5.4 Baseline Daily Per Capita Water Use

The baseline daily per capita water use in each of the baseline years is calculated in Table 5 of the SB X7-7 Verification Form (Appendix C) by dividing annual gross water use by annual service area population. The average baseline daily per capita water use is summarized in Table 6 of the SB X7-7 Verification Form (Appendix C) for the 10-year baseline, 5-year baseline, and 2015. The average baseline daily per capita water use is summarized in Table 5 of the SB X7-7 Compliance Form (Appendix C) for the 2020 compliance year.

### 5.5 Baselines and Targets Summary

As mentioned above, a supplier may update the baseline and target water use if there were changes to their distribution area. The City's distribution area has not changed since 2015. Therefore, the baseline and target gpcd values from the 2015 UWMP are utilized in this UWMP to determine compliance with the 2020 target.

Based on the water use targets calculated in 2015, the City water use target for 2020 is 162 gpcd. Based on the 10-year baseline of 203 gpcd, the 2015 interim water use target was 183 gpcd. The 2020 target was determined using Method 1. In order to meet the confirmation criteria, the 2020 target must fall below 95 percent of the 5-year baseline, which for the City is 204 gpcd. According to the DWR guidelines, the 2020 target is valid since it is less than the target confirmation criteria of 194 gpcd.

A summary of the various baselines and the confirmed 2020 target are summarized in Table 5-1. Refer to Table 7 and Table 8 of the SB X7-7 Verification Form (Appendix C) for more information on the calculation method and a summary of the targets.

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form <i>Retail Supplier or Regional Alliance Only</i>				
Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	1999	2008	203	162
5 Year	2003	2007	204	
*All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)				

## 5.6 2020 Compliance Daily Per Capita Water Use

10608.12(e) "Compliance daily per-capita water use" means the gross water use during the final year of the reporting period...

10608.20 (e) An urban retail water supplier shall include in its urban water management plan due in 2010 . . . compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

Compliance daily per-capita water use means the gross water use during the final year of the reporting period. Water suppliers are required to calculate their actual 2020 water use (2020 calendar year) and evaluate whether their per capita 2020 target use was met. Refer to Table 5-2 and SB X7-7 Compliance Form Table 9 (Appendix C) for 2020 compliance.

Submittal Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form <i>Retail Supplier or Regional Alliance Only</i>				
2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* (Adjusted if applicable)		
116	0	116	162	Y
*All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)				

The City met the 2020 target (162 gpcd) in the year 2020 (116 gpcd). If the City can maintain water consumption rates, it will maintain conservation goals. However, if consumption rates

begin to rise, the City must implement additional conservation measures. In all of its conservation programs, the City will avoid placing a disproportionate burden on any customer sector.

Although the City was able to meet the 2020 target, the year 2020 did not represent a typical year due to the impacts of the COVID-19 pandemic. Since the 2020 per capita demand of 116 gpcd was below the 2020 goal, adjustments for extraordinary events were not made in Table 5-2.

## Chapter 6

# WATER SUPPLY CHARACTERIZATION

The UWMPA requires that the UWMP include a description of the agency's existing and future water supply sources for the next 20 years. The description of water supplies must include detailed information on surface water, groundwater, the groundwater basin, potential opportunities for desalination of groundwater and seawater, and detailed information on the agency's imported water.

### 6.1 Purchased or Imported Water

The City's water supply is imported water from the SWP in addition to other supplemental imported water sources as described in the following subsections. The City also purchases water from the City of Vallejo

#### 6.1.1 State Water Project

The main source for the City's water supply is from the SWP, which is operated by DWR. SWP water used by the City is diverted from the Sacramento-San Joaquin Delta (Delta) and conveyed approximately 27 miles through the North Bay Aqueduct (NBA) system to the City's WTP.

##### 6.1.1.1 "Table A" Allotment

In 1967, the City (operating then as the American Canyon County Water District) entered into an agreement with the Napa County FCWCD for annual allotments of SWP water (i.e., "Table A" allotments). The City's contract with Napa County FCWCD is through 2035 and includes provisions for extensions. It is anticipated that the contract will be extended through 2085.

The City's current "Table A" allotment is 5,200 AFY. The actual amount of SWP water available to the City varies from year-to-year due to hydrologic conditions, water demands of other SWP contractors, SWP facility capacity, and environmental/regulatory requirements.

##### 6.1.1.2 Article 21 Water

In certain years, the City may also receive additional SWP water known as Article 21 water, which is identified in Article 21 of SWP long-term water supply contracts between DWR and each SWP water contractor. The year-to-year availability of the Article 21 water supply varies and Article 21 water becomes available only when the following conditions are met:

- Such deliveries do not interfere with SWP "Table A" allocations and SWP operations.
- Excess water is available in the Delta.
- Capacity is not being used for SWP purposes or scheduled SWP deliveries.
- Contractors can use the SWP Article 21 water directly or can store it in their own system (i.e., the water cannot be stored in the SWP system).

### 6.1.2 City of Vallejo

As described in the following subsections, the City has an agreement with the City of Vallejo to purchase the following water types:

- Vallejo Permit Water (raw water).
- Vallejo Treated Water (potable water).
- Vallejo Emergency Water (raw water).

#### 6.1.2.1 Vallejo Permit Water

Vallejo has an appropriate water right for Delta water from the State Water Resources Control Board (SWRCB) referred to as Vallejo Permit Water. The City purchased 500 AFY of this water supply from the City of Vallejo in 1996, which is delivered through the SWP's NBA system. Since the City began receiving Vallejo Permit Water in 1999, the City has received 100 percent of the full contracted volume every year.

#### 6.1.2.2 Vallejo Treated Water

The City also purchases up to 628.6 AFY of Vallejo Treated Water (potable water). Vallejo Treated Water is delivered via three (3) connection points to Vallejo's potable water distribution system located within the City.

#### 6.1.2.3 Vallejo Emergency Water

The City purchases up to 500 AFY of Vallejo Emergency Water (raw water) only in years when the City's "Table A" allotment is curtailed.

### 6.1.3 Other Imported Water Sources

In addition to the primary supply sources described previously, in some years, the City also uses other supplemental imported water sources as described in the following subsections. The availability of these water supplies vary from year-to-year.

#### 6.1.3.1 Other State Water Project Sources

##### *Dry Year Water Purchase Program*

DWR's Dry Year Water Purchase Program (or Dry Year Water Bank) allows interested SWP contractors in dry years the option to purchase emergency water supplies from Sacramento Valley rice farmers, if supply is made available.

##### *Article 56 Carryover Water*

DWR's Article 56 Carryover Program allows water that is allocated to an SWP contractor but not used by the end of the year to be used in the next year. This water is exported from the Delta by the Banks Pumping Plant and stored in the San Luis Reservoir.

##### *"Table A" Exchange Return Water*

DWR's "Table A" Exchange Return Water Program allows interested SWP contractors to receive a portion of another SWP contractors approved "Table A" allotment in exchange for return of future approved SWP "Table A" water at an established exchange ratio.



## 6.4 Stormwater

The City has not identified any opportunities related to stormwater recapture to offset potable water use.

## 6.5 Wastewater and Recycled Water

The UWMPA requires that the UWMP address the opportunities for development of recycled water, including the description of existing recycled water applications, quantities of wastewater currently being treated to recycled water standards, limitations on the use of available recycled water, an estimate of projected recycled water use, the feasibility of said projected uses, and practices to encourage the use of recycled water.

### 6.5.1 Recycled Water Coordination

*10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.*

The City and NSD provide municipal wastewater and recycled water services within the City's water service area.

The City provides wastewater collection, treatment and disposal services as well as recycled water services within the City limits as well as the Extra Territorial Sewer Service Area (ETSSA) located north of the City. Note that the ETSSA excludes the Chardonnay Golf Course and the Napa County Airport.

NSD provides wastewater collection, treatment and disposal as well as recycled water services for the City of Napa and portions of unincorporated Napa County, including northern portions of the City's water service area.

The City's and relevant portions of the NSD's sewer/recycled water service area is shown in Figure 3-1.

### 6.5.2 Wastewater Collection, Treatment Systems, and Disposal

*10633. (a) (Describe) the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.*

The City's wastewater collection system consists of gravity pipelines, two force mains (the Main and Industrial Basins from the southern and northern ends of the City, respectively), and a series of pump stations. The wastewater is conveyed to the City's Water Reclamation Facility (WRF) located near the City's northwest limits (see Figure 3-1) for treatment.

NSD collects wastewater from the residents and businesses in the City of Napa, Silverado Country Club, the Napa County Airport and several adjacent unincorporated areas, including northeastern portions of the City's water service area. The wastewater is conveyed to NSD's Soscol Water Recycling Facility (WRF), located outside the City's water service area northwestern border (see Figure 3-1) for treatment.

The 2020 wastewater flows from the City's service area is summarized in Table 6-2. As shown in Table 6-2, the City contributed 1,952 AFY of wastewater flow into the City's WRF and 139 AFY of wastewater flow into the NSD's Soscol WRF in 2020.

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
<input type="checkbox"/> There is no wastewater collection system. The supplier will not complete the table below.						
Percentage of 2020 service area covered by wastewater collection system (optional)						
Percentage of 2020 service area population covered by wastewater collection system (optional)						
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? <i>Drop Down List</i>	Volume of Wastewater Collected from UWMP Service Area 2020 *	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? <i>Drop Down List</i>	Is WWTP Operation Contracted to a Third Party? <i>(optional) Drop Down List</i>
City of American Canyon	Metered	1,625	City of American Canyon	American Canyon Water Reclamation Facility	Yes	No
Napa Sanitation District	Estimated	139	Napa Sanitation District	Soscol Water Recycling Facility	No	No
<b>Total Wastewater Collected from Service Area in 2020:</b>		1,764				
* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES: Units of measure in this UWMP are acre-feet.						

### 6.5.3 Wastewater Treatment and Discharge within Service Area

The City owns, maintains, and operates the WRF. The WRF has a total wastewater treatment capacity of 2.5 mgd at average dry weather flow conditions and 5.0 mgd at peak wet weather flow conditions.

The WRF facilities consists of an emergency overflow basin, headworks, micro-screening, grit removal, four parallel biological treatment basins that use membrane bioreactor (MBR) technology, and disinfection. The four treatment trains can be used to segregate domestic wastewater (Main Aeration Basin) from industrial wastewater (North Aeration Basin). The WRF has separate disinfection systems for treated wastewater discharges and recycled water. Treated wastewater discharges are disinfected by ultraviolet light (UV). Recycled water is disinfected using chlorine. Biosolids generated during the treatment process are stored in two sludge storage basins, until dewatered with a screw press and hauled to a landfill for disposal.

Treated wastewater discharges are regulated under National Pollutant Discharge Elimination System (NPDES) Waste Discharge Requirements (WDR) Order No. R2-2017-0008. Discharge is allowed to the North Slough on the Napa River (Discharge Point No. 001) and to two constructed freshwater wetlands that are tributary to the North Slough (Discharge Point No. 003). Treated wastewater is discharged from Discharge Point No. 001 during the wet season (November 1

through April 30) only. Treated wastewater is discharged from Discharge Point No. 003 year-round.

Table 6-3 identifies the volume of treated wastewater either recycled or disposed of within the service area. Note that water recycled within the service area is treated to a tertiary level.

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020											
<input type="checkbox"/> No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.											
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number (optional) <sup>2</sup>	Method of Disposal <i>Drop down list</i>	Does This Plant Treat Wastewater Generated Outside the Service Area? <i>Drop down list</i>	Treatment Level <i>Drop down list</i>	2020 volumes <sup>1</sup>				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
American Canyon Water Reclamation Facility	Discharge Point No. 001, Discharge Point No. 003	North Slough, North Slough via Constructed Freshwater Wetlands	CA0038768	River or creek outfall	No	Secondary, Disinfected - 23	1,625	1,326	409	0	0
<b>Total</b>							<b>1,625</b>	<b>1,326</b>	<b>409</b>	<b>0</b>	<b>0</b>
<sup>1</sup> Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3. <sup>2</sup> If the Wastewater Discharge ID Number is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at <a href="https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?nCommand=reset&amp;reportName=RegulatedFacility">https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?nCommand=reset&amp;reportName=RegulatedFacility</a>											
NOTES: Units of measure in this UWMP are acre-feet. The volume of recycled water within the service area is treated to a tertiary level and is the metered amount sent to the recycled water system from the WRF. The volume of wastewater treated is equal to the volume of wastewater collected in Table 6-2. Note that the sum of "Discharged Treated Wastewater" and "Recycled Within Service Area" does not equal to "Wastewater Treated", likely due to the error associated with estimating the volume of wastewater discharged.											

### 6.5.4 Recycled Water System Description

10633. (c) A description of the recycled water currently being used in the supplier’s service area, including, but not limited to, the type, place, and quantity of use.

The City's WRF produces disinfected tertiary recycled water under the General Water Reuse Order (Order No. 96-011) per the recycled water criteria defined by the Division of Drinking Water (DDW, formerly the California Department of Public Health) under California Administrative Code, Division 4, Title 22, California Code of Regulations (CCR).

The City’s recycled water distribution system includes approximately 13 miles of pipeline, a pump station, and two storage tanks with capacities of 1 MG and 1.5 MG.

### 6.5.5 Recycled Water Beneficial Uses

#### 6.5.5.1 Current and Planned Uses of Recycled Water

10633. (b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier’s service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

The City currently produces and delivers recycled water to meet demand on an as-needed basis. The City provides recycled water to 9 private customers for agricultural and landscape irrigation,

21 City-owned facilities for landscape irrigation, and temporary users for dust control at construction projects.

The current and projected recycled water uses are summarized in Table 6-4. An analysis conducted for the City’s Recycled Water Master Plan (May 2016) estimated that the 2016 demand for recycled water was approximately 68 AFY for agricultural (vineyard) irrigation and 180 AFY for landscape irrigation. The projected recycled water volumes in Table 6-4 for agricultural and landscape irrigation are based on this baseline 2016 demand plus the planned methods to expand future recycled water use (see Table 6-6).

Application materials have been received by the City for a proposed South Napa Industrial Project. The project’s annual recycled water demand is estimated to be a maximum of 82 AFY. This project is not accounted for in Table 6-6. The projected recycled water use for this project will be revisited during preparation of the 2025 UWMP when more information about this project, such as planned implementation year, is available.

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area										
<input type="checkbox"/> Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.										
Name of Supplier Producing (Treating) the Recycled Water:		City of American Canyon								
Name of Supplier Operating the Recycled Water Distribution System:		City of American Canyon								
Supplemental Water Added in 2020 (volume) <i>Include units</i>										
Source of 2020 Supplemental Water										
Beneficial Use Type <i>insert additional rows if needed.</i>	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity) <i>Include volume units<sup>1</sup></i>	General Description of 2020 Uses	Level of Treatment <i>Drop down list</i>	2020 <sup>1</sup>	2025 <sup>1</sup>	2030 <sup>2</sup>	2035 <sup>1</sup>	2040 <sup>1</sup>	2045 <sup>1</sup> (opt)
Agricultural irrigation			Vineyard irrigation	Tertiary	57	68	68	173	173	173
Landscape irrigation (exc golf courses)			Landscape irrigation	Tertiary	151	552	552	1,063	1,063	1,063
Golf course irrigation										
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)			Dust control at construction sites	Tertiary		5	5	5	5	5
<b>Total:</b>					208	625	625	1,241	1,241	1,241
<b>2020 Internal Reuse</b>										

<sup>1</sup> Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTES: Units of measure in this UWMP are acre-feet. The demand for the 2020 calendar year is based on the City’s water bills from February 2020 to January 2021 to account for the 1-month lag time between meter reading and billing.

### 6.5.5.2 Planned Versus Actual Use of Recycled Water

The recycled water use projection for 2020 from the 2015 UWMP is compared to the 2020 actual use in Table 6-5.

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual		
<input type="checkbox"/>	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.	
Beneficial Use Type	2015 Projection for 2020 <sup>1</sup>	2020 Actual Use <sup>1</sup>
<i>Insert additional rows as needed.</i>		
Agricultural irrigation	68	57
Landscape irrigation (exc golf courses)	513	151
Golf course irrigation	0	0
Commercial use	0	0
Industrial use	0	0
Geothermal and other energy production	0	0
Seawater intrusion barrier	0	0
Recreational impoundment	0	0
Wetlands or wildlife habitat	0	0
Groundwater recharge (IPR)	0	0
Reservoir water augmentation (IPR)	0	0
Direct potable reuse	0	0
Other (Description Required)	5	0
<b>Total</b>	<b>586</b>	<b>208</b>
<sup>1</sup> Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.		
NOTE: Units of measure in this UWMP are acre-feet. Other refers to dust control at construction sites.		

**6.5.6 Actions to Encourage and Optimize Future Recycled Water Use**

*10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier... and shall include the following:*

*(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.*

Table 6-6 presents the City’s planned methods to expand recycled water use and the associated expected increase in recycled water use. The City’s Recycled Water Master Plan identified 15 capital improvement projects, which are labeled as RW1 through R15 in Table 6-6, to upgrade the City’s recycled water system to serve projected buildout demands of nearly 1,000 AFY.

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
<input type="checkbox"/>	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use *
<i>Add additional rows as needed</i>			
Conversion of existing potable users	Convert existing potable water uses for landscape irrigation by connecting them to the existing recycled water network.	By 2019	137
RW1: Tower / Devlin / South Kelly Road	Extend pipeline to connect customers in Napa Logistics Park for landscape irrigation.	By 2019	147
RW2: Spikerush Circle	Extend pipeline to convert American Canyon Community Park 1 to recycled water irrigation.	2021-2024	15
RW3: Benton Way	Extend pipeline to convert American Canyon Middle School, Community Services and Community Park 2 to recycled water irrigation.	By 2018	28
RW4: Pelleria Drive	Extend pipeline to convert La Vigne Community Park to recycled water landscape irrigation.	By 2020	3
RW5: Jim Oswald Way / Mezzetta Court	Extend pipeline to convert existing potable users to recycled water landscape irrigation.	By 2019	18
RW6: Hanna Drive	Extend pipeline to convert existing potable users to recycled water landscape irrigation.	2021-2024	2
RW7: Dodd / Klamath Court	Extend pipeline to convert existing potable users to recycled water landscape irrigation.	2021-2024	7
RW8: Lombard / Hess Road	Extend pipeline to convert the City ball fields and an existing commercial nursery to recycled water irrigation.	2021-2024	15
RW9: Watson Lane RW10: Main / South Napa Junction Road RW11: Newell Drive	Extend pipeline to serve future landscape irrigation uses in Watson Ranch, undeveloped parcels north of Watson Lane and Canyon Estates developments.	2025-2034	266
RW12: Pump Station Upgrade	Upgrade the City's WRF Pump Station to support future connections when the total maximum month demand exceeds the existing pumping capacity (1,300 gallons per minute).	2025-2034	N/A
RW13: Paoli Loop Road / Northern Vineyards	Extend pipeline for irrigation of vineyards that currently receive raw water from the City.	2025-2034	105
RW14: Eucalyptus Drive RW15: Broadway / Donaldson Way	Extend pipeline to increase reliability and balance pressures across the distribution system and connection additional users.	2025-2034	40
Connection of future users	Use of recycled water by future development projects located within the existing recycled water network	2025-2034	205
<b>Total</b>			<b>988</b>
<i>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</i>			
NOTES: Units of measure in this UWMP are acre-feet.			

## 6.6 Desalinated Water Opportunities

*10631(d). Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.*

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water, and brackish groundwater.

At the present time, the City does not foresee any opportunities for the production of desalinated water. However, the City may pursue purchase of desalinated water if the supply became available through regional development.

## 6.7 Exchanges or Transfers

*10631(d). Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*

The UWMPA requires the UWMP to address the opportunities for development of short or long-term transfer or exchange opportunities.

### 6.7.1 Exchanges

Water exchanges entail water being delivered by one water user to another water user, with the receiving water user providing water in return at a specified time or when the conditions of the parties' agreements are met.

The City does not have any existing or planned water exchanges. The City will continue to consider potential exchange opportunities.

### 6.7.2 Transfers

Water transfers entail a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights.

The City does not have any existing or planned water transfers. The City will continue to consider potential transfer opportunities (such as one-time transfers from farmers who fallow fields and auction off their water).

### 6.7.3 Emergency Interties

The City does not have any emergency interties in which transfers of water can be made.

The City receives Vallejo Treated Water via an intertie connection (see Section 6.1.2.2).

## 6.8 Future Water Projects

*10631(f)... The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.*

The UWMPA requires that suppliers describe water supply projects and programs that may be undertaken to meet the projected water demands.

As described previously, the City is 100 percent reliant on purchased or imported water for its potable water supply. In order to diversify its water sources and improve local control over the water supply, the City has been exploring various long-term water supply options based on the following evaluation criteria:

- **Institutional:** Is it within the City’s operational authority?
- **Technical:** Can it be designed, operated, and maintained?
- **Capacity:** Will it meet anticipated demands now and in the future?
- **Schedule:** Can it be designed, built, and permitted in time to meet the City’s requirements?
- **Sustainability:** Does it provide uninterrupted service without significant impacts?
- **Affordability:** Can it be built and maintained at a reasonable cost?
- **Environmental:** Is it consistent with local, state, and federal environmental regulations?
- **Quality:** Is the water quality satisfactory and reliable?

The City Council reviewed and discussed a preliminary list of long-term water supply options. Based on the criteria above, the City selected three options for further evaluation, including surface water storage at Lake Curry, groundwater production wells outside of City limits, and potable reuse of recycled water. Specific projects or programs have not been selected for implementation; therefore, Table 6-7 has been left blank.

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
<input type="checkbox"/>	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
<input checked="" type="checkbox"/>	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
Section 6.8	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type <i>Drop Down List</i>	Expected Increase in Water Supply to Supplier* <i>This may be a range</i>
	<i>Drop Down List (y/n)</i>	<i>If Yes, Supplier Name</i>				
<i>Add additional rows as needed</i>						
<b>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</b>						

### 6.9 Summary of Existing and Planned Sources of Water

10631 (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following...

(b)(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(h) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

The actual source and volume of water for the year 2020 is presented in Table 6-8. As shown in Table 6.8, the City's total supply in 2020 was approximately 2,817 AFY.

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool		Actual Volume*	Water Quality Drop Down List	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Purchased or Imported Water	State Water Project "Table A" Water	29	Other Non-Potable Water	
Purchased or Imported Water	State Water Project Article 21 Water	191	Other Non-Potable Water	
Purchased or Imported Water	Article 56 Carryover Water	1,819	Other Non-Potable Water	
Purchased or Imported Water	Table A Exchange Return Water	12	Other Non-Potable Water	
Purchased or Imported Water	Vallejo Permit Water	500	Other Non-Potable Water	
Purchased or Imported Water	Vallejo Treated Water	58	Drinking Water	
Purchased or Imported Water	Vallejo Emergency Water	0	Other Non-Potable Water	
Recycled Water		208	Recycled Water	
<b>Total</b>		<b>2,817</b>		<b>0</b>
<i>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</i>				
NOTES: Units of measure in this UWMP are acre-feet.				

The projected purchased or imported water supplies in Table 6-9 are based on historical deliveries of average (normal) years. The projected water supply in 5-year increments is included in Table 6-9.

Submittal Table 6-9 Retail: Water Supplies — Projected											
Water Supply  <small>Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool</small>	Additional Detail on Water Supply	Projected Water Supply * Report To the Extent Practicable									
		2025		2030		2035		2040		2045 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
<small>Add additional rows as needed</small>											
Purchased or Imported Water	State Water Project "Table A" Water	3,016		3,016		3,016		3,016		3,016	
Purchased or Imported Water	State Water Project Article 21 Water	189		189		189		189		189	
Purchased or Imported Water	Article 56 Carryover Water	0		0		0		0		0	
Purchased or Imported Water	Table A Exchange Return Water	0		0		0		0		0	
Purchased or Imported Water	Vallejo Permit Water	500		500		500		500		500	
Purchased or Imported Water	Vallejo Treated Water	628.6		628.6		628.6		628.6		628.6	
Purchased or Imported Water	Vallejo Emergency Water	0		0		0		0		0	
Recycled Water		625		625		1,241		1,241		1,241	
<b>Total</b>		<b>4,959</b>	<b>0</b>	<b>4,959</b>	<b>0</b>	<b>5,575</b>	<b>0</b>	<b>5,575</b>	<b>0</b>	<b>5,575</b>	<b>0</b>
<small>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</small>											
<small>NOTES: Units of measure in this UWMP are acre-feet.</small>											

### 6.10 Climate Change Impacts to Supplies

The CWC requires that suppliers consider climate change in their water supply analysis. The potential water supply effects related to climate change are discussed briefly in this section.

Because the City is 100 percent reliant on purchased or imported water for its potable water supply, the effects of climate change are best summarized by considering the effects of the region as a whole. The City has continued to participate in regional climate change studies, such as, the San Francisco Bay Area Integrated Regional Water Management Plan (IRWMP) (2019) that assess potential long-term impacts of climate change and mitigation and adaption strategizes. According to the IRWMP, climate change is expected to increase water supply variability and affect regional imported water supplies as follows:

- Total precipitation is expected to decrease in the Sierra Nevada sources.
- Snow pack projected to decrease from less storage in the mountains.
- Precipitation projected to shift toward more rain and less snow.
- Timing of runoff is expected to shift to earlier in the year, affecting reservoir storage and hydropower generation, especially in the spring and summer months.
- Sea-level rise may impact Delta water deliveries.

As scientific understanding of climate change continues to advance, the nature of these impacts and the impact on water supply availability and reliability will be thoroughly studied to identify proper mitigation and adaptation strategies.

One additional consideration for the City is the impact of wildfires on water quality. The wildfire season is typically followed by the rainy season and sometimes heavy precipitation, leading to high levels of sediment in runoff that can severely degrade water quality, such as the increase in turbidity levels. In addition, Per- and polyfluoroalkyl substances (PFAS) is also an emerging contaminant that can be found in firefighting foam that can stay and spread in the environment for decades and become a major contributor to drinking water contamination. With the

increasing frequency of wildfires and atmospheric rivers across California, changes in treatment operations and/or treatment processes may be necessary to reliably treat and maintain water service to customers experiencing back-to-back impacts.

Additional details related to climate change data that has been collected using the Cal-Adapt tool are included in Chapter 3.

### **6.11 Energy Intensity**

The 2020 UWMP guidebook requests that water suppliers provide information on the energy required to produce and distribute their water supply. Water energy intensity is the total amount of energy on a per acre-foot basis associated with water management processes occurring within the City's operational control. The City has selected to report its energy intensity using the total utility approach Option B. In 2020, the City produced 2,550 AF of treated water entering the distribution system within its service area. The kilowatt hours (kWh) of energy needed across the City's potable water system was 313,587 kWh. The energy intensity analysis is located in Appendix D. The City's 2020 energy intensity is estimated at 123 kWh/AF (377 kWh/MG).

## Chapter 7

# WATER SERVICE RELIABILITY AND DROUGHT RISK ASSESSMENT

The UWMPA requires that the UWMP address the reliability of the agency's water supplies. This includes supplies that are vulnerable to seasonal or climatic variations. In addition, an analysis must be included to address supply availability in a single-dry year and in a five-consecutive-year drought.

*10635 (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.*

### 7.1 Introduction

The City water supply is purchased or imported water sources, mainly SWP water (from the Delta) purchased from the Napa County FCWCD and from the City of Vallejo. Refer to Appendix A for the City's demonstration of reduced Delta reliance.

The following factors affect water supply reliability and may pose an opportunity for inconsistency in supply.

- **Legal:** The SWP contract expires in 2035 with provisions for extensions. The agreement with Vallejo does not have an expiration.
- **Environmental:** The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have operational rules that limit exports from the Delta for protection of several fish species per the Endangered Species Act.
- **Water Quality:** The SWRCB has established salinity and other water quality objectives that can limit exports from the Delta.
- **Climatic:** Drought conditions can limit exports from the Delta.

## 7.2 Constraints of Water Sources

*10631 (b)(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.*

There are two aspects of supply reliability that can be considered. The first relates to immediate service needs and is primarily a function of the availability and adequacy of the supply facilities. The second aspect is climate-related and involves the availability of water during mild or severe drought periods.

There are a variety of factors that can affect water supply reliability. The factors that might result in supply reliability issues include water quality and climatic changes.

### 7.2.1 Water Supply Quality

The UWMPA requires that the UWMP include a discussion of water quality impacts on the reliability of an agency's water supplies. As indicated in Section 7.1, water quality may effect Delta supply reliability.

The City's drinking water meets all applicable water quality regulations. The Annual Consumer Confidence Report (CCR) for the City's service area in year 2020 can be found in Appendix E.

### 7.2.2 Climate Change

Climate change is likely to add uncertainties to supply planning and future supply availability. The severe and prolonged drought that began in 2012 has been a test of the City's ability to prepare for, and adapt to, the effects of climate change. Considering reductions in per capita use and projected demands, the City continues to balance a cautious optimism with a long-term strategy for sustainable sources of supply.

As stated in Chapter 4, the altered climate patterns in California creating hotter days and longer heat waves will increase customer water use and evaporative water losses. Extended drought periods are expected to become both more frequent, and more severe, which could lead to reduced rainfall and snowpack. Higher temperatures and decreased precipitation will result in drought, making wildfires more frequent, more severe, and harder to fight with less water supplies. Wildfires, followed by flooding, mean more landslides and mudslides, further impacting water supply reliability. Creating defensible space as well as slope stabilization and erosion prevention near critical infrastructure will be important for preserving supplies.

Efficient use of water is paramount in the City's effort to adapt to climate change. Technology and equipment to appropriately monitor and manage water supplies will be critical. Ensuring that pipes are appropriately sized and upgraded to minimize water loss is equally important. Redundancy in source of supply will provide operational flexibility in the event supplies are interrupted by fire, floods, earthquakes, or drought. Climate change effects such as drought, wildfire, and temperature fluctuations may all contribute to a degradation of water quality over time.

### 7.2.3 Potential Alternative Sources

The City also uses other supplemental imported water sources as described in Section 6.1.3. The availability of these supplemental water supplies varies from year-to-year; therefore, supplemental water supplies have not been included in this water supply reliability assessment.

In order to diversify its water sources and improve local control over the water supply, the City has been exploring various long-term water supply options as described in Section 6.8.

## 7.3 Water Supply Reliability by Type of Year

This section considers the City's water supply reliability during three water scenarios: average year, single-dry year, and five-consecutive-year drought. An average year is also referred to as a "normal" year.

These scenarios are defined as follows:

- **Average Year:** A year, or an averaged range of years, that most closely represents the average water supply available to the City. Generally, a year in the historical sequence that most closely represents median runoff levels and patterns. It is defined as the median runoff over the previous 30 years or more. This median is recalculated every 10 years.
- **Single-Dry Year:** The year that represents the lowest water supply available to the City. Generally considered to be the lowest annual runoff for a watershed since the water-year beginning in 1903. Suppliers should determine this for each watershed from which they receive supplies.
- **Five-Consecutive-Year Drought:** The period that represents the driest five-year historical sequence for the City. Generally considered to be the lowest average runoff for a five-consecutive-year period for a watershed since 1903.

### 7.3.1 Basis of Water Year Data

Table 7-1 contains the water supply available for each of the water year types, as a percentage of the average water year, but the water type years have not been included. The volume available for each year type are based on the following assumptions:

- **"Table A" Allotment:** Assumed to be 56 percent, 5 percent, and 27 percent of the full contracted volume (5,200 AFY) for average, single-dry, and five-consecutive-year drought water types, respectively. The percent volume available for each water year type is based on the 1992 to 2003 average allocation (2021 Draft State Water Project Final Delivery Capability Report, DWR), 2014 allocation, and 1987 to 1992 average allocation, respectively.
- **Article 21 Water:** Assumed to be 568 AFY, 0 AFY, and 216 AFY for average, single-dry, and five-consecutive-year drought water types, respectively. This is based on the 2012 to 2020 average allocation, 2014 allocation, and 2012 to 2016 average allocation, respectively.
- **Vallejo Permit Water:** Assumed to be the full contracted volume (500 AFY) for all water year types.

- **Vallejo Treated Water:** Assumed to be full contracted volume (628.6 AFY) for average year water type and to be reduced by 20 percent for single-dry and consecutive dry year water types based on City of Vallejo’s WSCP Stage 2.
- **Vallejo Emergency Water:** Assumed to be full contracted volume (500 AFY) for single-dry and consecutive dry years 1 to 2, 400 AFY consecutive dry years 3 to 5, and to be 0 AFY for average year water type (based on historical past practice).

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	Available Supplies if Year Type Repeats	
		<input type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		<input checked="" type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	% of Average Supply
Average Year	See notes	4,609	100%
Single-Dry Year	See notes	1,763	38%
Consecutive Dry Years 1st Year	See notes	3,122	68%
Consecutive Dry Years 2nd Year	See notes	3,122	68%
Consecutive Dry Years 3rd Year	See notes	3,022	66%
Consecutive Dry Years 4th Year	See notes	3,022	66%
Consecutive Dry Years 5th Year	See notes	3,022	66%
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
<b>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</b>			
NOTES: Units of measure in this UWMP are acre-feet (AF). Base years vary by source. See narrative in Section 7.3.1 for details on base years.			

### 7.4 Water Service Reliability Assessment

10635(a). Every urban water Supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

The projected demand and supplies are compared in 5-year increments in Table 7-2, Table 7-3, and Table 7-4. The demand is based on the total water use from Table 4-3. The supply is based on the reasonably available volume from Table 6-9. The supply is adjusted by the percent of average supply for the year type.

#### 7.4.1 Normal Year

Table 7-2 provides an estimate of the projected normal year supply and demand totals.

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals (autofill from Table 6-9)	4,959	4,959	5,575	5,575	5,575
Demand totals (autofill from Table 4-3)	3,543	3,785	4,580	4,822	5,075
Difference	1,416	1,174	994	753	500
NOTES: Units of measure in this UWMP are acre-feet (AF).					

#### 7.4.2 Single-Dry Year

Table 7-3 provides an estimate of the projected single-dry year supply and demand totals. Demand reductions due to water shortage stage rationing measures are not included in the single-dry year demand estimates.

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	1,897	1,897	2,132	2,132	2,132
Demand totals*	3,543	3,785	4,580	4,822	5,075
Difference	(1,646)	(1,888)	(2,448)	(2,689)	(2,943)
*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.					
NOTES: Units of measure in this UWMP are acre-feet (AF).					

#### 7.4.3 Five-Consecutive-Year Drought

Table 7-4 provides an estimate of the projected five-consecutive-year drought supply and demand totals. Demand reductions due to water shortage stage rationing measures are not included in the five-consecutive-year drought demand estimates.

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	3,359	3,359	3,776	3,776	3,776
	Demand totals	3,543	3,785	4,580	4,822	5,075
	Difference	(184)	(426)	(804)	(1,046)	(1,299)
Second year	Supply totals	3,359	3,359	3,776	3,776	3,776
	Demand totals	3,543	3,785	4,580	4,822	5,075
	Difference	(184)	(426)	(804)	(1,046)	(1,299)
Third year	Supply totals	3,251	3,251	3,655	3,655	3,655
	Demand totals	3,543	3,785	4,580	4,822	5,075
	Difference	(291)	(534)	(925)	(1,167)	(1,420)
Fourth year	Supply totals	3,251	3,251	3,655	3,655	3,655
	Demand totals	3,543	3,785	4,580	4,822	5,075
	Difference	(291)	(534)	(925)	(1,167)	(1,420)
Fifth year	Supply totals	3,251	3,251	3,655	3,655	3,655
	Demand totals	3,543	3,785	4,580	4,822	5,075
	Difference	(291)	(534)	(925)	(1,167)	(1,420)
Sixth year (optional)	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES: Units of measure in this UWMP are acre-feet (AF).						

#### 7.4.4 Hazard Mitigation Plan

Napa County's Multi-Jurisdictional Hazard Mitigation Plan is available for review at <https://mitigatehazards.com/napa-county-mjhmp/documents/>. Refer to Section 8.7 for additional details.

## 7.5 Drought Risk Assessment

*10635(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following...*

*(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period. [Emphasis added]*

*(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.*

CWC Section 10635(b) is a new requirement for the 2020 UWMPs where suppliers are required to prepare a DRA with descriptions of data and methods used, basis for the supply shortage conditions, determination of the reliability of sources, and a comparison of the total water supplies and uses during the drought. The DRA will be submitted every five years in addition to conducting an annual water supply and demand assessment. Evaluation for the DRA is based on the five dry years with consideration of climate changes, regulations, and other local criteria. In the event of stressed hydrologic conditions, suppliers will consider management of their water supplies in relation to customer usage, identify potential system vulnerabilities, and provide explanations of assumptions and decisions on which the analysis was based.

A summary of the City's water supply DRA from 2021 through 2025 is summarized in Table 7-5. The total water use reflects unconstrained demand without reduction measures. The supplies are based on the following conservative assumptions:

- **“Table A” Allotment:** Assumed to be 5 percent, 5 percent, 22 percent, 25 percent, and 27 percent of the full contracted volume (5,200 AFY) for 2021 through 2025. The percent volume available is based on the single dry year allocation of 5 percent and the 4-year drought allocation of 22 percent in the 2021 Draft State Water Project Final Delivery Capability Report, DWR.
- **Article 21 Water:** Assumed to be 242 AFY the first year and then unavailable the remaining years.
- **Vallejo Permit Water:** Assumed to be the full contracted volume (500 AFY) for all years.
- **Vallejo Treated Water:** Assumed to be reduced by 20 percent for single-dry and consecutive dry years based on City of Vallejo's WSCP Stage 2.
- **Vallejo Emergency Water:** Assumed to be full contracted volume (500 AFY) for 2021 and 2022 and then 400 AFY for 2023 through 2025.

As shown, in Table 7-5, the City anticipates it can supply all its water demands by purchasing supplemental imported water through existing agreements through the planning horizon (2045) for all water year scenarios. Use reduction savings are not quantified in Table 7-5 (refer to Table 8-3).

<b>2021</b>		<b>Total</b>
Total Water Use		2,674
Total Supplies		2,005
Surplus/Shortfall w/o WSCP Action		(669)
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		669
WSCP - use reduction savings benefit		
Revised Surplus/(shortfall)		0
Resulting % Use Reduction from WSCP action		0%
<b>2022</b>		
<b>Total</b>		
Total Water Use		2,735
Total Supplies		1,763
Surplus/Shortfall w/o WSCP Action		(972)
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		972
WSCP - use reduction savings benefit		
Revised Surplus/(shortfall)		0
Resulting % Use Reduction from WSCP action		0%
<b>2023</b>		
<b>Total</b>		
Total Water Use		2,796
Total Supplies		2,547
Surplus/Shortfall w/o WSCP Action		(249)
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		249
WSCP - use reduction savings benefit		
Revised Surplus/(shortfall)		0
Resulting % Use Reduction from WSCP action		0%
<b>2024</b>		
<b>Total</b>		
Total Water Use		2,857
Total Supplies		2,703
Surplus/Shortfall w/o WSCP Action		(154)
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		154
WSCP - use reduction savings benefit		
Revised Surplus/(shortfall)		0
Resulting % Use Reduction from WSCP action		0%
<b>2025</b>		
<b>Total</b>		
Total Water Use		2,918
Total Supplies		2,807
Surplus/Shortfall w/o WSCP Action		(111)
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		111
WSCP - use reduction savings benefit		
Revised Surplus/(shortfall)		0
Resulting % Use Reduction from WSCP action		0%

## 7.6 Regional Supply Reliability

*10620 (f) an urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

The City is expanding the use of local water resources (recycled water, see Section 6.5.6) and reducing waste through the implementation of DMMs (see Chapter 9). The City's efforts help to reduce the need to purchase water from other agencies.



## Chapter 8

# WATER SHORTAGE CONTINGENCY PLAN

In response to the severe drought of 2012-2016, new legislation in 2018 created a WSCP mandate replacing the water shortage contingency analysis under former law. The new requirements are more prescriptive to have consistency throughout California. The City Municipal Code Water Conservation Plan Chapter 13.14, included in Appendix F, serves as the City's WSCP and may be amended as needed without amending this 2020 UWMP.

In the event any provision of this Chapter or the Water Conservation Plan (Appendix F) conflicts or overlaps with any mandatory State regulation related to water conservation, the most stringent shall apply.

### 8.1 WSCP Overview

The City's WSCP details the stages of actions to be taken during a reduction in available water supply. These actions are broken up based upon six possible stages of water shortage. Reductions in supply are most frequently associated with drought, but could also be the result of flooding, major fire emergencies, earthquakes, regional power outages, water contamination, and any other situation that could impact the City's water supply.

The goal of a WSCP is to have a procedure for managing and mitigating shortages allowing the City to respond in an efficient and timely manner. Water shortage response actions include demand reduction, supply augmentation, operational changes, and mandatory prohibitions to address shortage levels. The following sections summarize the City's water shortage stages and the measures employed during each stage, as outlined in the WSCP.

### 8.2 Stages of Action

The stages of action in response to water supply shortages, including greater than 50 percent reduction in water supply are summarized in Table 8-1. Detailed descriptions of each stage of action are included in the Water Conservation Plan (Appendix F).

<b>Submittal Table 8-1 Water Shortage Contingency Plan Levels</b>		
<b>Shortage Level</b>	<b>Percent Shortage Range</b>	<b>Shortage Response Actions (Narrative description)</b>
1	Up to 10%	Voluntary Conservation
2	Up to 20%	Water Alert
3	Up to 30%	Water Emergency
4	Up to 40%	Critical Water Emergency
5	Up to 50%	Severe Water Emergency
6	>50%	Catastrophic Interruption of Water Supplies (1)

NOTES: (1) Major catastrophe or contamination of the water supply including flooding, major fire emergencies, earthquakes, regional power outages, water contamination, and emergencies other than water shortage.

### 8.3 Demand Reduction

Table 8-2 contains demand reduction actions and the water shortage stage when they are enacted. These prohibitions are detailed in the Water Conservation Plan (Appendix F). Additionally, the City Municipal Code contains the Water Waste Prohibitions Ordinance (Section 13.14.060) (see Appendix F). This Water Waste Prohibitions Ordinance is in place at all times and is not dependent upon a water shortage for implementation.

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only Drop Down List</i>
<i>Add additional rows as needed</i>				
1-6	Landscape - Limit landscape irrigation to specific times	<5%		No
1-6	Provide Rebates on Plumbing Fixtures and Devices	<5%		
1-6	Other	<5%		No
2-6	Landscape - Prohibit certain types of landscape irrigation	<5%		Yes
2-6	Other	<5%		Yes
2-6	Other - Prohibit use of potable water for washing hard surfaces	<5%		Yes
2-6	Landscape - Prohibit certain types of landscape irrigation	<10%		Yes
2-6	Other water feature or swimming pool restriction	<5%		Yes
2-6	Water Features - Restrict water use for decorative water features, such as fountains	<5%		Yes
3-6	Landscape - Other landscape restriction or prohibition	<5%		Yes
4-6	Other	<5%		Yes
4-6	CII - Other CII restriction or prohibition	<5%		Yes
5-6	Other	<10%		Yes

NOTES: Refer to City Municipal Code Water Conservation Plan Chapter 13.14 for details on demand reduction actions.

On May 9, 2016, the Governor of California issued an Executive Order declaring the following practices be permanently prohibited:

- Hosing off sidewalks, driveways, and other hardscapes.
- Washing automobiles with hoses not equipped with a shut-off nozzle.
- Using non-recirculated water in a fountain or other decorative water feature.
- Watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation.
- Irrigating ornamental turf on public street medians.

#### 8.4 Supply Augmentation

The UWMPA requires that the UWMP include an urban water shortage contingency analysis that addresses methods to reduce consumption. Table 8-3 contains supply augmentation methods and other actions by water shortage stage.

Submittal Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>
<i>Add additional rows as needed</i>			
2-6	Other Purchases	Varies	Dry year agreements and turnback pool purchases vary by year.
6-Jan	Other Actions (describe)	<5%	Residential Recycled Water Fill Station
1-6	Expand Public Information Campaign	<5%	
2-6	Other Actions (describe)	<5%	Offer Water Use Surveys
1-6	Other Actions (describe)	<5%	Decrease Line Flushing
3-6	Other Actions (describe)	<5%	Increase Water Waste Patrols
4-6	Other Actions (describe)	<5%	Moratorium or Net Zero Demand Increase on New Connections
2-6	Implement or Modify Drought Rate Structure or Surcharge	<10%	
NOTES: Units of measure in this UWMP are acre-feet (AF).			

### 8.5 Annual Water Supply and Demand Assessment Procedures

The annual water supply and demand assessment identifies key data and methods for determining the supply reliability each year. The annual assessment is due to DWR on or before July 1 of each year, as required by CWC Section 10632.1. The assessment assumes the year following the planning calendar year is a dry year.

The annual supply and demand assessment will include:

- Anticipated shortage.
- Triggered shortage response actions.
- Compliance and enforcement actions.
- Communication actions.
- Review of assets.

#### 8.5.1 Timeline

The timeline for the annual supply and demand assessment is listed below and is subject to change.

- Preparation of draft supply and demand analysis – February.
- Submit and present assessment to City Manager – March.
- Update and finalize assessment – April.
- Receive City Manager approval – May or June.
- Annual supply and demand assessment – Due to DWR July 1.

#### 8.5.2 Decision-Making Process

The steps in the decision-making process that the City will use each year to determine and subsequently report to the state are listed below.

1. Determine supply available, infrastructure constraints, and expected demand.
2. Compare supply and demand and decide on the water supply reliability for the current year and one dry year.

3. Present the findings and recommendations of the Annual Assessment Report to the City Manager.
4. Prepare and submit the Annual Assessment Report to the state.
5. Determine the shortage levels and other conservation matters, including but not limited to any restrictions in the number of new service connections allowed annually for any or all portions of the City service area.
6. Maintenance and Utilities Director or a designated representative implements the provisions of the WSCP.

### 8.5.3 Key Data and Methodologies

The key data inputs and assessment methodology used to evaluate the City's water supply reliability for the current year and one dry year, include the following:

- Current year unconstrained demand, considering weather, growth, building permit trends, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.
- Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the City.
- Existing infrastructure capabilities and plausible constraints.
- A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.
- A description and quantification of each source of water supply.
- The California Drought Monitor.
- Precipitation on a calendar and weather year basis.
- Any potential State or regional actions related to drought and water use restrictions.

#### 8.5.3.1 Water Supply

The annual assessment will evaluate the current year available and one subsequent dry year. The available water supplies for the City shall be quantified each year by summing the available water supplies. Potential production constraints, hydrological, and regulatory conditions will be considered.

#### 8.5.3.2 Unconstrained Customer Demand

Water demand/consumption for the previous year shall be quantified by summing the meter usage of each customer class for the previous year. Customer water demands shall be projected for the upcoming year based on the previous year's water consumption and the projected population growth.

#### 8.5.3.3 Planned Water Use for Current Year Considering Dry Subsequent Year

The planned water use for the current year is not impacted by an anticipated subsequent dry year. When SWP or Vallejo supplies are reduced, the City can purchase supplemental imported water sources.

#### 8.5.3.4 Infrastructure Considerations

Infrastructure projects anticipated for the upcoming year that could impact water supply will be evaluated for the timeframe the projects will impact supply. The available water supply will be increased or reduced accordingly for each month.

### 8.5.3.5 Evaluation Criteria

Evaluation of the appropriate shortage level will include, but not be limited to, the following considerations:

- Current and recent trends in Delta levels.
- Other hydrological or other local conditions indicative of water supply available.
- The previous winter's precipitation.
- The previous year's water demand.
- Current and anticipated demand for water by City customers.
- Current and anticipated supply of City water sources.
- Damage to the City's water system.
- Predicted weather patterns.
- Water content of the snowpack.
- Climate change impacts.
- California Drought Monitor.
- Current or pending state and regional water use efficiency or drought related actions.

If the available water supply is greater than the anticipated customer demand for the upcoming year, then the City does not need to take any further action. If the anticipated customer demand for the upcoming year is greater than the available water supplies, or that additional conditions exist (such as a State declared drought emergency), the City can initiate water conservation actions as detailed in the WSCP.

### 8.5.3.6 Triggering Mechanisms for Shortage Levels

The triggering mechanisms to use as guidelines for the shortage levels include:

- System malfunction resulting in up to the percent shortage of a level or catastrophic interruption of water supplies.
- City or state declaration due to drought.
- Federal, state, or local disaster declaration that may impact water supplies.
- City determination.
- Unplanned City water system maintenance.

The City may impose any of the shortage levels based upon facts and circumstances which may not have been otherwise anticipated in this chapter or WSCP.

## 8.6 Catastrophic Supply Intervention

The UWMPA requires that the City develop stages of action to be undertaken during a catastrophic interruption of water supply or the City's water treatment facilities that could include flooding, major fire emergencies, regional power outage, an earthquake, water contamination, and acts of sabotage. In response to these possibilities, the City developed an Emergency Response Plan (ERP), which identifies the following goals:

- Rapidly restoring water service after an emergency.
- Ensuring adequate water supply for fire suppression.
- Minimizing water system damage.
- Minimizing impact and loss to customers.

- Minimizing negative impacts on public health and employee safety.
- Providing emergency public information concerning customer service.

The ERP includes emergency planning process and water system information, including mutual aid agreements, emergency resources, emergency water supply calculations, and information on alternate water supplies. The ERP also contains emergency response chain-of-command information, concepts of operation, response and notification procedures, water quality sampling procedures, emergency response training, and action plans.

## 8.7 Hazard Mitigation Plan

The City is located in the seismically active San Francisco Bay region. The City's main water transmission main is located less than a half mile from the West Napa Fault; however, all components of the City's water system are vulnerable to seismic activity.

Napa County's Multi-Jurisdictional Hazard Mitigation Plan is available for review at <https://mitigatehazards.com/napa-county-mjhmp/documents/>. The Hazard Mitigation Plan may be updated at any time. The most recent Hazard Mitigation Plan shall apply to the current WSCP.

## 8.8 Revenue and Expenditure Impacts

The City is fully metered and City customers are billed volumetrically. Therefore, the City may experience a decrease in revenue with reduced water sales during a water shortage. Although the variable costs of supplying water will be reduced as water usage decreases, the fixed costs will remain constant. The variable costs are linked to the purchase of imported water. The fixed costs include plant operations, salaries, debt service, capital projects, and other similar expenses.

Additional costs during water shortage situations could be associated with increased monitoring, efficiency incentives, and outreach, namely due to an increase in the hours required to monitor customer accounts and enforce reduction actions. The additional costs associated with this effort, however, are not expected to significantly impact revenues and expenditures.

To overcome a reduction in revenue due to a water shortage the City could adjust the water rates or develop a reserve fund.

### 8.8.1 Drought Rate Structures and Surcharges

Refer to the Water Conservation Plan Chapter 13.14 (Appendix F) for drought surcharges rates.

### 8.8.2 Use of Financial Reserves

The City has funding reserves established that can be utilized for a financially qualifying event, such as providing for the continued operation of the water system in the event of a decline in water service revenue.

### 8.8.3 Other Measures

The City will consider postponement of capital improvements and operational measures to temporarily reduce power and chemical costs as a means to overcome impacts from water shortage contingency planning to revenues and expenditures.

## 8.9 Monitoring and Reporting

The City is fully metered and City customers are billed volumetrically. The City uses these meters to monitor City-wide use, individual customer use, and track actual reductions in water use. By periodic review of customer water use, the City is able to track the effectiveness of the shortage level reduction actions, educate customers regarding water use, and also identify leaks and other areas where additional conservation may be possible.

Monitoring will be used to ensure appropriate data is collected, tracked, and analyzed for purposes of determining:

- Customer compliance.
- Effectiveness of reduction actions.
- Potential leaks in the distribution system.
- Accurate monthly demand data for the annual supply and demand assessment.

Monitoring and reporting key water use metrics is fundamental to water supply planning and management and will be a critical part of the annual supply and demand assessment. Monitoring is also essential to ensure that the shortage level response actions achieve their intended water use reduction purposes or to determine if improvements or new actions are needed. Monitoring for customer compliance tracking is useful in enforcement actions. It should be noted that timing, frequency, and metrics will likely be variable, depending on the water shortage level and enforcement action logistics.

The City can compare meter data with water use in prior months and during non-drought years to determine if it is achieving specific percentage goals for water consumption associated with the drought response levels. If the goals are not being met, the City can implement additional shortage response actions at any time.

## 8.10 WSCP Refinement Procedures

To evaluate the effectiveness of the WSCP and to ensure that procedures and practices developed under the WSCP are adequate and are being implemented properly, the City will perform audits of the program on a periodic basis, at least every 5 years in coordination with the UWMP update.

The City will perform a thorough review of monitoring and reporting program data to determine the effectiveness of the reduction actions and whether the procedures and provisions of the WSCP need to be revised. The review will compare the expected percent demand reduction against actual reductions and shortage response actions.

City staff, customers, and other interested parties may have suggested actions or procedures to refine the WSCP. The City will evaluate these on a case-by-case basis for incorporation into the WSCP.

## Chapter 9

# DEMAND MANAGEMENT MEASURES

The UWMPA requires that the UWMP involve a comprehensive discussion of the agency's water conservation measures.

*10631 (f)(A)... The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.30.*

*(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:*

*(i) Water waste prevention ordinances*

*(ii) Metering*

*(iii) Conservation pricing*

*(iv) Public education and outreach*

*(v) Programs to assess and manage distribution system real loss*

*(vi) Water conservation program coordination and staffing support.*

*(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measure, if implemented.*

This chapter presents details of the DMMs contained in the UWMPA, as well as the City's existing and planned efforts to further develop their water conservation program. The City is committed to water conservation and has implemented several policies and on-going programs that promote and encourage water conservation.

The UWMPA was amended in 2014 to streamline DMMs from 14 specific measures to 6 more general requirements and an "other" category. Brief descriptions of the City's current and planned implementation of DMMs are included in the following sections. The UWMPA did not make any changes to the DMM requirements for the 2020 UWMP.

### 9.1 Water Waste Prevention Ordinances

This DMM involves adoption of an ordinance prohibiting water waste. The City Municipal Code contains the Water Waste Prohibitions Ordinance (Section 13.14.060) (see Appendix F). This Water Waste Prohibitions Ordinance is in place at all times and is not dependent upon a water shortage for implementation. See Chapter 8 and the Water Conservation Plan Chapter 13.14 (Appendix F) for detailed information on stages of action, prohibitions of end uses, and penalties.

In addition, the City Municipal Code Chapters 16.14 (Water Efficient Landscaping under Building and Construction Codes) and 19.22 (Water Efficient Landscaping under Zoning) summarize additional ongoing conservation efforts of the City (see Appendices G and H).

### 9.1.1 Implementation over the Past Five Years

The City has recorded violations over the past five years.

### 9.1.2 Planned Implementation

The City will continue to enforce this DMM. The effectiveness of this DMM will be evaluated by monitoring the number of warnings and offenses. If an area is determined to have excessive violations, the City could implement a specific public outreach program informing the public about the Water Waste Prohibitions Ordinance.

## 9.2 Metering

Installing water meters and billing for actual water use provides a strong incentive for customers to use less water and equalizes service cost for each customer to their actual use (high water users would pay a more equitable share of the system costs). Water metering can reduce exterior landscape water use and can also achieve a modest reduction in interior water use.

### 9.2.1 Implementation over the Past Five Years

All of the City customers are metered and are billed on a monthly basis. In addition, the City supply turnouts are also metered.

### 9.2.2 Planned Implementation

The best way to evaluate the effectiveness of metering is periodic review of customer water use. The City could contact individual customers determined to have high water use.

## 9.3 Conservation Pricing

Water conservation is encouraged through a pricing system that rewards customers who use less water with financial incentives, while high water users are charged a higher rate. Often this is implemented through a tiered pricing system.

### 9.3.1 Implementation over the Past Five Years

The City has an increasing-tier water rate schedule for single-family residential use. These metered water rates consist of a fixed meter charge as well as a rate per unit (where 1 unit equals 748 gallons) based on usage (see Appendix I). Refer to the Water Conservation Plan Chapter 13.14 (Appendix F) for drought surcharges rates.

The City has an increasing-tier sewer rate schedule for single-family residential use, which consists of a flat rate based on the average monthly water use for January to March of the previous calendar year (see Appendix I). The City charges a sewer service rate for commercial customers based on a flat rate or water consumption, whichever is greater (see Appendix I).

### 9.3.2 Planned Implementation

Water rates are approved through fiscal year 2023. The water rates will continue to be in effect until new rates are adopted.

## 9.4 Public Education and Outreach

Examples for public education and outreach for water demand management can include coordination with other agencies and provision of programs promoting water conservation, speakers for the media or community groups, school education programs, public service

announcements, water conservation bill inserts, information booths at public events, websites, newsletters and newspaper articles, rebates, and daily water use comparisons on customer's bills.

#### **9.4.1 Implementation over the Past Five Years**

The City has implemented this DMM through the provision of flyers, brochures, and information packets to customers, as well as providing bill inserts promoting water conservation and providing information on the City website.

The City also supplies free individual items for indoor conservation, including adjustable massage showerheads, shower timers, faucet aerators, toilet dye kits to detect leaks, and replacement toilet flapper valves, which are available for pick up at City Hall.

#### **9.4.2 Planned Implementation**

Public information can be one of the best tools to conserve water. The City will continue to promote water conservation.

### **9.5 Programs to Assess and Manage Distribution System Real Loss**

This DMM focuses on the water distribution system itself, and includes water audits, leak detection, and repair. The first step in a water audit is relatively straightforward, involving comparison of the amount of water produced with the amount of water delivered to customers. The difference is termed "unaccounted water," which includes actual losses (leaks) in the distribution system, authorized but unmetered use (e.g., hydrant flushing and firefighting), unauthorized water use, and meter error.

#### **9.5.1 Implementation over the Past Five Years**

When a complaint is lodged regarding a potential water leak, the City takes swift action to identify and repair the given leak as warranted.

#### **9.5.2 Planned Implementation**

The best way to evaluate the effectiveness of this program is to compare water production data at the WTP with water consumption from the City's customers. To improve the effectiveness, the City should continue to review data and identify leaks for repair, perform an annual review of the AWWA audit information to determine if a full-scale system audit is warranted, and perform distribution leak detection when warranted and cost-effective.

### **9.6 Water Conservation Program Coordination and Staffing Support**

This DMM entails designating a Water Conservation Coordinator responsible for managing water conservation efforts, preparing conservation reports, promoting water conservation to agency staff, and evaluating the results of efforts. The Water Conservation Coordinator tasks may include, but are not limited to, monthly tracking of production versus consumption, enforcement of water use restrictions, and implementation of conservation programs.

#### **9.6.1 Implementation over the Past Five Years**

The City has not designated a Water Conservation Coordinator. The City's water conservation program is a coordinated effort amongst various City departments, including, but not limited to,

the City Manager's office (Administrative Department), Public Works, Parks and Recreation, and Community Development.

### 9.6.2 Planned Implementation

The City will continue to implement the City's water conservation program. The City could educate community volunteers to aid the City in water conservation efforts.

## 9.7 Other Demand Management Measures

The City will continue to evaluate implementation of new DMMs in the future.

### 9.7.1 Efficiency and Rebates

For residential and commercial/industrial customers, \$100 rebates are offered for replacing a toilet that uses more than 1.28 gallons per flush with a high-efficiency toilet with WaterSense label.

The City also offers rebates for replacing grass with drip-irrigated, low water-use plants, and permeable hardscape. \$1 per square foot (sf) rebates are available for single-family residential (up to 750 sf) and for homeowner's association [HOA]/multi-family/commercial/institutional (up to 2,500 sf).

Notifying customers of the available rebates could improve water conservation within the City.

### 9.7.2 Administrative Policies

The City implemented the following policies to promote water conservation:

- **Zero Water Footprint (ZWF) Policy:** This policy has a goal of no loss in reliability or increase in water rates for existing water service customers due to new demand for water within the City's water service area. Developers must ensure that all new developments offset the amount of increased potable water that will be consumed by their project on a one-to-one basis. Developers are required to minimize their demand for new potable water by using water efficient fixtures, consuming recycled water for non-potable uses when available, dual plumbing buildings, installing water wise landscaping and irrigation, and other appropriate measures. Methods for offsetting the increase in potable water consumption might include contributing to the City's existing conservation programs, converting an existing public use of potable water to recycled water, contributing to projects that reduce potable water demand, increase capacity to produce recycled water, or expand the reclaimed water system, or acquiring water supply from another source.
- **Municipal Code Chapter 13.10 New Water and Sewer Connections and Services:** This Chapter limits new industrial water users within the City's water service area to a net use of 650 gallons per acre per day (GPAD) and requires dual-plumbing with purple pipe. For use greater than 650 GPAD, offset options include, but are not limited to, retrofit of existing residences with low flow fixtures, purchase of otherwise developable land as permanent open space, or acquisition of other water supply resources as provided for by a water supply analysis that follows the ZWF methodology.
- **Administrative Policy 2011-01 on the Management and Allocation of Raw Water:** This policy has a goal of shifting the City's raw water customers (new and existing) from the

State Water Supply to alternative supplies (e.g., recycled water) and also provides for the development of an agricultural water conservation program.

- **Administrative Policy 2011-02 on the Management and Allocation of Recycled Water:** This policy has a goal of providing recycled water as a substitute for potable water as a first priority to the City's parks and then to other users for irrigation purposes. This policy establishes a framework for allocating the recycled water resource and encouraging the development of privately-owned seasonal, recycled water storage facilities.
- **Administrative Policy 2011-03 on the Implementation of ZWF Policy:** This policy has a goal of assigning or shifting commercial, industrial, and new residential water demands from the SWP supply to more reliable alternate sources of water. This policy describes the manner in which the City will consider and evaluate new development proposals and provides guidance on acceptable methods for offsetting new water demands within the existing water system or bringing new water supplies to the City.

### 9.8 Planned Implementation to Achieve Water Use Targets

The City has met their 2020 target of 162 gpcd. If the City can maintain water consumption rates, it will maintain conservation goals.



## Chapter 10

# PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

The City prepared this 2020 UWMP during the fall of 2021 through summer of 2022. A completed UWMP checklist is included in Appendix J.

### 10.1 Inclusion of All 2020 Data

The 2020 UWMPs must include the water use and planning data for the entire year of 2020. The City is reporting on a calendar year basis and therefore, 2020 data includes the months of January to December 2020.

### 10.2 Notice of Public Hearing

A public hearing was held on August 16, 2022, prior to adoption of the UWMP at the Council Chambers of the City Hall, 4381 Broadway Street. Notices were provided to cities and counties, and the public. The public hearing provided an opportunity for the public to provide input to the plan before it is adopted. Additionally, the public hearing provided an opportunity for the City's customers, residents, and employees to learn and ask questions about the current and future water supply of the City.

#### 10.2.1 Notice to Cities and Counties

*10621(b) Every urban water supplier required to prepare a plan shall... at least 60 days prior to the public hearing on the plan... notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*

*10642... The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area...*

The cities and counties to which the City provides water supplies and other agencies, as shown in Table 10-1, were provided 60-day notification (prior to the public hearing) that the City was in the process of preparing the 2020 UWMP. The 60-day notification letters are included in Appendix B. The cities and counties were provided a notice of public hearing, including the time and location. The notice of public hearing to cities and counties is included in Appendix B.

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
City of Napa	Yes	Yes
City of Vallejo	Yes	Yes
City of Rio Vista	Yes	Yes
City of Dixon	Yes	Yes
City of Calistoga	Yes	Yes
City of Benicia	Yes	Yes
City of Vacaville	Yes	Yes
City of Fairfield	Yes	Yes
County Name <i>Drop Down List</i>	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
Napa County	Yes	Yes
NOTES: Napa County refers to the Napa County Conservation, Development and Planning and the Napa County Flood Control and Water Conservation District.		

**10.2.2 Notice to the Public**

*10642... Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection... Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code...*

The UWMPA requires that the UWMP show the water agency solicited public participation. The notice to the public was included in a local newspaper as prescribed in Government Code 6066. This notice included the time and location of the public hearing, in addition to the location of where the UWMP was available for public inspection. The notice of public hearing to the public is included in Appendix B.

On March 23, 2022, and April 6, 2022, the City placed a notice in The Reporter, Daily Democrat, and Times-Herald (local newspapers) stating that its UWMP was being updated and that a public hearing was to be conducted to address comments and concerns from members of the community. The notice stated that a public review period was scheduled through April 6, 2022, for written comments. The review period was extended through August 16, 2022.

The Draft 2020 UWMP was available for public inspection during normal business hours at City Hall's customer service counter, located at 4381 Broadway Street, as well as the City website ([www.cityofamericancanyon.org](http://www.cityofamericancanyon.org)).

### 10.2.3 Notice to Agencies and Organizations

The following agencies and organizations were provided notice that the City was in the process of preparing the 2020 UWMP:

- Local Agency Formation Commission.
- NSD.
- Reclamation District 2068.
- Solano County Water Agency.
- Solano Irrigation District.
- Napa Valley Unified School District.
- Amcan Beverages, Inc.
- G. L. Mezzetta, Inc.
- American Canyon Mobile Home Park.
- Wal-Mart Stores, Inc.

The agencies and organizations were provided 60-day notification (prior to the public hearing) and a notice of public hearing, including the time and location. The 60-Day Notification letters and the notice of public hearing are included in Appendix B.

### 10.3 Public Hearing and Adoption

*10642... Prior to adopting a plan, the urban water supplier shall hold a public hearing thereon.*

*10608.26(a). In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:*

*(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.*

*(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.*

*(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20 for determining its urban water use target.*

*10642... After the hearing, the plan shall be adopted as prepared or as modified after the hearing.*

The plan was adopted by City Council at a public hearing on August 16, 2022. The City Resolution is included in Appendix K. The hearing provided an opportunity for the City's customers, residents, and employees to learn and ask questions about the current and future water supply of the City. At the hearing, the UWMP, water use targets, and conservation implementation plan were discussed.

#### 10.3.1 Adoption

After the public hearing, the 2020 UWMP was adopted as prepared.

## **10.4 Plan Submittal**

The public hearing will be followed by submittal of the UWMP to the California DWR, the California State Library, and Cities and Counties (see Commitment to Distribute in Appendix B).

### **10.4.1 Submission to DWR**

The 2020 UWMP will be submitted to DWR within 30 days of adoption.

### **10.4.2 Electronic Data Submission**

The 2020 UWMP, in addition to tabular data, will be submitted using WUE data submittal tool.

### **10.4.3 Submission to the California State Library**

The 2020 UWMP will be submitted in CD or hardcopy format to the California State Library within 30 days of adoption.

### **10.4.4 Submission to Cities and Counties**

The 2020 UWMP will be submitted in electronic format to cities and counties within 30 days of adoption.

## **10.5 Public Availability**

Within 30 days of submitting the UWMP to DWR, the adopted UWMP will be available for public review during normal business hours at the locations specified herein.

## **10.6 Amending and Adopted UWMP**

The plan may be updated at any time when the urban water supplier believes significant changes have occurred in population, land use, and/or water sources that may affect the contents of the plan. Copies of amendments or changes to the plan shall be submitted electronically to DWR, the California State Library, and any cities or counties which the City provides water supplies within 30 days of adoption.

Appendix A  
REDUCED DELTA RELIANCE





City of American Canyon

## DEMONSTRATION OF REDUCED DELTA RELIANCE

REVISED DRAFT | August 2022







City of American Canyon

## DEMONSTRATION OF REDUCED DELTA RELIANCE

REVISED DRAFT | August 2022

This document is released for the purpose of information exchange review and planning only under the authority of Nicola A. Fontaine, August 2022, California PE No. 76863.



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## Abbreviations

AF	acre-feet
AFY	acre-feet per year
CCR	California Code of Regulations
City	City of American Canyon
Delta	Sacramento-San Joaquin Delta
DWR	California Department of Water Resources
FCWCD	Flood Control and Water Conservation District
SWP	State Water Project
SWRCB	State Water Resources Control Board
UWMP	Urban Water Management Plan



## Section 1

# INTRODUCTION

The Sacramento-San Joaquin Delta Reform Act of 2009 requires State and local public agencies with a “covered action” to submit a written certification of consistency to the Delta Stewardship Council as to whether the covered action is consistent with applicable policies. The City of American Canyon (City) receives supply through the State Water Project (SWP) by contract with Napa County Flood Control and Water Conservation District (FCWCD) and through an agreement with Vallejo for Delta water. Both supplies impact the Sacramento-San Joaquin Delta (Delta). Covered actions can include a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta. Therefore, the City is required to demonstrate consistency with Delta Plan Policy WR P1 (Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance). Delta Plan Policy WR P1 identifies Urban Water Management Plans (UWMP) as the tool to demonstrate consistency with State policy to reduce reliance on the Delta for a Supplier that carries out or takes part in a covered action.

The purpose of this document is to demonstrate compliance with the Sacramento-San Joaquin Delta Reform Act of 2009 and provide an analysis of the City’s reduced reliance on the Delta and expected outcomes in accordance with State protocols. The analysis provided herein includes the WR P1 requirements needed in a water supplier’s UWMP to support a certification of consistency for covered actions. The inclusion of this document as an appendix in the 2015 and 2020 UWMPs fulfills the requirements of WR P1. Future projects under evaluation will fulfill the requirements of WR P1.

## Section 2

# DELTA PLAN POLICY WR P1 REQUIREMENTS

WR P1 details the requirements for a covered action to demonstrate consistency with reduced reliance on the Delta and improved regional self-reliance. WR P1 subsection (a) states that: Water shall not be exported from, transferred through, or used in the Delta if all of the following apply:

- One or more water suppliers that would receive water as a result of the export, transfer, or use have failed to adequately contribute to reduced reliance on the Delta and improved regional self-reliance consistent with all of the requirements listed in paragraph (1) of subsection (c).
- That failure has significantly caused the need for the export, transfer, or use.
- The export, transfer, or use would have a significant adverse environmental impact in the Delta.

WR P1 subsection (c)(1) further defines what adequately contributing to reduced reliance on the Delta means in terms of (a) above. Water suppliers that have done all the following are contributing to reduced reliance on the Delta and improved regional self-reliance and are therefore consistent with this policy:

- Completed a current UWMP which has been reviewed by the California Department of Water Resources (DWR) for compliance with the applicable requirements of Water Code Division 6, Parts 2.55, 2.6, and 2.8;
- Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta; and
- Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code section 1011(a).

California Code of Regulations (CCR), Title 23, § 5003(c) is followed by a description of programs and projects that reduce reliance on the Delta. Programs and projects that reduce reliance could include, but are not limited to, improvements in water use efficiency, water recycling, stormwater capture and use, advanced water technologies, conjunctive use projects, local and regional water supply and storage projects, and improved regional coordination of local and regional water supply efforts.

## Section 3

# DEMONSTRATION OF REDUCED DELTA RELIANCE

The approach to determine the City's reduced Delta reliance and improved regional self-reliance is consistent with the approach detailed by the California DWR in Appendix C of their "Urban Water Management Plan Guidebook 2020" (DWR Guidebook), issued in March 2021. The data used in the reduced reliance analysis for demands and supplies is detailed below. All data represent average or normal water year conditions and were obtained from the 2020 UWMP, previously adopted UWMPs, and City records.

The data inputs used in the reduced reliance analysis include:

- Water Years:
  - Baseline (2010) – The analysis uses a normal water year representation of 2010 as the baseline, which is consistent with the approach described in the DWR

- Guidebook. Data for the City's 2010 baseline are taken from City records and information presented in the City's 2015 UWMP.
- 2015 and 2020 Conditions – The actual conditions for 2015 and 2020 are based on data reported in the City's 2015 and 2020 UWMPs, respectively.
  - 2025-2045 Conditions – Normal year projections for 2025 through 2045 are taken from the City's 2020 UWMP.
  - Service Area Water Demands with Water Use Efficiency Accounted For – These values reflect the City's actual and projected water use, including potable water demands, agricultural raw water, and losses.
  - Non-Potable Water Demands – These values consist of agricultural raw water that is not treated.
  - Population – Population data for 2010 and 2015 are taken from previous UWMPs. The population for 2020 and projected populations are taken from the 2020 UWMP.
  - Water Supplies Contributing to Regional Self-Reliance:
    - Water Use Efficiency – This amount is calculated by DWR's spreadsheet tool based on the City's baseline demand, actual demands, and projected demands. Calculated by multiplying the reduction in per capita water demand from the baseline (2010) for a year by the actual or projected population for the same year. For example, in 2025 there would be a gain of 481 acre-feet (AF) in supply from water use efficiency.
    - Water Recycling – Reflects the actual or projected recycled water delivered to customers within the City's drinking water service area. Recycled water contributes to regional self-reliance by reducing the demand for potable water. Note that there was no recycled water delivered within the service area in 2010. For example, in 2025 there would be a gain of 625 AF in supply from water recycling.
    - Other Programs – Distribution loss reductions are anticipated due to City programs. The 2020 UWMP assumed a water loss of 7.5 percent of potable demands. If this was reduced to 5.0 percent, it would contribute to reduced reliance. The difference between the losses estimated at 7.5 percent and 5.0 percent are included in the table for 2025-2045. For example, in 2025 the difference between 7.5 percent and 5.0 percent losses would be a gain of 63 AF in supply.
    - Other categories in the table do not currently apply to the City's supply portfolio. Supply options the city is evaluating include surface water storage at Lake Curry, groundwater production wells outside of City limits, and potable reuse of recycled water.
  - Water Supplies from the Delta Watershed:
    - The City sub-contracts with the Napa County FCWCD for imported surface water from the SWP.
    - The City has an agreement with Vallejo to purchase raw and treated water. Vallejo has an appropriative water right for Delta water from the State Water Resources Control Board (SWRCB) pre-dating the construction of the SWP.

Tables 1 and 2 contain demand calculations. Table 3 contains the regional self-reliance analysis and Table 4 contains the analysis of the City's reduced Delta reliance. The tables were generated using DWR's spreadsheet tool and fulfill the requirements of WR P1 subsection (c)(1) Paragraph C.

## Section 4

# EXPECTED OUTCOMES FOR REDUCED RELIANCE ON THE DELTA

As stated in WR P1(c)(1)(C), commencing in 2015, UWMPs are required to include expected outcomes for measurable reduction in Delta reliance and improved regional self-reliance. WR P1 further states that those outcomes shall be reported in the UWMP as the reduction in the amount or percentage of water used from the Delta. The following provides a summary of the near-term (2025) and long-term (2045) expected outcomes for the City's Delta reliance and regional self-reliance based on the assumptions described in the previous section and DWR's analysis tool. The results show that the City is measurably reducing reliance on the Delta and improving regional self-reliance, based on the percentage of the City's water supplies from the Delta watershed.

Expected Outcomes for Regional Self-Reliance (Table 3):

- Near-term (2025) – Normal water year regional self-reliance is expected to increase from 358 acre-feet per year (AFY) in 2015 to 1,169 AFY in 2025. This is achieved through water use efficiency, increased recycled water use, and distribution system loss reductions.
- Long-term (2045) – Normal water year regional self-reliance is expected to increase from 1,169 AFY in 2025 to 2,149 AFY in 2045. This is achieved through water use efficiency, increased recycled water use, and distribution system loss reductions.

Expected Outcomes for Percent of Water Supplies from the Delta Watershed (Table 4):

- Near-term (2025) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 45 percent relative to the 2010 baseline.
- Long-term (2045) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 6.6 percent relative to the 2010 baseline.

## Section 5

# NEW APPENDIX TO 2015 UWMP

The information contained in this document is also included as a new Appendix G to the City's 2015 UWMP, consistent with WR P1 subsection (c)(1)(C) (CCR, Title 23, Section 5003). As described in Chapter 10 of its 2020 UWMP, the City followed the required public notification, public review and hearing, and adoption processes required by the Urban Water Management Planning Act. Appendix G to the City's 2015 UWMP, the 2020 UWMP (including this Appendix), and the City Municipal Code Water Conservation Plan Chapter 13.14 were adopted by the City Council on August 16, 2022 (see Appendix K of the 2020 UWMP).

Table 1 Calculation of Water Use Efficiency

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	3,024	2,976	2,613	2,918	3,160	3,339	3,581	3,834
Non-Potable Water Demands	33	56	63	63	63	-	-	-
Potable Service Area Demands with Water Use Efficiency Accounted For	2,991	2,920	2,550	2,855	3,097	3,339	3,581	3,834

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Population	19,392	20,315	19,524	21,628	23,732	25,836	27,940	30,170

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Per Capita Water Use (GPCD)	138	128	117	118	117	115	114	113
Change in Per Capita Water Use from Baseline (GPCD)		(9)	(21)	(20)	(21)	(22)	(23)	(24)
Estimated Water Use Efficiency Since Baseline		213	461	481	563	646	728	819

Table 2 Calculation of Service Area Water Demands Without Water Use Efficiency

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	3,024	2,976	2,613	2,918	3,160	3,339	3,581	3,834
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline	-	213	461	481	563	646	728	819
Service Area Water Demands without Water Use Efficiency Accounted For	3,024	3,189	3,074	3,399	3,723	3,985	4,309	4,653

Table 3 Calculation of Supplies Contributing to Regional Self-Reliance

<b>Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Water Use Efficiency		213	461	481	563	646	728	819
Water Recycling	-	145	208	625	625	1,241	1,241	1,241
Stormwater Capture and Use	-	-	-	-	-	-	-	-
Advanced Water Technologies	-	-	-	-	-	-	-	-
Conjunctive Use Projects	-	-	-	-	-	-	-	-
Local and Regional Water Supply and Storage Projects	-	-	-	-	-	-	-	-
Other Programs and Projects the Contribute to Regional Self-Reliance	-	-	-	63	69	78	83	89
<b>Water Supplies Contributing to Regional Self-Reliance</b>	<b>-</b>	<b>358</b>	<b>669</b>	<b>1,169</b>	<b>1,257</b>	<b>1,965</b>	<b>2,052</b>	<b>2,149</b>
<b>Service Area Water Demands without Water Use Efficiency</b>								
<b>(Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Service Area Water Demands without Water Use Efficiency Accounted For	3,024	3,189	3,074	3,399	3,723	3,985	4,309	4,653
<b>Change in Regional Self Reliance</b>								
<b>(Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Water Supplies Contributing to Regional Self-Reliance	-	358	669	1,169	1,257	1,965	2,052	2,149
Change in Water Supplies Contributing to Regional Self-Reliance		358	669	1,169	1,257	1,965	2,052	2,149
<b>Percent Change in Regional Self Reliance</b>								
<b>(As Percent of Demand w/out WUE)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Percent of Water Supplies Contributing to Regional Self-Reliance	0.0%	11.2%	21.8%	34.4%	33.8%	49.3%	47.6%	46.2%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		11.2%	21.8%	34.4%	33.8%	49.3%	47.6%	46.2%

Table 4 Calculation of Reliance on Water Supplies from the Delta Watershed

<b>Water Supplies from the Delta Watershed (Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
CVP/SWP Contract Supplies	2,373	2,346	2,051	3,205	3,205	3,205	3,205	3,205
Delta/Delta Tributary Diversions								
Transfers and Exchanges								
Other Water Supplies from the Delta Watershed	570	566	558	1,629	1,629	1,629	1,629	1,629
<b>Total Water Supplies from the Delta Watershed</b>	<b>2,943</b>	<b>2,912</b>	<b>2,609</b>	<b>4,834</b>	<b>4,834</b>	<b>4,834</b>	<b>4,834</b>	<b>4,834</b>
<b>Service Area Water Demands without Water Use Efficiency</b>								
<b>Service Area Water Demands without Water Use Efficiency (Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Service Area Water Demands without Water Use Efficiency Accounted For	3,024	3,189	3,074	3,399	3,723	3,985	4,309	4,653
<b>Change in Supplies from the Delta Watershed</b>								
<b>Change in Supplies from the Delta Watershed (Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Water Supplies from the Delta Watershed	2,943	2,912	2,609	4,834	4,834	4,834	4,834	4,834
Change in Water Supplies from the Delta Watershed		(31)	(334)	1,891	1,891	1,891	1,891	1,891
<b>Percent Change in Supplies from the Delta Watershed</b>								
<b>Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Percent of Water Supplies from the Delta Watershed	97.3%	91.3%	84.9%	142.2%	129.8%	121.3%	112.2%	103.9%
Change in Percent of Water Supplies from the Delta Watershed		-6.0%	-12.5%	44.9%	32.5%	24.0%	14.8%	6.6%



Appendix B  
OUTREACH DOCUMENTS





November 3, 2021

Amcan Beverages, Inc.  
1201 Commerce Boulevard  
American Canyon, CA 94503

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

This letter is intended to notify your agency that the City of American Canyon (City) is in process of preparing the 2020 Urban Water Management Plan (UWMP). The City is located in Napa County and supplies potable and recycled water to approximately 20,000 residents and businesses through approximately 5,600 connections. The City's water service area is approximately 5 square miles and includes the city limits as well as the industrial/commercial area to the north along State Highway 29, including the Napa Airport Industrial Park.

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Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

American Canyon Mobile Home Park  
260 American Canyon Road  
American Canyon, CA 94503

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

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cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

City of Benicia  
250 East L Street  
Benicia, CA 94510

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

City of Calistoga Public Works  
414 Washington Street  
Calistoga, CA 94515

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

City of Dixon  
600 East A Street  
Dixon, CA 95620

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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Sincerely,

CITY OF AMERICAN CANYON

A handwritten signature in blue ink, appearing to read "Felix Hernandez III".

Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

City of Fairfield  
1000 Webster Street  
Fairfield, CA 94533

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

This letter is intended to notify your agency that the City of American Canyon (City) is in process of preparing the 2020 Urban Water Management Plan (UWMP). The City is located in Napa County and supplies potable and recycled water to approximately 20,000 residents and businesses through approximately 5,600 connections. The City's water service area is approximately 5 square miles and includes the city limits as well as the industrial/commercial area to the north along State Highway 29, including the Napa Airport Industrial Park.

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Sincerely,

CITY OF AMERICAN CANYON

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Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

City of Napa Water Division  
1340 Clay Street  
Napa, CA 94559

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

This letter is intended to notify your agency that the City of American Canyon (City) is in process of preparing the 2020 Urban Water Management Plan (UWMP). The City is located in Napa County and supplies potable and recycled water to approximately 20,000 residents and businesses through approximately 5,600 connections. The City's water service area is approximately 5 square miles and includes the city limits as well as the industrial/commercial area to the north along State Highway 29, including the Napa Airport Industrial Park.

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Sincerely,

CITY OF AMERICAN CANYON

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Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

City of Rio Vista Public Works  
1 Main Street  
Rio Vista, CA 94571

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

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cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

City of Vacaville  
650 Merchant Street  
Vacaville, CA 95688

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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CITY OF AMERICAN CANYON

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Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

City of Vallejo Water Division  
202 Fleming Hill Road  
Vallejo, CA 94589

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

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cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

G. L. Mezzetta, Inc.  
105 Mezzetta Court  
American Canyon, CA 94503

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CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

Local Agency Formation Commission  
1030 Seminary Street, Suite B  
Napa, CA 94559

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Felix Hernandez III  
Maintenance and Utilities Director

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cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

Napa County Conservation, Development and Planning  
1195 Third Street, Room 210  
Napa, CA 94559

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CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

Napa County Flood Control and Water Conservation District  
804 First Street  
Napa, CA 94559

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CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

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November 3, 2021

Napa Sanitation District  
1515 Soscol Ferry Road  
Napa, CA 94558

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

This letter is intended to notify your agency that the City of American Canyon (City) is in process of preparing the 2020 Urban Water Management Plan (UWMP). The City is located in Napa County and supplies potable and recycled water to approximately 20,000 residents and businesses through approximately 5,600 connections. The City's water service area is approximately 5 square miles and includes the city limits as well as the industrial/commercial area to the north along State Highway 29, including the Napa Airport Industrial Park.

UWMPs are prepared and adopted by urban water suppliers of a certain size every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their current and future water demands. A complete UWMP is necessary for the City to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

The City is encouraging participation by land use agencies, water use agencies, and other interested parties in the UWMP. The City would like to extend to your agency an opportunity to meet with us to go over the various elements of the UWMP, including assumptions about future population, future water demand, future water supplies, and upcoming water conservation programs.

Based on the City's current schedule, we anticipate that a draft of the 2020 UWMP will be available for public review in late 2021 prior to adoption in early 2022. Your agency will receive a notification letter when the draft UWMP is available for public review.

If your agency would like to learn more about the 2020 UWMP, submit questions or comments, or provide input to the City, please contact me at (707) 647-4525 or [fhernandez@cityofamericancanyon.org](mailto:fhernandez@cityofamericancanyon.org).

Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

A handwritten signature in blue ink, appearing to read "Felix Hernandez III".

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

Napa Valley Unified School District  
2425 Jefferson Street  
Napa, CA 94558

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

This letter is intended to notify your agency that the City of American Canyon (City) is in process of preparing the 2020 Urban Water Management Plan (UWMP). The City is located in Napa County and supplies potable and recycled water to approximately 20,000 residents and businesses through approximately 5,600 connections. The City's water service area is approximately 5 square miles and includes the city limits as well as the industrial/commercial area to the north along State Highway 29, including the Napa Airport Industrial Park.

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Sincerely,

CITY OF AMERICAN CANYON

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Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

Reclamation District 2068  
7178 Yolano Road  
Dixon, CA 95620

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

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cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

Solano County Water Agency  
810 Vaca Valley Parkway #203  
Vacaville, CA 95688

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

This letter is intended to notify your agency that the City of American Canyon (City) is in process of preparing the 2020 Urban Water Management Plan (UWMP). The City is located in Napa County and supplies potable and recycled water to approximately 20,000 residents and businesses through approximately 5,600 connections. The City's water service area is approximately 5 square miles and includes the city limits as well as the industrial/commercial area to the north along State Highway 29, including the Napa Airport Industrial Park.

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Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

Solano Irrigation District  
810 Vaca Valley Parkway #201  
Vacaville, CA 95688

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

A handwritten signature in blue ink, appearing to read "Felix Hernandez III".

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





November 3, 2021

Wal-Mart Stores, Inc. #1651  
7011 Main Street  
American Canyon, CA 94503

**Subject: Notice of Preparation of the 2020 City of American Canyon Urban Water Management Plan**

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Sincerely,

CITY OF AMERICAN CANYON

Felix Hernandez III  
Maintenance and Utilities Director

A handwritten signature in black ink, appearing to read "Felix Hernandez III". The signature is written in a cursive style and is positioned to the right of the printed name.

cc: Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

Wal-Mart Stores, Inc. #1651  
7011 Main Street  
American Canyon, CA 94503

**Subject: Notice of Public Hearing**

Pursuant to the California Water Code section 10642, the City Council of the City of American Canyon will conduct a Public Hearing to take testimony regarding the adoption of the updated Urban Water Management Plan (UWMP) and updated Water Conservation Plan Ordinance for the City of American Canyon. The hearing is scheduled for April 19, 2022 at 6:30 PM or as soon thereafter as possible on the following in the City Hall Council Chambers at 4381 Broadway Street, American Canyon. A copy of the UWMP and Water Conservation Plan Ordinance can be reviewed during normal business hours at City Hall's customer service counter, located at 4381 Broadway Street, or by visiting the City's website at [www.cityofamericancanyon.org](http://www.cityofamericancanyon.org). Interested persons are invited to attend. In compliance with the ADA, if you need assistance to participate in this meeting, you should contact the City at (707) 647-4360. Notification 72 hours prior to the meeting will enable the City to make reasonable arrangements to assure accessibility to this meeting. Council Chambers are handicapped accessible.

If your agency would like to learn more about the 2020 UWMP, submit questions or comments, or provide input to the City, please contact me at (707) 258-1269 or [dpatrick@cityofamericancanyon.org](mailto:dpatrick@cityofamericancanyon.org)

Sincerely,

CITY OF AMERICAN CANYON

A handwritten signature in black ink, appearing to read "DP", written over a horizontal line.

Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

Solano Irrigation District  
810 Vaca Valley Parkway #201  
Vacaville, CA 95688

**Subject: Notice of Public Hearing**

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Sincerely,

CITY OF AMERICAN CANYON

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Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

Solano County Water Agency  
810 Vaca Valley Parkway #203  
Vacaville, CA 95688

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Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

Napa Valley Unified School District  
2425 Jefferson Street  
Napa, CA 94558

**Subject: Notice of Public Hearing**

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Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

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1515 Sausal Ferry Road  
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Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

Napa County Flood Control and Water Conservation District  
804 First Street  
Napa, CA 94559

Subject: **Notice of Public Hearing**

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Dominic Patrick  
Water System Manager

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Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

Napa County Conservation, Development and Planning  
1195 Third Street, Room 210  
Napa, CA 94559

Subject: **Notice of Public Hearing**

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Water System Manager

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Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

Reclamation District 2068  
7178 Yolano Road  
Dixon, CA 95620

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Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

City of Rio Vista Public Works  
1 Main Street  
Rio Vista, CA 94571

Subject: **Notice of Public Hearing**

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Dominic Patrick  
Water System Manager

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Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

City of Napa Water Division  
1340 Clay Street  
Napa, CA 94559

**Subject: Notice of Public Hearing**

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Water System Manager

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Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

Local Agency Formation Commission  
1030 Seminary Street, Suite B  
Napa, CA 94559

Subject: **Notice of Public Hearing**

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CITY OF AMERICAN CANYON

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Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

G. L. Mezzetta, Inc.  
105 Mezzetta Court  
American Canyon, CA 94503

**Subject: Notice of Public Hearing**

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**Dominic Patrick**  
**Water System Manager**

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

City of Vallejo Water Division  
202 Fleming Hill Road  
Vallejo, CA 94589

**Subject: Notice of Public Hearing**

Pursuant to the California Water Code section 10642, the City Council of the City of American Canyon will conduct a Public Hearing to take testimony regarding the adoption of the updated Urban Water Management Plan (UWMP) and updated Water Conservation Plan Ordinance for the City of American Canyon. The hearing is scheduled for April 19, 2022 at 6:30 PM or as soon thereafter as possible on the following in the City Hall Council Chambers at 4381 Broadway Street, American Canyon. A copy of the UWMP and Water Conservation Plan Ordinance can be reviewed during normal business hours at City Hall's customer service counter, located at 4381 Broadway Street, or by visiting the City's website at [www.cityofamericancanyon.org](http://www.cityofamericancanyon.org). Interested persons are invited to attend. In compliance with the ADA, if you need assistance to participate in this meeting, you should contact the City at (707) 647-4360. Notification 72 hours prior to the meeting will enable the City to make reasonable arrangements to assure accessibility to this meeting. Council Chambers are handicapped accessible.

If your agency would like to learn more about the 2020 UWMP, submit questions or comments, or provide input to the City, please contact me at (707) 258-1269 or [dpatrick@cityofamericancanyon.org](mailto:dpatrick@cityofamericancanyon.org)

Sincerely,

CITY OF AMERICAN CANYON

A handwritten signature in black ink, appearing to be "DP" with a stylized flourish.

Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

City of Vacaville  
650 Merchant Street  
Vacaville, CA 95688

**Subject: Notice of Public Hearing**

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Sincerely,

CITY OF AMERICAN CANYON

A handwritten signature in black ink, appearing to read "D Patrick".

**Dominic Patrick**  
**Water System Manager**

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

City of Benicia  
250 East L Street  
Benicia, CA 94510

Subject: **Notice of Public Hearing**

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Sincerely,

CITY OF AMERICAN CANYON

A handwritten signature in black ink, appearing to read "D Patrick".

Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

City of Calistoga Public Works  
414 Washington Street  
Calistoga, CA 94515

**Subject: Notice of Public Hearing**

Pursuant to the California Water Code section 10642, the City Council of the City of American Canyon will conduct a Public Hearing to take testimony regarding the adoption of the updated Urban Water Management Plan (UWMP) and updated Water Conservation Plan Ordinance for the City of American Canyon. The hearing is scheduled for April 19, 2022 at 6:30 PM or as soon thereafter as possible on the following in the City Hall Council Chambers at 4381 Broadway Street, American Canyon. A copy of the UWMP and Water Conservation Plan Ordinance can be reviewed during normal business hours at City Hall's customer service counter, located at 4381 Broadway Street, or by visiting the City's website at [www.cityofamericancanyon.org](http://www.cityofamericancanyon.org). Interested persons are invited to attend. In compliance with the ADA, if you need assistance to participate in this meeting, you should contact the City at (707) 647-4360. Notification 72 hours prior to the meeting will enable the City to make reasonable arrangements to assure accessibility to this meeting. Council Chambers are handicapped accessible.

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Sincerely,

CITY OF AMERICAN CANYON

A handwritten signature in black ink, appearing to read "D. Patrick".

Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

Amcan Beverages, Inc.  
1201 Commerce Boulevard  
American Canyon, CA 94503

**Subject: Notice of Public Hearing**

Pursuant to the California Water Code section 10642, the City Council of the City of American Canyon will conduct a Public Hearing to take testimony regarding the adoption of the updated Urban Water Management Plan (UWMP) and updated Water Conservation Plan Ordinance for the City of American Canyon. The hearing is scheduled for April 19, 2022 at 6:30 PM or as soon thereafter as possible on the following in the City Hall Council Chambers at 4381 Broadway Street, American Canyon. A copy of the UWMP and Water Conservation Plan Ordinance can be reviewed during normal business hours at City Hall's customer service counter, located at 4381 Broadway Street, or by visiting the City's website at [www.cityofamericancanyon.org](http://www.cityofamericancanyon.org). Interested persons are invited to attend. In compliance with the ADA, if you need assistance to participate in this meeting, you should contact the City at (707) 647-4360. Notification 72 hours prior to the meeting will enable the City to make reasonable arrangements to assure accessibility to this meeting. Council Chambers are handicapped accessible.

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Sincerely,

CITY OF AMERICAN CANYON

A handwritten signature in black ink, appearing to read "DP" or similar initials, written over a faint circular stamp.

Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

American Canyon Mobile Home Park  
260 American Canyon Road  
American Canyon, CA 94503

**Subject: Notice of Public Hearing**

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Sincerely,

CITY OF AMERICAN CANYON

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Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

City of Dixon  
600 East A Street  
Dixon, CA 95620

**Subject: Notice of Public Hearing**

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Sincerely,

CITY OF AMERICAN CANYON

A handwritten signature in black ink, appearing to read "D Patrick".

Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director





March 15, 2022

City of Fairfield  
1000 Webster Street  
Fairfield, CA 94533

**Subject: Notice of Public Hearing**

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CITY OF AMERICAN CANYON

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Dominic Patrick  
Water System Manager

cc: Felix Hernandez III, City of American Canyon, Maintenance and Utilities Director  
Erica Ahmann Smithies, City of American Canyon, Public Works Director



# Advertising Order Confirmation

<u>Ad Order Number</u> 0006653914	<u>Customer</u> CITY OF AMERICAN CANYON	<u>Payor Customer</u> CITY OF AMERICAN CANYON	<u>PO Number</u> Notice- publish 3-23.22 and 4.6.22
<u>Sales Representative</u> Jill Teer	<u>Customer Account</u> 2130705	<u>Payor Account</u> 2130705	<u>Ordered By</u>
<u>Order Taker</u> Jill Teer	<u>Customer Address</u> ATTN: ACCOUNTS PAYABLE 4381 BROADWAY, STE 201 AMERICAN CANYON, CA 94503	<u>Payor Address</u> ATTN: ACCOUNTS PAYABLE 4381 BROADWAY, STE 201 AMERICAN CANYON, CA 94503	<u>Customer Fax</u>
<u>Order Source</u> Select Source	<u>Customer Phone</u> 707-647-4354	<u>Payor Phone</u> 707-647-4354	<u>Customer EMail</u> accountspayable@cityofamericancany on.org
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# Advertising Order Confirmation

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# Advertising Order Confirmation

## PUBLIC HEARING NOTICE

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A copy of the Urban Water Management Plan and Water Conservation Plan Ordinance can be reviewed during normal business hours at City Hall's customer service counter, located at 4381 Broadway Street, or by visiting the City's website at [www.cityofamericancanyon.org](http://www.cityofamericancanyon.org)

# Advertising Order Confirmation

1.3P\*

For questions concerning the document, please contact  
Felix Hernandez III  
Phone: (707) 647-4525  
fhernandez@cityofamericancaanyon.org

Written comments are requested by the close of business on April 6, 2022. Send written comments to:  
Felix Hernandez III  
Maintenance and Utilities Director  
City of American Canyon  
151 Mezzetta Ct.  
American Canyon, CA 94503

**Date:** March 15, 2022  
**Publication Dates:** March 23rd and April 6, 2022

<u>Product</u>	<u>Requested Placement</u>	<u>Requested Position</u>	<u>Run Dates</u>	<u># Inserts</u>
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For questions concerning the document, please contact

Felix Hernandez III

Phone: (707) 647-4525

[fhernandez@cityofamericancanyon.org](mailto:fhernandez@cityofamericancanyon.org)

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Send written comments to:

Felix Hernandez III

Maintenance and Utilities Director

City of American Canyon

151 Mezzetta Ct.

American Canyon, CA 94503

**Date:** March 15, 2022

**Publication Dates:** March 23<sup>rd</sup> and April 6, 2022



## **Commitment to Distribute the 2020 Urban Water Management Plan (UWMP)**

The documentation currently included in these appendices satisfies California Water Code (CWC) parts 10621(b) and 10642.

Two other sections of the CWC specify UWMP documentation that must take place after the submission of the supplier's UWMP to the California Department of Water Resources (DWR). These parts are as follows:

- Part 10644(a), requiring documentation that within 30 days of submitting the UWMP to DWR, the adopted UWMP has been or will be submitted to the California State Library and any city or county to which the supplier provides water.
- Part 10645, requiring documentation that the supplier will make the UWMP available for public review no later than 30 days after submission to DWR.

In order to satisfy these requirements, the City will perform the following actions:

- The City will submit its 2020 UWMP to DWR.
- The City will send a printed or electronic copy of its 2020 UWMP to the California State Library and to the cities and counties within which it provides water. The City will do this within 30 days from filing with DWR.
- The City will make their 2020 UWMP available for public review within 30 days from filing with DWR.

Appendix C  
SB X7-7 VERIFICATION AND COMPLIANCE  
FORMS



**SB X7-7 Table 0: Units of Measure Used in UWMP\***

*(select one from the drop down list)*

Acre Feet

*\*The unit of measure must be consistent with Table 2-3*

NOTES:

**SB X7-7 Table-1: Baseline Period Ranges**

Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	4,193	Acre Feet
	2008 total volume of delivered recycled water	67	Acre Feet
	2008 recycled water as a percent of total deliveries	1.60%	Percent
	Number of years in baseline period <sup>1, 2</sup>	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range <sup>3</sup>	2008	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range <sup>4</sup>	2007	

<sup>1</sup> If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period. <sup>2</sup> The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.

<sup>3</sup> The ending year must be between December 31, 2004 and December 31, 2010.

<sup>4</sup> The ending year must be between December 31, 2007 and December 31, 2010.

NOTES:

**SB X7-7 Table 2: Method for Population Estimates**

<b>Method Used to Determine Population</b> (may check more than one)	
<input checked="" type="checkbox"/>	<b>1. Department of Finance (DOF)</b> DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input checked="" type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review
NOTES:	

<b>SB X7-7 Table 3: Service Area Population</b>		
<b>Year</b>		<b>Population</b>
<b>10 to 15 Year Baseline Population</b>		
Year 1	1999	9,628
Year 2	2000	9,803
Year 3	2001	10,302
Year 4	2002	11,748
Year 5	2003	13,073
Year 6	2004	14,104
Year 7	2005	15,418
Year 8	2006	16,350
Year 9	2007	17,655
Year 10	2008	18,258
<i>Year 11</i>		
<i>Year 12</i>		
<i>Year 13</i>		
<i>Year 14</i>		
<i>Year 15</i>		
<b>5 Year Baseline Population</b>		
Year 1	2003	13,073
Year 2	2004	14,104
Year 3	2005	15,418
Year 4	2006	16,350
Year 5	2007	17,655
<b>2015 Compliance Year Population</b>		
	<b>2015</b>	20,315
NOTES:		

**SB X7-7 Table 4: Annual Gross Water Use \***

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Annual Gross Water Use	
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>		
<b>10 to 15 Year Baseline - Gross Water Use</b>								
Year 1	1999	2,039.25	-	-	-	46.22	-	1,993.03
Year 2	2000	2,369.20	-	-	-	180.02	-	2,189.18
Year 3	2001	2,608.83	-	-	-	143.69	-	2,465.14
Year 4	2002	2,913.08	-	-	-	94.99	-	2,818.09
Year 5	2003	3,207.12	-	-	-	135.42	-	3,071.70
Year 6	2004	3,657.13	-	-	-	196.65	-	3,460.48
Year 7	2005	3,715.62	-	-	-	142.39	-	3,573.23
Year 8	2006	3,638.54	-	-	-	108.33	-	3,530.21
Year 9	2007	3,984.24	-	-	-	174.17	-	3,810.07
Year 10	2008	4,126.13	-	-	-	109.60	-	4,016.53
<i>Year 11</i>	0	-			-		-	-
<i>Year 12</i>	0	-			-		-	-
<i>Year 13</i>	0	-			-		-	-
<i>Year 14</i>	0	-			-		-	-
<i>Year 15</i>	0	-			-		-	-
<b>10 - 15 year baseline average gross water use</b>							<b>3,093</b>	
<b>5 Year Baseline - Gross Water Use</b>								
Year 1	2003	3,207.12	-	-	-	135.42	-	3,071.70
Year 2	2004	3,657.13	-	-	-	196.65	-	3,460.48
Year 3	2005	3,715.62	-	-	-	142.39	-	3,573.23
Year 4	2006	3,638.54	-	-	-	108.33	-	3,530.21
Year 5	2007	3,984.24	-	-	-	174.17	-	3,810.07
<b>5 year baseline average gross water use</b>							<b>3,489</b>	
<b>2015 Compliance Year - Gross Water Use</b>								
<b>2015</b>		3,013.67	-		-	56.21	-	<b>2,957</b>
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3								
NOTES:								

**SB X7-7 Table 4-A: Volume Entering the Distribution System(s)**

Complete one table for each source.

<b>Name of Source</b>		SWP Water		
<b>This water source is:</b>				
<input type="checkbox"/>	The supplier's own water source			
<input checked="" type="checkbox"/>	A purchased or imported source			
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	<b>Volume Entering Distribution System</b>	<b>Meter Error Adjustment*</b> <i>Optional (+/-)</i>	<b>Corrected Volume Entering Distribution System</b>	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
Year 1	1999	1,382		1,382
Year 2	2000	1,682		1,682
Year 3	2001	2,097		2,097
Year 4	2002	2,391		2,391
Year 5	2003	2,657		2,657
Year 6	2004	3,112		3,112
Year 7	2005	3,148		3,148
Year 8	2006	3,009		3,009
Year 9	2007	3,340		3,340
Year 10	2008	3,453		3,453
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
<b>5 Year Baseline - Water into Distribution System</b>				
Year 1	2003	2,657		2,657
Year 2	2004	3,112		3,112
Year 3	2005	3,148		3,148
Year 4	2006	3,009		3,009
Year 5	2007	3,340		3,340
<b>2015 Compliance Year - Water into Distribution System</b>				
<b>2015</b>		2,025		2,025
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				
NOTES:				

<b>SB X7-7 Table 4-A: Volume Entering the Distribution</b>				
<b>Name of Source</b>		Vallejo Permit Water		
<b>This water source is:</b>				
<input type="checkbox"/>		The supplier's own water source		
<input checked="" type="checkbox"/>		A purchased or imported source		
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment* <i>Optional (+/-)</i>	Corrected Volume Entering Distribution System	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
Year 1	1,999	500		500
Year 2	2,000	500		500
Year 3	2,001	500		500
Year 4	2,002	500		500
Year 5	2,003	500		500
Year 6	2,004	500		500
Year 7	2,005	500		500
Year 8	2,006	500		500
Year 9	2,007	500		500
Year 10	2,008	500		500
Year 11	-			0
Year 12	-			0
Year 13	-			0
Year 14	-			0
Year 15	-			0
<b>5 Year Baseline - Water into Distribution System</b>				
Year 1	2,003	500		500
Year 2	2,004	500		500
Year 3	2,005	500		500
Year 4	2,006	500		500
Year 5	2,007	500		500
<b>2015 Compliance Year - Water into Distribution System</b>				
<b>2015</b>	500			500
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				
NOTES:				

**SB X7-7 Table 4-A: Volume Entering the Distribution**

**Name of Source** Vallejo Treated Water

**This water source is:**

The supplier's own water source

A purchased or imported source

<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment* <i>Optional (+/-)</i>	Corrected Volume Entering Distribution System
---	-------------------------------------	--	---

**10 to 15 Year Baseline - Water into Distribution System**

Year 1	1,999	157.49	157
Year 2	2,000	186.78	187
Year 3	2,001	12.03	12
Year 4	2,002	22.57	23
Year 5	2,003	50.38	50
Year 6	2,004	44.95	45
Year 7	2,005	67.32	67
Year 8	2,006	129.12	129
Year 9	2,007	144.61	145
Year 10	2,008	172.93	173
Year 11	-		0
Year 12	-		0
Year 13	-		0
Year 14	-		0
Year 15	-		0

**5 Year Baseline - Water into Distribution System**

Year 1	2,003	50.38	50
Year 2	2,004	44.95	45
Year 3	2,005	67.32	67
Year 4	2,006	129.12	129
Year 5	2,007	144.61	145

**2015 Compliance Year - Water into Distribution System**

<b>2015</b>	101.67		102
-------------	--------	--	-----

*\* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

<b>SB X7-7 Table 4-A: Volume Entering the Distribution</b>				
<b>Name of Source</b>		Vallejo Emergency Water		
<b>This water source is:</b>				
<input type="checkbox"/>		The supplier's own water source		
<input checked="" type="checkbox"/>		A purchased or imported source		
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment* <i>Optional (+/-)</i>	Corrected Volume Entering Distribution System	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
Year 1	1,999	0		0
Year 2	2,000	0		0
Year 3	2,001	0		0
Year 4	2,002	0		0
Year 5	2,003	0		0
Year 6	2,004	0		0
Year 7	2,005	0		0
Year 8	2,006	0		0
Year 9	2,007	0		0
Year 10	2,008	0		0
Year 11	-			0
Year 12	-			0
Year 13	-			0
Year 14	-			0
Year 15	-			0
<b>5 Year Baseline - Water into Distribution System</b>				
Year 1	2,003	0		0
Year 2	2,004	0		0
Year 3	2,005	0		0
Year 4	2,006	0		0
Year 5	2,007	0		0
<b>2015 Compliance Year - Water into Distribution System</b>				
<b>2015</b>	387			387
* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document				
NOTES:				

**SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)**

<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Annual Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
Year 1	1999	9,628	1,993	185
Year 2	2000	9,803	2,189	199
Year 3	2001	10,302	2,465	214
Year 4	2002	11,748	2,818	214
Year 5	2003	13,073	3,072	210
Year 6	2004	14,104	3,460	219
Year 7	2005	15,418	3,573	207
Year 8	2006	16,350	3,530	193
Year 9	2007	17,655	3,810	193
Year 10	2008	18,258	4,017	196
<i>Year 11</i>	0	-	-	
<i>Year 12</i>	0	-	-	
<i>Year 13</i>	0	-	-	
<i>Year 14</i>	0	-	-	
<i>Year 15</i>	0	-	-	
<b>10-15 Year Average Baseline GPCD</b>				<b>203</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use</b>
Year 1	2003	13,073	3,072	210
Year 2	2004	14,104	3,460	219
Year 3	2005	15,418	3,573	207
Year 4	2006	16,350	3,530	193
Year 5	2007	17,655	3,810	193
<b>5 Year Average Baseline GPCD</b>				<b>204</b>
<b>2015 Compliance Year GPCD</b>				
<b>2015</b>		20,315	2,957	<b>130</b>
NOTES:				

**SB X7-7 Table 6: Gallons per Capita per Day**  
*Summary From Table SB X7-7 Table 5*

10-15 Year Baseline GPCD	203
5 Year Baseline GPCD	204
2015 Compliance Year GPCD	130
NOTES:	

**SB X7-7 Table 7: 2020 Target Method***Select Only One*

Target Method		Supporting Documentation
<input checked="" type="checkbox"/>	Method 1	SB X7-7 Table 7A
<input type="checkbox"/>	Method 2	SB X7-7 Tables 7B, 7C, and 7D <i>Contact DWR for these tables</i>
<input type="checkbox"/>	Method 3	SB X7-7 Table 7-E
<input type="checkbox"/>	Method 4	Method 4 Calculator

NOTES:

**SB X7-7 Table 7-A: Target Method 1**

20% Reduction

10-15 Year Baseline GPCD	2020 Target GPCD
203	162
NOTES:	

**SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target**

5 Year Baseline GPCD <i>From SB X7-7 Table 5</i>	Maximum 2020 Target <sup>1</sup>	Calculated 2020 Target <sup>2</sup>	<b>Confirmed 2020 Target</b>
204	194	162	<b>162</b>

<sup>1</sup> Maximum 2020 Target is 95% of the 5 Year Baseline GPCD <sup>2</sup> 2020  
 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and  
 corresponding tables for agency's calculated target.

NOTES:

<b>SB X7-7 Table 8: 2015 Interim Target GPCD</b>		
Confirmed 2020 Target <i>Fm SB X7-7 Table 7-F</i>	10-15 year Baseline GPCD <i>Fm SB X7-7 Table 5</i>	<b>2015 Interim Target GPCD</b>
162	203	<b>183</b>
NOTES:		

**SB X7-7 Table 9: 2015 Compliance**

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments <i>(in GPCD)</i>					2015 GPCD <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2015?
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD		
		Extraordinary Events	Weather Normalization	Economic Adjustment				
130	183	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	-	130	130	YES

NOTES:

**SB X7-7 Table 0: Units of Measure Used in 2020 UWMP\***

*(select one from the drop down list)*

Acre Feet

*\*The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*

NOTES:

SB X7-7 Table 1 pertains to baselines and targets and is not used in the SB X7-7 2020 Compliance Form.

**SB X7-7 Table 2: Method for 2020 Population Estimate**

<b>Method Used to Determine 2020 Population</b> (may check more than one)	
<input checked="" type="checkbox"/>	<b>1. Department of Finance (DOF) or American Community Survey (ACS)</b>
<input checked="" type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review
NOTES:	

**SB X7-7 Table 3: 2020 Service Area Population**

**2020 Compliance Year Population**

<b>2020</b>	19,524
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NOTES:

**SB X7-7 Table 4: 2020 Gross Water Use**

Compliance Year 2020	2020 Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	2020 Deductions				2020 Gross Water Use	
		Exported Water *	Change in Dist. System Storage* (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use*		Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>
	2,609	-	-	-	63	-	2,546

\* Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES: Units of measure are acre-feet (AF). Raw water purchased for agricultural use has been deducted.

**SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment**

Complete one table for each source.

<b>Name of Source</b>		State Water Project Water	
<b>This water source is (check one) :</b>			
<input type="checkbox"/>	The supplier's own water source		
<input checked="" type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	29	-	29
<sup>1</sup> <b>Units of measure (AF, MG, or CCF)</b> must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. <span style="float: right;"><sup>2</sup> <b>Meter Error Adjustment</b> - See guidance in Methodology 1, Step 3 of Methodologies Document</span>			
NOTES: Units of measure are acre-feet (AF).			

**SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s) Meter Error Adjustment**

Complete one table for each source.

<b>Name of Source</b>		Vallejo Permit Water	
<b>This water source is (check one) :</b>			
<input type="checkbox"/>	The supplier's own water source		
<input checked="" type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	500		500
<sup>1</sup> <b>Units of measure (AF, MG, or CCF)</b> must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. <span style="float: right;"><sup>2</sup> <b>Meter Error Adjustment</b> - See guidance in Methodology 1, Step 3 of Methodologies Document</span>			
NOTES: Units of measure are acre-feet (AF).			

**SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment**

Complete one table for each source.

<b>Name of Source</b>		Vallejo Treated Water	
<b>This water source is (check one) :</b>			
<input type="checkbox"/>	The supplier's own water source		
<input checked="" type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	58		58
<sup>1</sup> <b>Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.</b>			
<sup>2</sup> <b>Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</b>			
NOTES: Units of measure are acre-feet (AF).			

**SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment**

Complete one table for each source.

<b>Name of Source</b>		Article 21	
<b>This water source is (check one) :</b>			
<input type="checkbox"/>	The supplier's own water source		
<input checked="" type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	191		191
<sup>1</sup> <b>Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.</b>			
<sup>2</sup> <b>Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</b>			
NOTES: Units of measure are acre-feet (AF).			

**SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment**

Complete one table for each source.

<b>Name of Source</b>		Article 56 Carryover	
<b>This water source is (check one) :</b>			
<input type="checkbox"/>	The supplier's own water source		
<input checked="" type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	1,819		1,819
<sup>1</sup> <b>Units of measure (AF, MG , or CCF)</b> must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. <span style="float: right;"><sup>2</sup> <b>Meter Error</b></span>			
<b>Adjustment</b> - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are acre-feet (AF).			

**SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment**

Complete one table for each source.

<b>Name of Source</b>		Table A Exchange Return Water	
<b>This water source is (check one) :</b>			
<input type="checkbox"/>	The supplier's own water source		
<input checked="" type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	12		12
<sup>1</sup> <b>Units of measure (AF, MG , or CCF)</b> must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. <span style="float: right;"><sup>2</sup> <b>Meter Error</b></span>			
<b>Adjustment</b> - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are acre-feet (AF).			

**SB X7-7 Table 4-B: 2020 Indirect Recycled Water Use Deduction** (For use only by agencies that are deducting indirect recycled water)

2020 Compliance Year	2020 Surface Reservoir Augmentation				2020 Groundwater Recharge			Total Deductible Volume of Indirect Recycled Water Entering the Distribution System	
	Volume Discharged from Reservoir for Distribution System Delivery <sup>1</sup>	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/Treatment Loss <sup>1</sup>	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility <sup>1,2</sup>	Transmission/Treatment Losses <sup>1</sup>		Recycled Volume Entering Distribution System from Groundwater Recharge
			-		-			-	-

<sup>1</sup> Units of measure (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. <sup>2</sup> Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.

Data from this table will not be entered into WUEdata.  
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

**SB X7-7 Table 4-C: 2020 Process Water Deduction Eligibility**

**(For use only by agencies that are deducting process water) Choose Only One**

<input type="checkbox"/>	<b>Criteria 1</b> - Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
<input type="checkbox"/>	<b>Criteria 2</b> - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
<input type="checkbox"/>	<b>Criteria 3</b> - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
<input type="checkbox"/>	<b>Criteria 4</b> - Disadvantaged Community. Complete SB x7-7 Table 4-C.4

NOTES:

Data from this table will not be entered into WUEdata.  
 Instead, the entire table will be uploaded to WUEdata as a separate upload in  
 Excel format.

**SB X7-7 Table 4-C.1: 2020 Process Water Deduction Eligibility** *(For use only by agencies that are deducting process water using Criteria 1)*

**Criteria 1**  
 Industrial water use is equal to or greater than 12% of gross water use

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction	2020 Industrial Water Use	Percent Industrial Water	Eligible for Exclusion Y/N
	2,546		0%	NO

NOTES: Units of measure are acre-feet (AF).

Data from this table will not be entered into WUEdata.  
 Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel  
 format.

**SB X7-7 Table 4-C.2: 2020 Process Water Deduction Eligibility** *(For use only by agencies that are deducting process water using Criteria 2)*

**Criteria 2**  
 Industrial water use is equal to or greater than 15 GPCD

2020 Compliance Year	2020 Industrial Water Use	2020 Population	2020 Industrial GPCD	Eligible for Exclusion Y/N
		19,524	-	NO

NOTES:

Data from this table will not be entered into WUEdata.  
 Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

**SB X7-7 Table 4-C.3: 2020 Process Water Deduction Eligibility** *(For use only by agencies that are deducting process water using Criteria 3)*

**Criteria 3**  
 Non-industrial use is equal to or less than 120 GPCD

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction <i>Fm SB X7-7 Table 4</i>	2020 Industrial Water Use	2020 Non-industrial Water Use	2020 Population <i>Fm SB X7-7 Table 3</i>	Non-Industrial GPCD	Eligible for Exclusion Y/N
	2,546		2,546	19,524	116	YES

NOTES: Units of measure are acre-feet (AF).

Data from this table will not be entered into WUEdata.  
 Instead, the entire table will be uploaded to WUEdata as a separate upload in  
 Excel format.

**SB X7-7 Table 4-C.4: 2020 Process Water Deduction Eligibility** *(For use only by agencies that are deducting process water using Criteria 4)*

**Criteria 4**

Disadvantaged Community. A "Disadvantaged Community" (DAC) is a community with a median household income less than 80 percent of the statewide average.

**SELECT ONE**

"Disadvantaged Community" status was determined using one of the methods listed below:

**1. IRWM DAC Mapping tool <https://gis.water.ca.gov/app/dacs/>**

If using the IRWM DAC Mapping Tool, include a screen shot from the tool showing that the service area is considered a DAC.

**2. 2020 Median Income**

	California Median Household Income*		Service Area Median Household Income	Percentage of Statewide Average	Eligible for Exclusion? Y/N
	2020	\$75,235			
<input type="checkbox"/>	2020	\$75,235		0%	YES
*California median household income 2015 -2019 as reported in US Census Bureau QuickFacts.					

NOTES

Data from these tables will not be entered into WUEdata.

Instead,

the entire tables will be uploaded to WUEdata as a separate upload in Excel format.

This table(s) is only for Suppliers that deduct process water from their 2020 gross water use.

**SB X7-7 Table 4-D: 2020 Process Water Deduction - Volume**

*Complete a*

*separate table for each industrial customer with a process water exclusion*

Name of Industrial Customer		<i>Enter Name of Industrial Customer 1</i>			
Compliance Year 2020	Industrial Customer's Total Water Use *	Total Volume Provided by Supplier*	% of Water Provided by Supplier	Customer's Total Process Water Use*	Volume of Process Water Eligible for Exclusion for this Customer
					-

\* Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

**SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)**

2020 Gross Water <i>Fm SB X7-7 Table 4</i>	2020 Population <i>Fm</i> <i>SB X7-7 Table 3</i>	2020 GPCD
2,546	19,524	116

NOTES: Units of measure are acre-feet (AF).

SB X 7-7 Table 6 pertains to baselines and targets and is not used in the SB X7-7 2020 Compliance Form.

SB X7-7 Table 7 applies to baseline and target calculations and is not included in the SB X7-7 2020 Compliance Form.

SB X7-7 Table 8 was used for the 2015 Interim Target and is not used in the 2020 UWMP.

**SB X7-7 Table 9: 2020 Compliance**

Actual 2020 GPCD <sup>1</sup>	Optional Adjustments to 2020 GPCD					2020 Confirmed Target GPCD <sup>1,2</sup>	Did Supplier Achieve Targeted Reduction for 2020?
	Enter "0" if Adjustment Not Used			TOTAL Adjustments <sup>1</sup>	Adjusted 2020 GPCD <sup>1</sup> <i>(Adjusted if applicable)</i>		
	Extraordinary Events <sup>1</sup>	Weather Normalization <sup>1</sup>	Economic Adjustment <sup>1</sup>				
116	-	-	-	-	116	162	YES

<sup>1</sup> All values are reported in GPCD  
<sup>2</sup> **2020 Confirmed Target GPCD** is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.

NOTES:

Appendix D  
ENERGY INTENSITY FORM



**Urban Water Supplier:**

City of American Canyon

**Water Delivery Product** (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach				
Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Control		
End Date	12/31/2020			
<input type="checkbox"/> Is upstream embedded in the values reported?		Sum of All Water Management Processes	Non-Consequential Hydropower	
Water Volume Units Used	AF	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		2550		2550
Energy Consumed (kWh)		313587		313587
Energy Intensity (kWh/vol. converted to MG)		377.4	0.0	377.4
<b>Quantity of Self-Generated Renewable Energy</b>				
<input type="text"/> kWh				
<b>Data Quality</b> (Estimate, Metered Data, Combination of Estimates and Metered Data)				
<input type="text"/> Metered Data				
<b>Data Quality Narrative:</b>				
Energy usages data from PG&E. Volume of water entering the process does not include the raw water used for agricultural irrigation in Table 4-1.				



Appendix E  
2020 CONSUMER CONFIDENCE REPORT





## 2020 Water Quality Report

The City of American Canyon is pleased to distribute the Annual Water Quality Report for 2020. This report is designed to inform you about the quality of water and services we deliver to you every day. Our goal is to provide a safe and reliable source of drinking water. We are committed to ensuring the quality of your water and we want our valued customers to be informed about their water system. If you have questions about this report or your water quality, please contact the Water Systems Manager at (707) 258-1269. For emergencies after hours or on weekends or holidays, the City of American Canyon answering service can be reached at (707) 995-8674. To learn more, attend any regularly scheduled City Council meeting, held on the first and third Tuesdays of each month at 6:30 PM LINK FOR CITY HALL YOUTUBE at the American Canyon City Hall Council Chambers at 4381 Broadway, Suite 201.

### Source Water Information

#### *Where does my water come from?*

The City of American Canyon treated 2845 acre feet of water during 2020 (an acre foot of water is equal to 325,829 gallons). The city receives its source water from the State Water Project (SWP) through the North Bay Aqueduct (NBA). The NBA water is a surface source and comes from Barker Slough.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over land or through the ground, it dissolves naturally occurring minerals, in some cases radioactive material, and can pick up substances resulting from the presence of animals or human activity.

### System Information

#### *How is my water treated?*

The American Canyon Water Treatment Plant consists of two plants, a conventional plant which uses coagulants (which cause fine suspended particles to clump together) followed by sedimentation and filtration, and a membrane plant which uses membranes with pores small enough to filter out contaminants, including microorganisms. Filtered water is disinfected with chlorine and the pH is adjusted prior to distribution. These processes are continually monitored and adjusted for optimum performance by operators certified by the State Water Resource Control Board.

The City of American Canyon's water source comes from the Barker Slough in the Sacramento Delta via the North Bay Aqueduct, the City has an agreement with the City of Vallejo to purchase treated water through a connection located on Flosden Road. This connection could provide up to 56 million gallons per month of supplemental treated water for the City. The City also has a treated water connection with the City of Napa.

#### *Does the city add fluoride to the water?*

The City of American Canyon does not add fluoride to the water. However, the City of Vallejo does, and since Vallejo water is sometimes added to the system during the summer months when demand is high, trace amounts of fluoride may be present.

## Compliance Standards

### *Is my water safe?*

In order to ensure that tap water is safe to drink, the US Environmental Protection Agency (USEPA) and the State Water Resource Control Board Division of Drinking Water (SWRCBDDW) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

With the exception of Total Trihalomethanes (TTHM), all required testing indicate that your drinking water meets or exceeds all primary drinking water standards, which are set by the federal Safe Drinking Water Act, and the SWRCBDDW. In addition to the required testing, additional monitoring was conducted for unregulated organic chemicals for which the USEPA and SWRCBDDW have not yet set standards. All results were below detection limits unless otherwise noted.

## Vulnerability Assessment

### *What affects the water quality?*

An assessment of the North Bay Aqueduct water source was completed for the City of American Canyon in November 2011. A copy of the complete assessment may be reviewed at City Hall, 4381 Broadway, Suite 201. You may request a summary of the assessment to be sent to you by calling (707) 647-5325. The source is considered to be vulnerable to sheep and cattle grazing activities in the watershed that are associated with turbidity, total organic carbon, and coliform bacteria detected in the raw water supply. Although the water source is considered vulnerable to sheep and cattle grazing activities, it is important to note that there are multiple barriers for physical removal of contaminants, and the water is disinfected at the water treatment plant.

More information can also be found at the city website, [www.cityofamericancanyon.org](http://www.cityofamericancanyon.org). Click on '**City Departments, Maintenance and Utilities**' to access more information about the City of American Canyon's water and wastewater systems.

For more information on drinking water and the professionals who provide it, visit [www.drinktap.org](http://www.drinktap.org). This site is designed to be a resource for the general public to learn more about their drinking water and to inform consumers about a variety of water related issues, including articles that are designed to describe complex water issues in a simple way.

## Water Quality Information

### Source Water Contaminant Information

**Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Monitoring for bacteriological contaminants in the treated water distribution system is required to determine the presence of microbiological contaminants such as coliforms, fecal coliforms, or *E. coli*.

**Inorganic contaminants**, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides**, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

**Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

**Arsenic:** The California Department of Public Health continues to research the health effects of low levels of arsenic, a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

**Cryptosporidium / Giardia:** Microbial pathogens found in surface water throughout the US. Although filtration removes Cryptosporidium and Giardia, the most commonly used filtration methods cannot guarantee 100% removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at a greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

#### Treated Water Contaminant Information

The City of American Canyon routinely monitors for contaminants in your drinking water according to federal and state laws. The following table shows the results of our most recent monitoring for the period of January 1, 2020 through December 31, 2020 unless otherwise noted.

All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

**Sensitive Populations:** Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

**Trihalomethanes and Haloacetic Acids:** Some people who drink water containing THMs and HAAs in excess of the MCL over many years may experience liver, kidney, or central nervous system problems and may have an increased risk of getting cancer.

**Lead and Copper:** Elevated levels can cause serious health problems. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets standards. During 2020, we did not complete all monitoring for lead and copper and therefore, cannot be sure of the quality of your drinking water at that time. 2020 Lead and copper sampling has been completed and results are represented in our 2020 Water Quality Report. None of the samples collected in 2020 exceeded the action level for lead or copper. The next round of lead and copper samples will occur the summer of 2021.

#### Water Conservation

As you are probably aware, many water utilities across the State are imposing strict conservation measures as a result of the ongoing drought. Even in the best of times, water customers are encouraged to conserve water. The American Water Works Association recommends the following steps to help conserve water:

- *Don't over water your lawn. Only water every three to five days in the summer, and ten to fourteen days in the winter.*

- To prevent water loss from evaporation, don't water your lawn during the hottest part of the day or when it is windy.
- Only run the dishwasher and clothes washer when they are fully loaded.
- When washing dishes by hand, use two basins – one for washing and one for rinsing rather than letting the water run.
- Use a broom rather than a hose to clean sidewalks and driveways.
- If you have a swimming pool, get a cover. You will cut the loss of water through evaporation by 90 percent.
- Repair leaky faucets and toilets. Dripping faucets can waste about 2,000 gallons of water a year. Leaky toilets can waste as much as 200 gallons a day.

The table below summarizes the contaminants that were detected in the period January 1, 2020 to December 31, 2020.

<i>Treated Water</i>							
<b>Primary Inorganic Contaminants</b>							
<i>Substance</i>	<i>Units</i>	<i>MCL</i>	<i>PHG/MCLG</i>		<i>Average</i>	<i>Range</i>	<i>Range Contaminant Sources</i>
Nitrate		ppm	45	45	ND	ND – 0.35	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Aluminum		ppb	1000		ND	14 - 100	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production
Fluoride		ppm	2	1	0.06	ND – 0.198	Erosion of natural deposits

<b>Secondary Inorganic Contaminants</b>						
<i>Substance</i>	<i>Units</i>	<i>SMCL</i>	<i>PHG/MCLG</i>	<i>Average</i>	<i>Range</i>	<i>Contaminant Sources</i>
Color	Color Units	15	N/A	ND		Naturally occurring organic materials
Chloride	ppm	500	N/A	17	15.0 – 54.5	Runoff/leaching from natural deposits; seawater influence
Manganese	ppb			8.38	3.6 - 240	Erosion of natural deposits
Sulfate	ppm	500	N/A	5.45	15.2 – 53.5	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	N/A	168.5	150 - 331	Runoff/leaching from natural deposits
Specific Conductance	uS/cm	1600	N/A	301	267 - 533	Substances that form ions in water; seawater influence

Unregulated Contaminants						
Substance	Units	NL	PHG/MCLG	Average	Range	
Vanadium	ppb			ND	ND – 2.1	Unregulated contaminant monitoring helps EPA and the State determine where certain contaminants occur and whether the contaminants need to be regulated
Barium	ppb			ND	28 – 48	
Nickel	ppb			ND	1.1 – 5.7	

Sodium and Hardness						
Substance	Units	MCL	PHG/MCLG	Average	Range	Contaminant Sources
Sodium	ppm	N/A	N/A	6.1	32.3 – 60.5	Generally found in surface and ground water
Hardness	ppm	N/A	N/A	72.1	85 - 137	

Filtration Performance				
Substance	Performance Standard	Highest Single Detected Measurement	% of Samples < 0.3 NTU	Contaminant Sources
Turbidity	TT=1NTU, 95% of samples must be <0.3NTU	0.252	98.9	Soil runoff

Microbiological Contaminants					
Substance	Total # of Samples Taken	Maximum Number of Positive Samples Allowed Per Month (MCL)	Highest Monthly Number of Positive Samples	Total Number of Positive Fecal Coliform or E. coli Samples	Contaminant Sources
Coliform Bacteria	263	1	0	0	Naturally present in the environment

Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors						
Trihalomethanes (THMs) and Haloacetic Acids (HAAs): Routine Regulatory Sampling						
Substance	Units	MCL	PHG/MCLG	Highest Annual Running Average	Range	Contaminant Sources
THMs	ppb	80	N/A	90.95	70.25 – 90.75	Byproducts of drinking water chlorination
HAAs	ppb	60	N/A	48.15	26.0 – 35.5	

Chlorine Residuals						
Substance	Units	MRDL	MRDLG	Average	Range	Contaminant Sources
Chlorine	ppm	4.0	4.0	1.21	.1- 1.78	Drinking water disinfectant added for treatment

Total Organic Carbon						
Substance	Compliance	MCL	PHG/MCLG	Average Ratio	Ratio Range	Contaminant Sources
TOC	Removal Ratio must be >1	TT	N/A	2.46	1.32 -2.26	Various natural and man-made sources

Lead and Copper					
Substance	Units	AL	PHG	Level Detected 90 <sup>th</sup> Percentile	Contaminant Sources
Lead	ppb	15	2	ND	Plumbing corrosion; erosion of natural deposits
Copper	ppb	1300	170	104	

Note: Lead and Copper testing was done in 30 homes in 2017. All samples were below the action levels.

## Important Definitions

<b>Maximum Contaminant Level (MCL)</b>	The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs and MCLGs as is economically or technically feasible. Secondary maximum contaminant levels (SMCL's) are set to protect the odor, taste, and appearance of drinking water.
<b>Maximum Contaminant Level Goal (MCLG)</b>	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the US Environmental Protection Agency.
<b>Public Health Goal (PHG)</b>	The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
<b>Action Level (AL)</b>	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a drinking water system must follow.
<b>Treatment Technique (TT)</b>	A required process intended to reduce the level of a contaminant in drinking water.
<b>Primary Drinking Water Standard (PDWS)</b>	MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
<b>Maximum Residual Disinfectant Level (MRDL)</b>	The level of a disinfectant added for water treatment that cannot be exceeded at the consumer's tap.
<b>Maximum Residual Disinfectant Level Goal there is (MRDLG)</b>	The level of a disinfectant added for water treatment below which no known or expected health risk. MRDLGs are set by the USEPA.

### Acronyms

ND	None Detected	USEPA	US Environmental Protection Agency
NS	No Standard	CDPH	California Department of Public Health
NA	Not Analyzed	NBA	North Bay Aqueduct
N/A	Not Applicable	SWP	State Water Project
ppm	parts per million	DBP	Disinfection Byproducts
ppb	parts per billion	TOC	Total Organic Carbon
uS/cm	microsiemens per centimeter	THM	Trihalomethanes
NL	Notification Level	HAA	Haloacetic Acids

### Examples for Comparison Purposes

#### **One part per million:**

One minute in two years  
Half an aspirin dissolved in a bathtub of water  
A single penny in \$10,000

#### **One part per billion:**

One minute in two thousand years  
One aspirin dissolved in an Olympic swimming pool  
A single penny in \$10,000,000

With the exception of Total Trihalomethanes (TTHM)

Este documento está disponible en español en nuestro sitio: [www.cityofamericancanyon.org/waterquality](http://www.cityofamericancanyon.org/waterquality)

Available ang dokumentong ito sa Tagalog sa aming website sa: [www.cityofamericancanyon.org/waterquality](http://www.cityofamericancanyon.org/waterquality)

Appendix F  
CITY MUNICIPAL CODE WATER CONSERVATION  
PLAN CHAPTER 13.14



## Chapter 13.14 WATER CONSERVATION PLAN

### 13.14.010 Title.

This chapter shall be known as the “Water Conservation Plan” of the city of American Canyon and may be so cited. [This chapter serves as the city’s water shortage contingency plan.](#) (Ord. 2015-07 § 2, 2015)

### 13.14.020 Purpose and intent.

The purpose of this chapter is to have a plan for water conservation resulting from a reduced supply of water such as may result from drought, water supply shortages, or limitations of water delivery conditions.

Nothing in this chapter will preclude the city council from passing an emergency resolution for the immediate curtailment of water use by its customers due to water supply shortages and delivery limitations caused by catastrophic events and conditions, either natural or unnatural.

[In the event any provision of this chapter conflicts or overlaps with any mandatory state regulation related to water conservation, the most stringent shall apply.](#) (Ord. 2015-07 § 2, 2015)

### 13.14.030 Definitions.

The terms used in this chapter shall have the following meanings:

“City” means the city of American Canyon acting by and through the city of American Canyon public works department as operator of the city of American Canyon water and recycled water systems.

“Customer” means any person, firm, partnership, association, corporation, company, organization, property, or governmental entity, whether within or outside the geographic boundaries of the city of American Canyon, who uses water supplied by the city.

[“Essential water use” means water necessary for human consumption, sanitation, and fire protection. All other uses of water that are not specifically required to meet these needs shall be considered non-essential.](#)

“GPD” means gallons per day.

“Low-flow toilet” means a toilet that uses no more than 1.6 gallons of water per flush or less.

“Manager” is the city manager of the city of American Canyon.

“Nonresidential uses” means all other uses not classified as residential pursuant to APMC 19.05.040.

[“Ornamental \(or decorative\)” means a water feature where artificially supplied open water performs solely an aesthetic function. Ornamental \(or decorative\) water features do not include recreational water features, such as swimming pools and spas.](#)

~~“Maintenance and Utilities Director~~[Public works director](#)” is the public works department head of the city of American Canyon.

“Recycled water” means water treated in accordance with Title 22, Section 60301 et seq., of the California Code of Regulations and suitable for reuse under the circumstances outlined.

“Residential uses” means all those uses classified as residential pursuant to ACMC 19.05.040.

“Turf” means a species of grass that was developed to be used as a lawn together with the surface layer of earth held together by its roots.

“Water” means potable water. (Ord. 2015-07 § 2, 2015)

#### 13.14.040 Authorization.

The manager or designee is authorized and directed to implement the applicable provisions of this chapter upon adoption of a city council resolution determining that such implementation is necessary to protect the public health, safety and welfare. (Ord. 2015-07 § 2, 2015)

#### 13.14.050 Application.

The provisions of this chapter shall apply to all persons, customers and properties served by the city including expressly those outside the geographic boundaries of the city of American Canyon. (Ord. 2015-07 § 2, 2015)

#### 13.14.060 Water waste prohibitions.

The following uses of water are defined as “waste of water” and are absolutely prohibited:

A. Failing to repair a leak and/or otherwise permit the escape of water through breaks or leaks within the customer’s plumbing or private distribution system for any substantial period of time within which such break or leak should reasonably have been discovered and corrected. It shall be presumed that a period of seventy-two hours after the customer discovers such a break or leak or receives notice from the city, is a reasonable time within which to correct such a break or leak or, at a minimum, to stop the flow of water from such break or leak.

B. Use water to irrigate grass, lawns, groundcover, shrubbery, crops, trees or other vegetation or in such a manner as to result in runoff to any gutter, ditch, drain or impermeable surface. Every customer is deemed to have his or her water system under control at all times, to know the manner and extent of his or her water use and any run-off, and to employ available alternatives to apply irrigation water in an efficient manner.

C. Washing cars, boats, trailers or other vehicles and machinery directly with a hose not equipped with a shutoff nozzle.

D. Water for non-recycling decorative water fountains.

E. Water for single-pass evaporative cooling systems for air conditioning in all connections installed after the effective date of the ordinance codified in this chapter, unless required for health or safety reasons.

F. Water for non-recirculating conveyor car wash systems, industrial clothes wash systems, and/or other commercial purposes for which recirculated or recycled water can safely and effectively serve the same purpose.

G. Water for the irrigation of turf for nonresidential uses.

H. Water for the flushing of toilets for nonresidential uses with the exception of water for flushing low-flow toilets and/or as provided by Section 13.14.110.

I. The use of water for earth compaction, dust control, or other construction use, including the testing of new sewer lines unless the water is obtained from a source expressly approved by the ~~Maintenance and Utilities Director~~~~public-works director~~; provided, however, notwithstanding the foregoing, that water may be used for purposes of testing new water service lines.

J. Withdrawal of water from fire hydrants within the service area of the city, except for purposes of fire-fighting, water system maintenance, and other uses as permitted by the city.

K. All restaurants, hotels, cafés, cafeterias, bars, or other public places where food or drink are served and/or purchased are to serve water to customers only when specifically requested by the customer.

L. All hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom using clear and easily understood language.

M. The irrigation with water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with Chapter 16.14.

N. Use of water that is inconsistent with state or federal regulations. (Ord. 2015-07 § 2, 2015)

#### 13.14.065 Recycled water service required.

Following a public hearing, the city's nonresidential water customers whose properties may be served by recycled water shall connect their property to recycled water for those uses for which the use of potable domestic water would be deemed a waste or unreasonable use of water as specified in Division 7, Chapter 7, of the California Water Code (Section 13550 et seq.). Recycled water customers shall pay for recycled water at the rate established by the city council.

Upon written notification from the city, new development shall construct the infrastructure to accept recycled water from the city. New development shall pay any applicable recycled water connection fees at the rate established by the city council.

Upon written notification from the city, new development abutting on any street in which there is now or may in the future be located a public recycled water line, is required to connect the property directly to the recycled water line, provided that the public recycled water line is within two hundred feet of the nearest point of the property. The expense to extend the public recycled water line and associated appurtenances to and across the street frontage is the sole responsibility of the developer.

Upon written notification from the city, new development abutting on any street in which there may be located a public recycled water line in the future is required to construct the recycled water line and associated appurtenances along the street frontage at the developer's sole expense, including the new development's connection thereto.

Failure of a water customer to accept service of recycled water when it is made available, where use of potable water would otherwise be deemed a waste or unreasonable use of water, may be grounds for termination of the customer's potable water service.

Failure of a recycled water customer to comply with the city's conditions for recycled water use shall be deemed a violation and shall be subject to enforcement as outlined in Section 13.14.120.

Water customers may appeal the city's determination that recycled water of suitable quality is available as outlined in Section 13.14.110. (Ord. 2015-07 § 2, 2015)

#### 13.14.070 Water conservation stages.

The intent of this section is to provide for the escalation of customer demand management strategies that may be necessary due to an emergency caused by drought and/or water supply shortages. There are ~~four~~ six stages of strategies, each of which builds upon its predecessor stage and are to be implemented as the severity of conditions increase. Stage 6 can be implemented at any time due to catastrophic events and conditions, either natural or unnatural, including flooding, major fire emergencies, earthquakes, regional power outages, water contamination, and emergencies other than water shortage. No customer of the city shall make, cause, use, or permit the use of water from the city for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this chapter, or in an amount in excess of what is permitted in accordance with the provisions of this chapter. The reductions shall be based upon the amount of water used during that base period defined as the amount of water used on a customer's property during the corresponding monthly billing period in the previous year, or other year as may be designated by the city council. New services or services without a base year billing history shall be allotted on comparable customer usage.

A. Stage 1. Voluntary Conservation. The intent of Stage 1 is to achieve an overall system-wide demand reduction of ten percent. The city council may by resolution declare a "Drought Emergency Stage 1 (Voluntary Conservation)" upon recommendation by the manager and based on water supply and delivery projections by the Maintenance and Utilities Director~~public works director~~, that an overall system-wide reduction of ten percent is necessary. During Stage 1, all water customers of the city shall be requested to implement the following best practices:

1. Apply irrigation water only during the evening and early morning hours to reduce evaporation losses.
2. Utilize water conservation incentive, rebate and giveaway programs to replace water guzzling plumbing fixtures and appliances with water efficient models.
3. Utilize city information regarding using water efficiently, reading water meters, repairing ordinary leaks, and water efficient landscape.
4. Wash automobiles, trucks, trailers, boats, airplanes, and other types of mobile equipment during the evening and early morning hours to reduce evaporation losses. Such washing shall be done with a hand-held bucket, or hand-held hose equipped with a positive shutoff nozzle used for quick rinses.
5. Reduce monthly demand by ten percent when compared to the same time period in the established base year.

B. Stage 2. Mandatory Compliance—Water Alert. The intent of Stage 2 is to achieve an overall system-wide demand reduction of twenty percent. The city council may by resolution declare a “Drought Emergency Stage 2 (Mandatory Compliance—Water Alert)” upon recommendation by the manager and based on water supply and delivery projections by the [Maintenance and Utilities Director](#)~~public works director~~, that an overall system-wide reduction of twenty percent is necessary. In addition to the mandatory twenty percent reduction for each water customer, and in addition to the requirements in Stage 1, the following activities shall be prohibited:

1. Gardening and landscape irrigation utilizing individual sprinklers or sprinkler systems on lawns, gardens, landscaped areas, trees, shrubs, or other plants except as expressly provided for by resolution of the city council.
2. The washing of automobiles, trucks, trailers, boats, airplanes, and other types of mobile equipment ~~is~~ except as expressly allowed by the adoption of a resolution by city council.
3. The washing of sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas except as expressly allowed by the adoption of a resolution by city council.
4. The irrigation of turf on street medians with water.
5. The use of water to fill a new [or existing](#) swimming pool, spa, pond, or similar recreational basin of water.
6. The operation of any ornamental fountain or other structure making similar or otherwise ornamental use of water outside.

C. Stage 3. Mandatory Compliance—Water Emergency. The intent of Stage 3 is to achieve an overall system-wide demand reduction of thirty percent. The city council may, by resolution, declare a “Drought Emergency Stage 3 (Mandatory Compliance—Water Emergency)” upon recommendation by the manager and based on water supply and delivery projections by the [Maintenance and Utilities Director](#)~~public works director~~, that an overall system-wide demand reduction of thirty percent is necessary. In addition to a mandatory reduction of thirty percent for each water customer, and in addition to the requirements in Stages 1 and 2, the following activities shall be prohibited:

1. Planting any new landscaping, except for native, drought tolerant species as defined by Chapter 16.22.

[DE. Stage 4. Mandatory Compliance—Critical Water Emergency. The intent of Stage 4 is to achieve an overall system-wide demand reduction of forty percent. The city council may, by resolution, declare a “Drought Emergency Stage 4 \(Mandatory Compliance—Critical Water Emergency\)” upon recommendation by the manager and based on water supply and delivery projections by the \[Maintenance and Utilities Director\]\(#\), that an overall system-wide demand reduction of forty percent is necessary. In addition to the mandatory conservation goals for each water customer, and in addition to the requirements in Stages 1, 2, and 3, the following activities shall be prohibited:](#)

- [1. Residential development unless the developer has submitted a complete building permit application to the City prior to the Stage 4 declaration. Building permit applications may proceed with a deferral of landscape installation, until the water shortage level has been lifted.](#)

2. Linen/towel exchanges more frequently than once every three nights or for the entire stay, whichever is shorter, except for health and safety.

ED. Stage 45. Mandatory Compliance—Severe Water Emergency. The intent of Stage 45 is to achieve an overall system-wide demand reduction of fifty percent. The city council may, by resolution, declare a “Drought Emergency Stage 54 (Mandatory Compliance—Severe Water Emergency)” upon recommendation by the manager and based on water supply and delivery projections by the Maintenance and Utilities Director~~public works director~~, that an overall system-wide demand reduction of fifty percent is necessary. During Stage 54, mandatory water rationing will occur on a property by property basis. Regardless of water consumption in the prior or other base year, the city council may set water allocation amounts based on minimum health and safety standards. In addition to the mandatory conservation goals for each water customer, and in addition to the requirements in Stages 1, 2, 3 and 34, the following activities shall be prohibited:

1. The use of water outside of a home or business except as expressly provided for by resolution of the city council.
2. Use of water in excess of the allocation to a property. (Ord. 2015-07 § 2, 2015)

- F. Stage 6. Mandatory Compliance—Catastrophic Interruption of Water Supplies. The intent of Stage 6 is to achieve an overall system-wide demand reduction of greater than fifty percent. The city council may, by resolution, declare a “Drought Emergency Stage 6 (Mandatory Compliance—Catastrophic Interruption of Water Supplies)” upon recommendation by the manager and based on water supply and delivery projections by the Maintenance and Utilities Director, that an overall system-wide demand reduction of greater than fifty percent is necessary. In addition to the mandatory conservation goals for each water customer, and in addition to the requirements in Stages 1, 2, 3, 4, and 5, the following activities shall be prohibited:

1. Non-essential water use. Water use is restricted to essential water uses only.

#### 13.14.080 Mandatory conservation phase implementation.

After the city council, by resolution, declares a Stage 1, 2, 3, 4, 5 or 64 Drought Emergency, the manager shall order that the appropriate stage of water conservation be implemented in accordance with the applicable provisions of this chapter. Said order shall be made by public announcement; shall be published a minimum of one time in a daily newspaper of general circulation. The city council shall receive a report at least monthly, noticed on a city council agenda, regarding the city’s water supply situation as long as the drought conditions remain in effect. (Ord. 2015-07 § 2, 2015)

#### 13.14.090 Duration of conservation stages.

Mandatory stages shall be effective upon the effective date of the ordinance codified in this chapter and may be implemented as authorized by city council resolution. Current conservation stages as authorized by city council will be modified at such time that conditions indicate a more or less restrictive stage is necessary. (Ord. 2015-07 § 2, 2015)

#### 13.14.100 Drought surcharge.

Customers will receive prior notification of the standard allotment basis, applicable rates, and the opportunity to request exceptions to the standard allotment basis.

Water use beyond the maximum allowed for each water conservation stage shall be subject to a drought surcharge pursuant to the schedule set forth below. The customer of record may request an increase in this basic allotment as set forth in Section 13.14.110 hereof. Application forms and instructions will be available at the American Canyon City Hall.

In addition to the general water service rates, each customer shall pay, during each billing period, a drought surcharge for water delivered in excess of the basic allotment. The surcharge is as follows:

- A. Up to 10% in excess of allotment = 1.0 times the applicable volume charge.
- B. 10.01% to 20% in excess of allotment = 2.0 times the applicable volume charge.
- C. Over 20% in excess of allotment = 3.0 times the applicable volume charge.

Customers whose water usage falls in Tier 1 of the rate schedule are assumed to have maximized their conservation effort and will not be subject to a drought surcharge if their water consumption is not further reduced.

In addition to the drought surcharge, if drought usage exceeds the allowed allotment, a warning will be issued and enforcement actions may be taken as described in Section 13.14.120. (Ord. 2015-07 § 2, 2015)

#### 13.14.110 Exceptions and application procedures for exceptions.

All water use associated with the operation and maintenance of fire suppression equipment or employed by the city for water quality flushing and sanitation purposes shall be exempt from the provisions of this chapter. Use of water supplied by a private well or from a rain water utilization system is also exempt.

Any customer of the city may make written application for an exception to uses and activities prohibited by this chapter. Said application shall describe in detail why applicant believes an exception is justified.

A. The manager may grant exceptions for use of water otherwise prohibited or required by this section upon finding and determining that failure to do so would cause an emergency condition affecting the health, sanitation, fire protection or safety of the applicant or public; or, cause an unnecessary and undue hardship on applicant or the public, including, but not limited to, adverse economic impacts, such as loss of production or jobs.

B. In the event of an appeal of a drought surcharge, customers who can clearly demonstrate that they have taken steps to reduce their water consumption (by installing water efficient appliances, drip irrigation, drought tolerant landscaping, etc.) shall be considered favorably in granting waivers.

C. No increase in the basic water allotment shall be granted unless the customer has installed all water-saving devices which are feasible. Water saving devices include: (1) ultra-low flush toilets utilizing 1.6 gallons per flush or less; (2) low-flow shower heads; (3) low-flow faucet restrictors utilizing two gallons per minute or less; (4) drip irrigation systems.

D. The decision of the manager may be appealed to the city council by submitting a written appeal to the city clerk within fifteen calendar days of the date of the decision. Upon granting any appeal, the city council may impose any conditions it determines to be just and proper. Exceptions granted by the city council shall be prepared in writing and the city council may require the exception be recorded at applicant's expense. (Ord. 2015-07 § 2, 2015)

#### 13.14.120 Violation—Enforcement.

The violation of each provision of this chapter, and each separate violation thereof, shall be deemed a separate offense, and shall be enforced accordingly.

A. Any customer that violates any provision of this chapter shall, in addition to the imposition of the drought surcharge rates of Section 13.14.100 hereof, receive a personal contact by the city at the address of the water service. If personal contact is unsuccessful, written notice of the violation, including a date that the violation is to be corrected, may be left on the premises, with a copy of the notice sent by certified mail to the customer.

B. If after issuance of the written warning, the manager determines that the customer has continued or is continuing to violate the provisions of this chapter, the manager may authorize and implement installation of a flow restricting device on the service line or reduce the amount of water available to the customer. Any costs incurred by the city to authorize and implement the flow restricting device or reduce the amount of water available to the customer shall be borne by the customer. The flow restricting device shall be removed and the prior water supply amount resumed no sooner than sixty days after the date of the installation of the flow restricting device or a reduction in water available, provided that no further violations have occurred within that time.

C. If after implementation of a flow restricting device or reduction of water available to a customer, the customer continues to violate the provisions of the chapter, the city may disconnect the service to the customer for a period of three days. All costs or expenses incurred by the city for enforcement of this section shall be borne by the customer.

D. The unauthorized use of water following a disconnection of service pursuant to subsection C above, or any other unauthorized use of water from a fire hydrant or other use bypassing an installed meter, shall be subject to an automatic fine of two thousand five hundred dollars for the first offense and five thousand dollars for the second offense. (Ord. 2015-07 § 2, 2015)

#### 13.14.130 Violation—Penalties.

In addition to all other remedies provided herein, any person who violates any provision of this chapter after having received a written notice to refrain as provided in Section 13.14.120, is guilty of an infraction. The violation of each provision of this chapter and each separate violation thereof shall be deemed a separate offense and shall be punishable pursuant to Chapter 1.24. (Ord. 2015-07 § 2, 2015)

#### 13.14.140 Violation—Additional remedy.

As an additional remedy, the violation of any provision of this chapter by any person who has received more than one written warning pursuant to Section 13.14.120 to refrain from the same or any other violation under this chapter in one calendar year shall be deemed and is declared to be, a public

nuisance and may be subject to abatement in accordance with Chapter 8.04 of the city of American Canyon Municipal Code. (Ord. 2015-07 § 2, 2015)



Appendix G  
CITY MUNICIPAL CODE WATER EFFICIENT  
LANDSCAPING CHAPTER 16.14



## **Chapter 16.14 WATER-EFFICIENT LANDSCAPING**

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### **16.14.010 Purpose.**

This chapter defines the requirements for completing water-efficient final landscape plans, in compliance with Chapter 19.22 of the municipal code. The documentation described is intended to implement the landscape efficiency standards set by the Water Conservation in Landscaping Act of 2006 (AB 1881). (Ord. 2015-05 § 2, 2015)

### **16.14.020 Applicability.**

A. Applicability. Final landscape plans shall be required for the following landscape projects:

1. New construction and rehabilitated landscapes for public agency projects, private development projects and developer-installed single-family and multifamily projects, requiring a building permit, plan check or design permit;

2. Cemeteries. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries are limited to Sections 16.14.070, 16.14.140 and 16.14.160; and existing cemeteries are limited to Sections 16.14.160 and 16.14.170.

B. This chapter does not apply to:

1. Registered local, state or federal historical sites;

2. Ecological restoration projects that do not require a permanent irrigation system;

3. Plant collections, as part of botanical gardens and arboretums open to the public. (Ord. 2015-05 § 2, 2015)

### **16.14.030 Review and approval.**

Final landscape plans shall be subject to review and approval by the community development director. (Ord. 2015-05 § 2, 2015)

### **16.14.040 Definitions.**

The terms used in this chapter have the meaning set forth below:

“Applied water” means the portion of water supplied by the irrigation system to the landscape.

“Automatic irrigation controller” means an automatic timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.

“Backflow prevention device” means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

“Bay-Friendly Landscape Guidelines” means the most recent version of the guidelines developed by StopWaste.Org for use in the professional design, construction and maintenance of landscapes.

“Bay-Friendly Landscaping Scorecard” means the most recent version of the Bay-Friendly Landscaping points system developed by StopWaste.Org.

“Certificate of completion” means the document required under Section [16.14.180](#).

“Certified irrigation designer” means a person certified to design irrigation systems by an accredited academic institution, a professional trade organization or other program such as the U.S. Environmental Protection Agency’s WaterSense Irrigation Designer Certification Program and Irrigation Association’s Certified Irrigation Designer Program.

“Certified landscape irrigation auditor” means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the U.S. Environmental Protection Agency’s WaterSense Irrigation Auditor Certification Program and Irrigation Association’s Certified Landscape Irrigation Auditor Program.

“Check valve” or “anti-drain valve” means a valve located under a sprinkler head, or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

“City” means the city of American Canyon and its representatives.

“Common interest developments” means community apartment projects, condominium projects, planned developments, and stock cooperatives per [Civil Code](#) Section 1351.

“Compost” is the product of controlled biological decomposition of organic materials, often including urban plant debris and food waste. It is an organic matter resource that has the unique ability to improve the chemical, physical and biological characteristics of soils or growing media. It contains plant nutrients but is typically not characterized as a fertilizer. Excerpted from U.S. Compost Council, Field Guide to Compost Use.

“Conceptual landscape plan” means a preliminary landscape plan submitted to the city for review with a discretionary application.

“Conversion factor (0.62)” means the number that converts acre-inches per acre per year to gallons per square foot per year.

“Drip irrigation” means any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

“Drought resistant soil” means soil that has been managed, by amending with compost and covering with mulch, for example, to maximize rainfall infiltration, increase the soil’s capacity to hold water, and allow for plant roots to penetrate and proliferate such that the landscape can survive with less than optimal water (i.e., less than MAWA).

“Ecological restoration project” means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

“Effective precipitation (Eppt)” or “usable rainfall” means the portion of total precipitation which becomes available for plant growth.

“Emitter” means a drip irrigation emission device that delivers water slowly from the system to the soil.

“Established landscape” means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

“Establishment period of the plants” means the first year after installing the plant in the landscape or the first two years if irrigation will be terminated after establishment. Typically, most plants are established after one or two years of growth.

“Estimated total water use (ETWU)” means the total water used for the landscape as described in Section 492.4.

“ET adjustment factor (ETAF)” means a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape.

“Evapotranspiration rate” means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

“Final landscape plan” means a landscape plan submitted to the city for review and issuance of building permits and contains the same elements as the conceptual landscape plan.

“Flow rate” means the rate at which water flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.

“Hardscapes” means any durable material (pervious and non-pervious).

“High-flow sensors” or “flow meters” detect and report high flow conditions created by system damage or malfunction.

“Homeowner-provided landscaping” means any landscaping either installed by a private individual for a single-family residence or installed by a licensed contractor hired by a homeowner. A homeowner, for purposes of this chapter, is a person who occupies the dwelling he or she owns. This excludes speculative homes, which are not owner-occupied dwellings.

“Hydrozone” means a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.

“Infiltration rate” means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

“Invasive plant species” means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources.

“Irrigation audit” means an in-depth evaluation of the performance of an irrigation system conducted by a certified landscape irrigation auditor.

“Irrigation efficiency (IE)” means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices.

“Irrigation survey” means an evaluation of an irrigation system that is less detailed than an irrigation audit. An irrigation survey includes, but is not limited to: inspection, system test, and written recommendations to improve performance of the irrigation system.

“Irrigation water use analysis” means an analysis of water use data based on meter readings and billing data.

“Landscape architect” means a person who holds a license to practice landscape architecture in the state of California [Business and Professions Code Section 5615](#).

“Landscape area” means all the planting areas, turf areas, and water features in a landscape design plan subject to the maximum applied water allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

“Landscape contractor” means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

“Landscape documentation package” means the documents required under Section [16.14.050](#).

“Landscape project” means total area of landscape in a project as defined in “Landscape area” for the purposes of this chapter, meeting requirements under Section [16.14.020](#).

“Lateral line” means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

“Lawn” means an area of short, mown grass in a yard, garden, or park.

“Low volume irrigation” means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

“Main line” means the pressurized pipeline that delivers water from the water source to the valve or outlet.

“Maximum applied water allowance (MAWA)” means the upper limit of annual applied water for the established landscaped area as specified in Section [16.14.070](#). It is based upon the area’s reference evapotranspiration, the ET adjustment factor, and the size of the landscape area.

“Microclimate” means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

“Mined-land reclamation projects” means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

“Mulch” means any organic material such as leaves, bark, arbor or wood chips, recycled wood waste, straw, compost, or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

“Native species” means plants from the local microclimate or Northern California species.

“New construction” means, for the purposes of this chapter, a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

“Operating pressure” means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

“Overhead sprinkler irrigation systems” means systems that deliver water through the air (e.g., spray heads and rotors).

“Overspray” means the irrigation water which is delivered beyond the target area.

“Permit” means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

“Pervious” means any surface or material that allows the passage of water through the material and into the underlying soil.

“Plant factor” or “plant water use factor” is a factor that, when multiplied by ETo, estimates the amount of water needed by plants.

“Precipitation rate” means the rate of application of water measured in inches per hour.

“Project applicant” means the individual or entity submitting a landscape documentation package required under Section 16.14.050, to request a permit, plan check, or design permit from the city. A project applicant may be the property owner or designee.

“Rain sensor” or “rain sensing shutoff device” means a component which automatically suspends an irrigation event when it rains.

“Record drawing” or “as-builts” means a set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

“Recreational area” means publicly owned or publicly accessible areas dedicated to active play such as parks, sports fields, and golf courses where turf provides a playing surface.

“Recycled water,” “reclaimed water,” or “treated sewage effluent water” means treated or recycled waste water of a quality suitable for non-potable uses such as landscape irrigation and water features. This water is not intended for human consumption.

“Reference evapotranspiration” or “ET<sub>o</sub>” means a standard measurement of environmental parameters which affect the water use of plants. ET<sub>o</sub> is expressed in inches per day, month, or year as represented in Section 16.14.070, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the maximum applied water allowance so that regional differences in climate can be accommodated.

“Rehabilitated landscape” means any re-landscaping project that requires a permit, plan check, or design permit, meets the requirements of Section 16.14.020, and the modified landscape area is equal to or greater than two thousand five hundred square feet, is fifty percent of the total landscape area, and the modifications are completed within one year.

“Runoff” means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, runoff may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.

“Soil moisture sensing device” or “soil moisture sensor” means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

“Soil texture” means the classification of soil based on its percentage of sand, silt, and clay.

“Special landscape area (SLA)” means an area of the landscape dedicated solely to edible plants, areas irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

“Sprinkler head” means a device which delivers water through a nozzle.

“Static water pressure” means the pipeline or municipal water supply pressure when water is not flowing.

“Station” means an area served by one valve or by a set of valves that operate simultaneously.

“Swing joint” means an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.

“Turf” means a species of grass that was developed to be used as a lawn together with the surface layer of earth held together by its roots.

“Valve” means a device used to control the flow of water in the irrigation system.

“Water conserving plant species” means a plant species identified as having a low plant factor. “Water feature” means a design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied).

“Watering window” means the time of day irrigation is allowed.

“WUCOLS” means the Water Use Classification of Landscape Species published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation, 2100. (Ord. 2015-05 § 2, 2015)

### **16.14.050 Water-efficient landscape plans.**

A. Prior to issuance of a building permit, the applicant shall submit a final landscape documentation package to the community development department. The final landscape documentation package, submitted as part of the final landscape plan, shall include the following:

1. Project information:
  - a. Date;
  - b. Applicant name, address, telephone, email;
  - c. Property owner name, address, telephone, email;
  - d. Project address (if available, parcel and/or lot number(s));
  - e. Total landscape area (square feet);
  - f. Project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed);
  - g. Water supply type (e.g., potable, recycled, well);
  - h. Checklist of all documents in landscape documentation package;
  - i. Applicant signature and date with statement, “I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete landscape documentation package.”
2. Water-efficient landscape worksheet:
  - a. Hydrozone information table;
  - b. Water budget calculations:
    - i. Maximum applied water allowance (MAWA),
    - ii. Estimated total water use (ETWU),
    - iii. Soil management report,

- iv. Landscape design plan,
- v. Irrigation design plan, and
- vi. Grading design plan. (Ord. 2015-05 § 2, 2015)

## **16.14.060 General requirements and standards.**

### **A. General Requirements and Standards.**

1. The setbacks from streets required by the schedule of zoning district regulations shall be fully landscaped except in single-family districts where parking may be permitted as specified in this title.
2. All landscaped areas shall be protected by six-inch concrete curbing.
3. Parking and circulation areas shall be landscaped according to the requirements this title.
4. The use of turf is limited to rear yards of residential projects.
5. Landscaping should be used to separate parking and vehicle circulation areas from buildings, to provide a visual landscaped foreground for buildings, and to enhance the perimeter of a project.
6. Live plant materials generally should be used in all landscaped areas.
7. Landscape planters abutting parking areas shall be sufficiently large to allow for vehicle overhang without extending into the planting area.

### **B. Trees.**

1. Landscape plans for sites on major streets should include large-scale street trees, with deep root systems and broad canopies.
2. Tree planting shall consider passive solar heating and cooling opportunities related to building orientation.
3. Trees shall be provided in parking lot areas in a manner that provides shading of parked vehicles to the maximum extent feasible.
4. Trees shall be properly supported. Stakes and ties on trees shall be checked regularly for correct functions. Ties shall be adjusted to avoid creating abrasions or girdling on trunks or branches.

C. **Hard Surfaces.** Required planter or landscaped areas may be combined with pedestrian walks and similar hard surface areas, provided that such hard surface areas do not cover more than thirty percent of any required planter or landscaped areas. Ornamental or landscaping rock and gravel areas, artificial turf, or other areas covered with other artificial materials shall be considered hard surface areas for the purpose of this provision.

### **D. Slopes.**

1. All manufactured slopes over five feet in height created by grading shall be fully landscaped utilizing a combination of trees, shrubs and groundcover materials.
2. Stabilizing jute netting or equivalent netting shall be provided in conjunction with the landscape planting and shall fully cover lower slope areas.

E. Installation.

1. All landscaping and planter areas shall be installed consistent with an approved water efficient landscape plan prior to final building permit sign-off or granting of an occupancy permit for a project.
2. Prior to the installation of landscaping in any public right-of-way, the developer shall provide for continued maintenance until such areas are accepted by the city or as defined in a subdivision improvement agreement.

F. Maintenance. Required landscaped areas shall be continually maintained in good condition and kept clean and weeded. Good maintenance shall be interpreted to include: watering and maintaining water efficiency, weeding, pruning, insect and disease control, and replacement of plant materials and irrigation equipment as needed to preserve the health and appearance of plant materials. (Ord. 2015-05 § 2, 2015)

### 16.14.070 Water-efficient landscape worksheet.

A. The applicant shall complete the water efficient landscape worksheet which contains two sections:

1. A hydrozone information table for the landscape project; and
2. A water budget calculation for the landscape project. For the calculation of the maximum applied water allowance and estimated total water use, a project applicant shall use the ETo values from the table below:

<b>NAPA County</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Annual ETo</b>
Carneros	0.8	1.5	3.1	4.6	5.5	6.6	6.9	6.2	4.7	3.5	1.4	1.0	45.8

\* The values in this table were derived from:

1. California Irrigation Management Information System (CIMIS);
2. Reference Evapotranspiration Zones Map, University of California, Davis - Dept. of Land, Air & Water Resources and California Dept. of Water Resources 1999;
3. Reference Evapotranspiration for California, University of California, Davis - Department of Agriculture and Natural Resources (1987) Bulletin 1922;
4. Determining Daily Reference Evapotranspiration, Cooperative Extension University of California, Davis - Division of Agriculture and Natural Resources (1987), Publication Leaflet 21426.

B. Water budget calculations shall adhere to the following requirements:

1. The plant factor used shall be from WUCOLS. The plant factor ranges from 0 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants.
2. All water features shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone.
3. All special landscape areas shall be identified and their water use calculated as described below.
4. ETAF for special landscape areas shall not exceed 1.0.

C. Maximum Applied Water Allowance. The maximum applied water allowance shall be calculated using the equation:

$$MAWA = (ET_o) (0.62)[(0.7 \times LA) + (0.3 \times SLA)]$$

D. Estimated Total Water Use. The estimated total water use shall be calculated using the equation below. The sum of the estimated total water use calculated for all hydrozones shall not exceed MAWA.

Where:

ETWU = Estimated Total Water Use per year (gallons)

ET<sub>o</sub> = Reference Evapotranspiration (inches)

PF = Plant Factor from WUCOLS (see Section 491)

HA = Hydrozone Area [high, medium, and low water use areas] (square feet)

SLA = Special Landscape Area (square feet)

0.62 = Conversion Factor

IE = Irrigation Efficiency (minimum 0.71)

1. Example ETWU calculation: landscape area is fifty thousand square feet; plant water use type, plant factor, and hydrozone area are shown in the table below. The ET<sub>o</sub> value is 51.1 inches per year. There are no special landscape areas (recreational area, area permanently and solely dedicated to edible plants, and area irrigated with recycled water) in this example.

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	10,000	7,000
3	Medium	0.5	16,000	8,000
4	Low	0.3	7,000	2,100

5	Low	0.2	10,000	2,000
			Sum	24,700

\* Plant Factor from WUCOLS

$$\begin{aligned} \text{ETWU} &= (51.1)(0.62)(24,700/0.71 + 0) \\ &= 1,102,116 \text{ gallons per year} \end{aligned}$$

Compare ETWU with MAWA: For this example MAWA = (51.1) (0.62) [(0.7 x 50,000) + (0.3 x 0)] = 1,108,870 gallons per year. The ETWU (1,102,116 gallons per year) is less than MAWA (1,108,870 gallons per year). In this example, the water budget complies with the MAWA.

2. Example ETWU calculation: total landscape area is fifty thousand square feet, two thousand square feet of which is planted with edible plants. The edible plant area is considered a special landscape area (SLA). The reference evapotranspiration value is 51.1 inches per year. The plant type, plant factor, and hydrozone area are shown in the table below.

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	9,000	6,300
3	Medium	0.5	15,000	7,500
4	Low	0.3	7,000	2,100
5	Low	0.2	10,000	2,000
			Sum	23,500
6	SLA	1.0	2,000	2,000

\* Plant Factor from WUCOLS

$$\begin{aligned} \text{ETWU} &= (51.1)(0.62)(23,500/0.71 + 2,000) \\ &= (31.68) (33,099 + 2,000) \\ &= 1,111,936 \text{ gallons per year} \end{aligned}$$

Compare ETWU with MAWA. For this example:

$$\begin{aligned} \text{MAWA} &= (51.1) (0.62) [(0.7 \times 50,000) + (0.3 \times 2,000)] \\ &= 31.68 \times [35,000 + 600] \\ &= 31.68 \times 35,600 \\ &= 1,127,808 \text{ gallons per year} \end{aligned}$$

The ETWU (1,111,936 gallons per year) is less than MAWA (1,127,808 gallons per year). For this example, the water budget complies with the MAWA. (Ord. 2015-05 § 2, 2015)

### **16.14.080 Irrigation efficiency.**

For the purpose of determining maximum applied water allowance, average irrigation efficiency is assumed to be 0.71. Irrigation systems shall be designed, maintained, and managed to meet or exceed an average landscape irrigation efficiency of 0.71. (Ord. 2015-05 § 2, 2015)

### **16.14.090 Soil management report.**

A. In order to create drought resistant soil, reduce runoff and encourage healthy plant growth, a soil management report addressing soil attributes of the project site shall be completed by the applicant, or designee.

B. The soil management report shall address the soil attributes of the project site and shall include:

1. Identification of areas of quality topsoil to be protected during construction and/or critical soil limitations such as compaction; water logged soils or wetlands; thin, eroded or erosion prone soils.

2. A laboratory soil analysis of the soil(s) into which plantings are to be made.

C. Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.

D. At a minimum the soil analysis shall include:

1. Soil texture;

2. Infiltration rate determined by laboratory test or soil texture infiltration rate table;

3. pH;

4. Total soluble salts;

5. Sodium;

6. Essential nutrients;

7. Percent organic matter; and

8. Recommendations for soil amendments or nutrient applications to ameliorate the soil limitations identified by the analysis and the amount of compost required to bring the soil organic matter content to a minimum of three and one-half percent by dry weight or a minimum application of at least one inch. The required practice of adding compost is waived if the plant palette primarily includes California native species that are adapted to soils with little or no organic matter as documented by a published plant reference.

E. Specifications for protecting topsoil, ameliorating soil limitations, such as ripping the soil to alleviate soil compaction, and incorporating compost and/or amendments as per recommendations in the soil analysis report.

F. The applicant, or designee, shall comply with one of the following:

1. If significant mass grading is not planned, the soil management report shall be submitted to the city as part of the landscape documentation package; or

2. If significant mass grading is planned, the soil management report shall be submitted to the city as part of the certificate of completion.

3. The soil management report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and irrigation design plans to make any necessary adjustments to the design plans.

4. The applicant, or designee, shall submit documentation verifying implementation of soil management report recommendations to the city with the certificate of completion. (Ord. 2015-05 § 2, 2015)

## **16.14.100 Landscape design plan.**

For the efficient use of water, landscaping shall be carefully designed and planned for the intended function of the project. A landscape design plan meeting the following design criteria shall be submitted as part of the landscape documentation package.

A. Plant Material.

1. The estimated total water use of the plant material selected must not exceed the maximum applied water allowance.

2. Each hydrozone shall have plant materials with similar water use, with the exception of hydrozones with plants of mixed water use, as specified in Section 16.14.110(B)(4).

3. At least seventy-five percent of the total number of plants in non-turf areas shall require occasional, little or no summer water. All species should be adapted to the climate in which they will be planted, as documented by a published plant reference. If plants are given a range of water needs from “occasional to moderate” for example, the landscape designer must determine if the plant will require either occasional or moderate watering based on site, soil, and climate conditions and categorize the plant appropriately. Sources used to determine climate adaptation and watering requirements may include:

a. Bornstein, Carol, David Fross and Bart O’Brien, California Native Plants for the Garden.

Qualifying irrigation designation: “occasional,” “infrequent,” or “drought tolerant.”

b. East Bay Municipal Utility District’s publication Plants and Landscapes for Summer Dry Climates.

Qualifying irrigation designation: “occasional,” “infrequent” or “no summer water”

- c. Sunset Publishing Corporation Sunset Western Garden Book.

Qualifying irrigation designation: “little or no water”

- d. University of California Cooperative Extension’s Guide to Estimating Irrigation Water Needs of Landscape Plantings in CA.

Qualifying irrigation designation: “Low” or “Very Low”

- 4. Turf is not allowed on slopes greater than twenty-five percent where the toe of the slope is adjacent to an impermeable hardscape and where twenty-five percent means one foot of vertical elevation change for every four feet of horizontal length (rise divided by run x 100 = slope percent).
- 5. Total irrigated areas specified as turf shall be limited to a maximum of twenty-five percent with recreational areas exempted.
- 6. A landscape design plan for projects in fire-prone areas shall address fire safety and prevention. A defensible space or zone around a building or structure is required per California [Public Resources Code](#) Section 4291(a) and (b). Avoid fire-prone plant materials and highly flammable mulches.
- 7. Those species identified by the California Invasive Plant Council (CAL-IPC) as invasive in the San Francisco Bay Area shall not be specified.
- 8. The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.
- 9. Plant species shall be selected and spaced to allow them to grow to their natural size and shape. Pruning for structural integrity and health of plant is permitted. In addition, plants located in a row or adjacent to buildings, sidewalks, or roads will be spaced between their minimum and maximum mature plant spread according to a published reference plant book and still fit into their planting area without significant overhang. Trees must meet the spacing requirements only when adjacent to buildings, in a row or adjacent to other vertical obstructions. Vines are not subject to spacing requirements.
- 10. Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site.

B. Water Features.

- 1. Recirculating water systems shall be used for water features.
- 2. Where available, recycled water shall be used as a source for decorative water features.
- 3. Surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.

C. Mulch and Amendments.

1. A minimum three-inch layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, or direct seeding applications where mulch should not be used because it may be harmful. The use of plastic sheeting as a weed barrier is prohibited.
  2. Stabilizing mulching products shall be used on slopes.
  3. The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.
  4. Compost and soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected (see Section 16.14.090).
  5. Ongoing maintenance shall include regular reapplication of mulch to a minimum of three inches.
- D. The landscape design plan, at a minimum, shall:
1. Delineate and label each hydrozone by number, letter, or other method;
  2. Identify each hydrozone as low, moderate, high water, or mixed water use. Areas of the landscape temporarily irrigated to establish drought tolerant plants shall be included in the low water use hydrozone for the water budget calculation;
  3. Identify recreational areas;
  4. Identify areas permanently and solely dedicated to edible plants;
  5. Identify areas irrigated with recycled water;
  6. Identify type of mulch and application depth;
  7. Identify soil amendments, type, and quantity;
  8. Identify type and surface area of water features;
  9. Identify hardscapes (pervious and non-pervious);
  10. Identify location and installation details of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater;
  11. Identify any applicable rain harvesting or catchment technologies (e.g., rain gardens, cisterns, etc.);
  12. Contain the following statement: "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plan"; and
  13. Bear the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the California [Business and Professions Code](#), Section 832.27 of Title 16 of the [California Code of Regulations](#), and Section 6721 of the Food and Agriculture Code.) (Ord. 2015-05 § 2, 2015)

## 16.14.110 Irrigation design plan.

For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following design criteria shall be submitted as part of the landscape documentation package.

### A. System.

1. The irrigation system shall be designed to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.

a. If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.

b. Static water pressure, dynamic or operating pressure, and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

2. Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency (such as a main line break) or routine repair.

3. Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions are required for all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.

4. Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system.

5. The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

6. Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.

7. The design of the irrigation system shall conform to the hydrozones of the landscape design plan.

8. The irrigation system must be designed and installed to meet, at a minimum, the irrigation efficiency criteria as described in Section 16.14.080 regarding the maximum applied water allowance.
9. In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.
10. Sprinkler heads and other emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.
11. Sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
12. Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to high traffic areas.
13. Check valves or anti-drain valves are required for all irrigation systems.
14. Narrow or irregularly shaped areas, including turf, less than eight feet in width in any direction shall be irrigated with subsurface irrigation or a low volume irrigation system.
15. Overhead irrigation shall not be permitted within twenty-four inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:
  - a. The landscape area is adjacent to permeable surfacing and no runoff occurs; or
  - b. The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or
  - c. The irrigation designer specifies an alternative design or technology, as part of the landscape documentation package and clearly demonstrates strict adherence to irrigation system design criteria in subsection (A)(8) of this section. Prevention of overspray and runoff must be confirmed during the irrigation audit.
16. Slopes greater than twenty-five percent shall not be irrigated with an irrigation system with a precipitation rate exceeding three-fourths inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the landscape documentation package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.

B. Hydrozone.

1. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.
2. Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.

3. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf.
4. Individual hydrozones that mix plants of moderate and low water use, or moderate and high water use, may be allowed if the plant factor of the higher water using plant is used for calculations.
5. Individual hydrozones that mix high and low water use plants shall not be permitted.
6. On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation. On the irrigation design plan, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the Hydrozone Information Table (see City of American Canyon Template Water-Efficient Landscaping Worksheet). This table can also assist with the irrigation audit and programming the controller.
7. The irrigation design plan, at a minimum, shall contain:
  - a. Location and size of separate water meters for landscape;
  - b. Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices;
  - c. Static water pressure at the point of connection to the public water supply;
  - d. Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;
  - e. Recycled water irrigation systems as specified in Section [19.22.070](#);
  - f. The following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan"; and
  - g. The signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or any other person authorized to design an irrigation system. (See Sections 5500.I, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the [Business and Professions Code](#), Section 832.27 of Title 16 of the [California Code of Regulations](#), and Section 6721 of the [Food and Agricultural Code](#).) (Ord. 2015-05 § 2, 2015)

## **16.14.120 Grading design plan.**

For the efficient use of water, project site grading shall be designed to minimize soil erosion, runoff, and water waste. A grading plan shall be submitted as part of the landscape documentation package. A comprehensive grading plan prepared by a civil engineer for other city permits satisfies this requirement.

- A. The project applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:
  1. Height of graded slopes;
  2. Drainage patterns;

3. Pad elevations;
4. Finish grade; and
5. Stormwater retention improvements, if applicable.

B. The grading design plan shall contain the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan" and shall bear the signature of a licensed professional as authorized by law. (Ord. 2015-05 § 2, 2015)

### **16.14.130 Irrigation scheduling.**

For the efficient use of water, all irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:

A. Irrigation scheduling shall be regulated by automatic irrigation controllers.

B. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

C. For implementation of the irrigation schedule, particular attention must be paid to irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the estimated total water use. Total annual applied water shall be less than or equal to maximum applied water allowance (MAWA). Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.

D. Parameters used to set the automatic controller shall be developed and submitted for each of the following:

1. The plant establishment period;
2. The established landscape; and
3. Temporarily irrigated areas.

E. Each irrigation schedule shall consider for each station all of the following that apply:

1. Irrigation interval (days between irrigation);
2. Irrigation run times (hours or minutes per irrigation event to avoid runoff);
3. Number of cycle starts required for each irrigation event to avoid runoff;
4. Amount of applied water scheduled to be applied on a monthly basis;
5. Application rate setting;
6. Root depth setting;

7. Plant type setting;
8. Soil type and mulch depth;
9. Slope factor setting;
10. Shade factor setting; and
11. Irrigation uniformity or efficiency setting. (Ord. 2015-05 § 2, 2015)

### **16.14.140 Landscape and irrigation maintenance schedule.**

A. Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the certificate of completion.

B. A regular maintenance schedule shall include, but not be limited to, routine inspection; adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning; weeding in all landscape areas, and removing and obstruction to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

C. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents.

D. At least one landscaping staff member or contractor shall be trained in the use of Integrated Pest Management (IPM) or is a “Bay-Friendly Qualified Landscape Professional.” (Ord. 2015-05 § 2, 2015)

### **16.14.150 Stormwater management.**

All landscape plans shall conform to Chapter [14.28](#) Stormwater and Pollution Discharge Control Program. (Ord. 2015-05 § 2, 2015)

### **16.14.160 Irrigation audit, irrigation survey, and irrigation water use analysis.**

A. All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.

B. For new construction and rehabilitated landscape projects installed after January 1, 2010, as described in Section [16.14.020](#):

1. The project applicant shall submit an irrigation audit report with the certificate of completion to the city that may include, but is not limited to: inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule;

2. The city shall administer programs that may include, but not be limited to, irrigation water use analysis, irrigation audits, and irrigation surveys for compliance with the maximum applied water allowance. (Ord. 2015-05 § 2, 2015)

### **16.14.170 Effective precipitation.**

A. The city may consider effective precipitation (twenty-five percent of annual precipitation) in tracking water use and may use the following equation to calculate maximum applied water allowance:

$$\text{MAWA} = (\text{ET}_o - \text{Eppt}) (0.62) [(0.7 \times \text{LA}) + (0.3 \times \text{SLA})].$$

Upon approval of the final landscape documentation package by the city, the project applicant shall:

1. Receive a permit or approval of the plan check or design permit and record the date of the permit in the certificate of completion;
2. Submit a copy of the approved final landscape documentation package along with the record drawings, and any other information to the property owner or designee; and
3. Submit a copy of the water-efficient landscape worksheet to the city. (Ord. 2015-05 § 2, 2015)

### **16.14.180 Certificate of completion.**

The certificate of completion shall include the following:

A. Project information sheet that contains:

1. Date;
2. Project name;
3. Project applicant name, telephone, and mailing address;
4. Project address and location; and
5. Property owner name, telephone, and mailing address.

B. Certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that the landscape project has been installed per the approved landscape Documentation Package:

1. Where there have been significant changes made in the field during construction, these “as-built” or record drawings shall be included with the certification.

- C. Irrigation scheduling parameters used to set the controller (see Section [16.14.130](#)).
- D. Landscape and irrigation maintenance schedule (see Section [16.14.140](#)).
- E. Irrigation audit report (see Section [16.14.160](#)).

F. Soil management report, if not submitted with landscape documentation package, and documentation verifying implementation of soil report recommendations (see Section [16.14.090](#)).

G. The project applicant shall:

1. Submit the signed certificate of completion to the city for review;
2. Ensure that copies of the approved certificate of completion are submitted to the city and property owner or designee. (Ord. 2015-05 § 2, 2015)

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## Contact:

City Clerk: 707-647-4352

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Appendix H  
CITY MUNICIPAL CODE WATER EFFICIENT  
LANDSCAPING CHAPTER 19.22



## **Chapter 19.22 WATER-EFFICIENT LANDSCAPING**

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19.22.070 Recycled water.

19.22.080 Stormwater management.

### **19.22.010 Purpose.**

This chapter is intended to implement the landscape design requirements of the Water Conservation in Landscaping Act of 2006 (AB 1881) and to establish standards for sustainable landscape practices in accordance with the StopWaste.Org Bay Friendly Landscape guidelines. It ensures that urbanized areas are sufficiently augmented by adequate, water-efficient, landscaping and open space in order to:

- A. Shade vehicles in parking lots.
- B. Break up extensive stretches of paving.
- C. Reduce impervious areas.
- D. Provide natural solar insulation for buildings, to screen certain types of land uses where appropriate.
- E. Create interesting and defined entries to facilities.
- F. Soften project perimeters. (Ord. 2015-05 § 3, 2015)

## **19.22.020 Applicability.**

A. Applicability. A conceptual landscape plan shall be required for all entitlements for which design permit approval is required (Chapter 19.41).

B. This chapter does not apply to:

1. Registered local, state or federal historical sites.
2. Ecological restoration projects that do not require a permanent irrigation system.
3. Plant collections, as part of botanical gardens and arboretums open to the public.

C. Review and Approval.

1. Conceptual landscape plans shall be reviewed and approved by the planning commission, except for entitlements subject to the approval of the community development director (pursuant to Chapter 19.40, Review and Approval Procedures).

2. Final landscape plans, as defined by Chapter 16.13 of the municipal code, shall be subject to review and approval by the community development director. (Ord. 2015-05 § 3, 2015)

## **19.22.030 Definitions.**

The terms used in this chapter have the meaning set forth below:

“Applied water” means the portion of water supplied by the irrigation system to the landscape.

“Bay-Friendly Landscape Guidelines” means the most recent version of the guidelines developed by StopWaste.Org for use in the professional design, construction and maintenance of landscapes.

“City” means the city of American Canyon and its representatives.

“Conceptual landscape plan” means a preliminary landscape plan submitted to the city for review with a discretionary application.

“Conversion factor (0.62)” means the number that converts acre-inches per acre per year to gallons per square foot per year.

“Drip irrigation” means any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

“Ecological restoration project” means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

“Estimated total water use (ETWU)” means the total water used for the landscape as described in Section 492.4.

“ET adjustment factor (ETAF)” means a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape.

“Evapotranspiration rate” means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

“Final landscape plan” means a landscape plan submitted to the city for review and issuance of building permits and contains the same elements as the conceptual landscape plan.

“Flow rate” means the rate at which water flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.

“Hardscapes” means any durable material (pervious and non-pervious).

“Homeowner-provided landscaping” means any landscaping either installed by a private individual for a single-family residence or installed by a licensed contractor hired by a homeowner. A homeowner, for purposes of this chapter, is a person who occupies the dwelling he or she owns. This excludes speculative homes, which are not owner-occupied dwellings.

“Hydrozone” means a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.

“Infiltration rate” means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

“Invasive plant species” means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources.

“Landscape architect” means a person who holds a license to practice landscape architecture in the state of California [Business and Professions Code Section 5615](#).

“Landscape area” means all the planting areas, turf areas, and water features in a landscape design plan subject to the maximum applied water allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

“Landscape contractor” means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

“Landscape documentation package” means the documents required under Section [16.14.050](#).

“Landscape project” means total area of landscape in a project as defined in “landscape area” for the purposes of this chapter, meeting requirements under Section [19.22.020](#).

“Lawn” means an area of short, mown grass in a yard, garden, or park.

“Maximum applied water allowance (MAWA)” means the upper limit of annual applied water for the established landscaped area as specified in Section 19.22.060. It is based upon the area’s reference evapotranspiration, the ET adjustment factor, and the size of the landscape area.

“Mulch” means any organic material such as leaves, bark, arbor or wood chips, recycled wood waste, straw, compost, or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

“Native species” means plants from the local microclimate or Northern California species.

“New construction” means, for the purposes of this chapter, a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

“Permit” means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

“Pervious” means any surface or material that allows the passage of water through the material and into the underlying soil.

“Plant factor” or “plant water use factor” is a factor that, when multiplied by ETo, estimates the amount of water needed by plants.

“Project applicant” means the individual or entity submitting a landscape documentation package required under Section 19.22.050, to request a permit, plan check, or design permit from the city. A project applicant may be the property owner or designee.

“Record drawing” or “as-builts” means a set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

“Recreational area” means publicly owned or publicly accessible areas dedicated to active play such as parks, sports fields, and golf courses where turf provides a playing surface.

“Recycled water,” “reclaimed water,” or “treated sewage effluent water” means treated or recycled waste water of a quality suitable for non-potable uses such as landscape irrigation and water features. This water is not intended for human consumption.

“Reference evapotranspiration” or “ETo” means a standard measurement of environmental parameters which affect the water use of plants. ETo is expressed in inches per day, month, or year as represented in Section 19.22.060, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the maximum applied water allowance so that regional differences in climate can be accommodated.

“Rehabilitated landscape” means any re-landscaping project that requires a permit, plan check, or design permit, meets the requirements of Section 19.22.020, and the modified landscape area is equal to or greater than two thousand five hundred square feet, is fifty percent of the total landscape area, and the modifications are completed within one year.

“Runoff” means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, runoff may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.

“Special landscape area (SLA)” means an area of the landscape dedicated solely to edible plants, areas irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

“Turf” means a species of grass that was developed to be used as a lawn together with the surface layer of earth held together by its roots.

“Water feature” means a design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied).

“WUCOLS” means the Water Use Classification of Landscape Species published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation, 2100. (Ord. 2015-05 § 3, 2015)

## **19.22.040 General requirements and standards.**

### **A. General Requirements and Standards.**

1. The setbacks from streets required by the schedule of zoning district regulations shall be fully landscaped except in single-family districts where parking may be permitted as specified in this title.
2. All landscaped areas shall be protected by six-inch concrete curbing.
3. Parking and circulation areas shall be landscaped according to the requirements of this title.
4. The use of turf in new residential projects is limited to the rear yard.
5. Landscaping should be used to separate parking and vehicle circulation areas from buildings, to provide a visual landscaped foreground for buildings, and to enhance the perimeter of a project.
6. Live plant materials generally should be used in all landscaped areas. Bark should only be utilized as mulch, not as a permanent form of groundcover.
7. Landscape planters abutting parking areas shall be sufficiently large to allow for vehicle overhang without extending into the planting area.

### **B. Trees.**

1. Landscape plans for sites on major streets should include large-scale street trees, with deep root systems and broad canopies.

2. Tree planting shall consider passive solar heating and cooling opportunities related to building orientation.

3. Trees shall be provided in parking lot areas in a manner that provides shading of parked vehicles to the maximum extent feasible.

4. Trees shall be properly supported. Stakes and ties on trees shall be checked regularly for correct functions. Ties shall be adjusted to avoid creating abrasions or girdling on trunks or branches.

C. Hard Surfaces. Required planter or landscaped areas may be combined with pedestrian walks and similar hard surface areas, provided that such hard surface areas do not cover more than thirty percent of any required planter or landscaped areas. Ornamental or landscaping rock and gravel areas, artificial turf, or other areas covered with other artificial materials shall be considered hard surface areas for the purpose of this provision.

D. Slopes.

1. All manufactured slopes over five feet in height created by grading shall be fully landscaped utilizing a combination of trees, shrubs and groundcover materials.

2. Stabilizing jute netting or equivalent netting shall be provided in conjunction with the landscape planting and shall fully cover lower slope areas.

E. Installation.

1. All landscaping and planter areas shall be installed consistent with an approved final landscape plan prior to final building permit sign-off or granting of an occupancy permit for a project.

2. Prior to the installation of landscaping in any public right-of-way, the developer shall provide for continued maintenance until such areas are accepted by the city or as defined in a subdivision improvement agreement.

F. Maintenance. Required landscaped areas shall be continually maintained in good condition and kept clean and weeded. Good maintenance shall be interpreted to include: watering and maintaining water efficiency, weeding, pruning, insect and disease control, and replacement of plant materials and irrigation equipment as needed to preserve the health and appearance of plant materials. (Ord. 2015-05 § 3, 2015)

## **19.22.050 Elements of the conceptual landscape documentation plan.**

A. The conceptual landscape documentation plan, submitted as part of the discretionary application, shall include the following:

1. Project information:
  - a. Date;
  - b. Project applicant;
  - c. Project address (if available, parcel and/or lot number(s));
  - d. Total landscape area (square feet);
  - e. Water supply type (e.g., potable, recycled, well);
  - f. Landscape requirements identified in Sections [19.22.040](#) and [19.22.060](#);
  - g. Project contacts to include contact information for the project applicant and property owner.
2. Water-efficient landscape worksheet in Section [19.22.060](#):
  - a. Hydrozone information table;
  - b. Water budget calculations:
    - i. Maximum applied water allowance (MAWA),
    - ii. Estimated total water use (ETWU).
3. Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site.
4. The use of turf in new residential projects is limited to twenty-five percent of the rear yard of each home.
5. On nonresidential projects, turf is not allowed on slopes greater than twenty-five percent where the toe of the slope is adjacent to an impermeable hardscape and where twenty-five percent means one foot of vertical elevation change for every four feet of horizontal length (rise divided by run x 100 = slope percent).
6. Total irrigated areas specified as turf shall be limited to a maximum of twenty-five percent with recreational areas exempted.
7. Turf is prohibited in street medians, traffic islands or bulb outs of any size.
8. A landscape design plan for projects in fire-prone areas shall address fire safety and prevention. A defensible space or zone around a building or structure is required per California [Public Resources Code](#) Section 4291(a) and (b). Avoid fire-prone plant materials and highly flammable mulches.
9. Those species identified by CAL-IPC as invasive in the San Francisco Bay Area shall not be specified.

10. Landscape plans shall bear the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the California [Business and Professions Code](#), Section 832.27 of Title 16 of the [California Code of Regulations](#), and Section 6721 of the Food and Agriculture Code.) (Ord. 2015-05 § 3, 2015)

### **19.22.060 Water-efficient landscape worksheet.**

A. A project applicant shall complete the water-efficient landscape worksheet which contains two sections:

1. A hydrozone information table for the landscape project.

2. A water budget calculation for the landscape project. For the calculation of the maximum applied water allowance and estimated total water use, a project applicant shall use the ETo values from the table below:

<b>County and City NAPA</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Annual ETo</b>
Carneros	0.8	1.5	3.1	4.6	5.5	6.6	6.9	6.2	4.7	3.5	1.4	1.0	45.8

\* The values in this table were derived from:

1. California Irrigation Management Information System (CIMIS);

2. Reference Evapotranspiration Zones Map, University of California, Davis - Dept. of Land, Air & Water Resources and California Dept. of Water Resources 1999;

3. Reference Evapotranspiration for California, University of California, Davis - Department of Agriculture and Natural Resources (1987) Bulletin 1922;

4. Determining Daily Reference Evapotranspiration, Cooperative Extension University of California, Davis - Division of Agriculture and Natural Resources (1987), Publication Leaflet 21426.

B. Water budget calculations shall adhere to the following requirements:

1. The plant factor used shall be from WUCOLS. The plant factor ranges from 0 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants.

2. All water features shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone.

3. All special landscape areas shall be identified and their water use calculated as described below.

4. ETAF for special landscape areas shall not exceed 1.0.

C. Maximum Applied Water Allowance. The maximum applied water allowance shall be calculated using the equation:

$$\text{MAWA} = (\text{ET}_o) (0.62) [(0.7 \times \text{LA}) + (0.3 \times \text{SLA})]$$

D. Estimated Total Water Use. The estimated total water use shall be calculated using the equation below. The sum of the estimated total water use calculated for all hydrozones shall not exceed MAWA.

Where:

ETWU = Estimated Total Water Use per year (gallons)

ET<sub>o</sub> = Reference Evapotranspiration (inches)

PF = Plant Factor from WUCOLS (see Section 491)

HA = Hydrozone Area [high, medium, and low water use areas] (square feet)

SLA = Special Landscape Area (square feet)

0.62 = Conversion Factor

IE = Irrigation Efficiency (minimum 0.71)

(Ord. 2015-05 § 3, 2015)

### **19.22.070 Recycled water.**

A. The installation of recycled water irrigation systems shall allow for the current and future use of recycled water, unless a written exemption has been granted as described in subsection B.

B. Irrigation systems and decorative water features shall use recycled water unless a written exemption has been granted by the city stating that recycled water meeting all public health codes and standards is not available and will not be available for the foreseeable future.

C. All recycled water irrigation systems shall be designed and operated in accordance with all applicable local and state laws.

D. Landscapes using recycled water are considered special landscape areas. The ET adjustment factor for special landscape areas shall not exceed 1.0. (Ord. 2015-05 § 3, 2015)

### **19.22.080 Stormwater management.**

All landscape plans shall conform to Chapter [14.28](#) Stormwater and Pollution Discharge Control Program. (Ord. 2015-05 § 3, 2015)

## Contact:

City Clerk: 707-647-4352

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Appendix I  
WATER AND SEWER RATE SCHEDULES



## RATE SCHEDULE

Effective January 1, 2021

### Water Rates

Customer Category	Variable Unit* Charge (\$/unit or 748 gal)	Fixed Meter Charges (\$/month)
<b>Residential Use</b>		
Tier 1 (0-10 units*)	\$6.78	\$15.18
Tier 2 (>10 units*)	\$7.38	\$15.18

\*1 unit = 748 gallons; the average household uses approximately 10 units per month

### Multi-Family, Commercial and Landscape

< 1" meter	\$6.96	\$15.18
1" meter (residential)	\$6.96	\$15.18
1" meter (commercial)	\$6.96	\$25.38
1 ½" meter	\$6.96	\$50.72
2" meter	\$6.96	\$81.14
3" meter	\$6.96	\$162.29
4" meter	\$6.96	\$253.59
6" meter	\$6.96	\$507.18
8" meter	\$6.96	\$811.54

<b>Private Fire Protection</b>	\$3.48	\$7.59
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<b>Temporary Hydrant Meters</b>	\$6.96	\$162.29
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### Raw Water

1" meter	\$3.24	\$25.38
2" meter	\$3.24	\$81.14
4" meter	\$3.24	\$253.59
6" meter	\$3.24	\$507.18

Recycled Water	By Contract	
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### Sewer Rates

Sewer rates are set according to the average monthly water use for January to March of the previous calendar year. New customers are charged at the average winter use rate (standard) and adjusted the following year if applicable.

Single-Family Residential	Flat Rate	January to March – Average Monthly Use
Low Winter Water Use	\$53.53	4 units or less
Average Winter Water Use (Standard)	\$57.01	4.1 – 13 units
High Winter Water Use	\$59.05	13.01 units and above

Multi-Family Residential	\$42.76	Per dwelling unit
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Commercial Sewer Rate	\$57.01 or \$5.09 per unit (whichever is greater)	
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All Rates in Accordance with Resolution 2018-54, Municipal Code 13.06 and 14.04

\*\*Sewer Rates Updated as of 4.2021 due to error in CPI charges from 1.2021 to 3.2021

**RESOLUTION NO. 2018-54**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AMERICAN CANYON ADJUSTING "WATER QUANTITY CHARGES" AND "WATER METER CHARGES" ESTABLISHED BY AMERICAN CANYON MUNICIPAL CODE TITLE 13, CHAPTER 13.06 "WATER RATES AND CONNECTIONS FEES".**

**WHEREAS**, the Water Fund requires additional funding to meet operational requirements, construct improvements to existing aging infrastructure, and to establish funding necessary to pay for additional water purchases, expenses related to promoting conservation, and water saving projects throughout the City; and

**WHEREAS**, staff and the Water Rate Advisory Committee have conducted a detailed in-house fiscal analysis of the Water Enterprise Fund and have held multiple community engagement and outreach meetings to provide information and receive input from the community; and

**WHEREAS**, American Canyon Municipal Code Title 13, Chapter 13.06 permits the City Council to increase water rates by Resolution following a Public Hearing; and

**WHEREAS**, Article XIID, Section 6 of the California Constitution requires that prior to the public hearing to increase water rates charged by the City, the City mail to each property owner or utility billing customer, at least 45 days prior to such public hearing, a notice describing (a) the amount of the fee or charge to be imposed upon each parcel, (b) the basis upon which the amount of the proposed fee or charge was calculated, (c) the reason for the fee or charge, and (d) the date, time, and location of a public hearing on the proposed fee or charge; and

**WHEREAS**, on March 30, 2018, the City mailed the Notice of Public Hearing to be held on May 15, 2018, relating to the City's proposed water rate adjustments in accordance with California Constitution Article XIID Section 6; and

**WHEREAS**, the City held such public hearing on May 15, 2018, and received and considered all oral and written protests related to the proposed adjustments in the water rates; and

**WHEREAS**, the City Council of the City of American Canyon determined that written protests have not been received from property owners or utility billing customers representing a majority of the parcels subject to the proposed fee increase; and

**WHEREAS**, after following the procedures required by Proposition 218, Article XII D, Section 6 of the California Constitution and in accordance with American Canyon Municipal Code Title 13, Chapter 13.06, the City Council intends to adopt water rate adjustments as shown in Exhibit A, attached hereto and made a part thereof.

**NOW, THEREFORE BE IT RESOLVED** that the City Council of the City of American Canyon does hereby resolve that based on these facts and circumstances presented and the information received during the Public Hearing, the City Council finds that adjustments to the water rates, as shown in Exhibit A attached hereto and incorporated herein, are necessary and hereby adopted

**PASSED, APPROVED AND ADOPTED** at a regular meeting of the City Council on the 15<sup>th</sup> day of May, 2018 by the following vote:

AYES: Council Members Aboudamous, Joseph, Oro, Vice Mayor Leary and Mayor Garcia  
NOES: None  
ABSTAIN: None  
ABSENT: None

  
\_\_\_\_\_  
Leon Garcia, Mayor

ATTEST:

  
\_\_\_\_\_  
Suellen Johnston, City Clerk

## Water Rates

### Variable Unit Charge (\$/unit or 748 gallons)

	Current	1-Jan-2019	1-Jan-2020	1-Jan-2021	1-Jan-2022	1-Jan-2023
<b>Raw Water</b>	\$3.87	\$3.06	\$3.15	\$3.24	\$3.34	\$3.44
<b><u>Potable Water</u></b>						
<b>Residential Use</b>						
<i>Tier 1 (0-8 units)</i>	\$5.33					
Tier 1 (0-10 units)	-	\$6.07	\$6.42	\$6.78	\$7.15	\$7.54
<i>Tier 2 (9-20 units)</i>	\$6.25					
Tier 2 (>10 units)	-	\$6.65	\$7.01	\$7.38	\$7.76	\$8.15
<i>Tier 3 (&gt;20 units)</i>	\$6.54					
Tier 2 (>10 units)	-	\$6.65	\$7.01	\$7.38	\$7.76	\$8.15
All Other Use	\$5.87	\$6.24	\$6.59	\$6.96	\$7.33	\$7.72
Private Fire	\$3.94	\$3.12	\$3.30	\$3.48	\$3.67	\$3.86

### Fixed Meter Charges (\$/month)

	Current	1-Jan-2019	1-Jan-2020	1-Jan-2021	1-Jan-2022	1-Jan-2023
< 1"	\$6.40	\$6.82	\$10.67	\$15.18	\$20.44	\$26.56
1" (residential)	\$6.40	\$6.82	\$10.67	\$15.18	\$20.44	\$26.56
1" (commercial)	\$10.70	\$11.41	\$17.84	\$25.38	\$34.18	\$44.42
1.5"	\$21.38	\$22.80	\$35.65	\$50.72	\$68.30	\$88.75
2"	\$34.21	\$36.47	\$57.04	\$81.14	\$109.28	\$141.99
3"	\$68.42	\$72.95	\$114.08	\$162.29	\$218.55	\$283.98
4"	\$106.91	\$113.99	\$178.26	\$253.59	\$341.51	\$443.74
6"	\$213.82	\$227.98	\$356.52	\$507.18	\$683.02	\$887.48
8"	\$342.14	\$364.79	\$570.46	\$811.54	\$1,092.90	\$1,420.06
Private Fire	\$3.20	\$3.41	\$5.33	\$7.59	\$10.22	\$13.28

Approved by City Council on May 15, 2018

Appendix J  
UWMP CHECKLIST



# UWMP Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	Section 1.1
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the supplier’s plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Section 1.1
x	x	Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.4
x	x	Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	Section 2.4
x		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	N/A

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
	x	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	N/A
x	x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 3.1
x	x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.2
x	x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.3.1
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.3.2
x	x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 3.3.1
x	x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.4

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2
x	x	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Section 4.3
x	x	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System Water Use	Section 4.4
x	x	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Section 4.2
x	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Section 4.3
x	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5
x	x	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Section 4.6

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x		Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Chapter 5 (see SB X7-7 forms in Appendix C)
x		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Section 5.6
	x	Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	N/A
x		Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.6

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x		Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.5
x		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	Section 5.6 (See SB X7-7 forms in Appendix C)
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Section 7.4
x	x	Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, <i>including changes in supply due to climate change.</i>	System Supplies	Section 7.4

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	Chapter 6
x	x	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Chapter 6
x	x	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Section 6.10
x	x	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.3
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.3
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.3

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.3
x	x	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Section 6.3
x	x	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.3
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Section 6.3
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	Section 6.8

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.6.3
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.6.5
x	x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.6.5
x	x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.6.5
x	x	Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.6.6

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.6.5.1
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.7
x	x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Section 6.6.2
x	x	Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	Section 6.9
x	x	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	Section 6.12

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.2.1
x	x	Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.2.3
x	x	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.4
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Section 7.5

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Section 7.3
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Section 7.4
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Section 7.4
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Sections 6.11 and 7.22
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	See Appendix F

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Appendix F, Chapter 2
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Appendix F, Chapter 10
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Appendix F, Chapter 3
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Appendix F, Chapter 3

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Appendix F, Chapter 5
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	N/A
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Appendix F, Section 5.9
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Appendix F, Section 5.9

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Appendix F, Section 5.10
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	Section 8.3
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	Section 8.3
x	x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Appendix F, Section 5.12
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Appendix F, Section 6.5
x	x	Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Appendix F, Sections 6.3 and 6.4

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	Appendix F, Chapter 7
x	x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	Appendix F, Chapter 8
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Appendix F, Section 1.3
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	Appendix F, Chapter 8
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Appendix F, Chapter 9
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Appendix F, Chapter 9

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	Appendix F, Chapter 9
x		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Appendix F, Chapter 10
x		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	Appendix F, Chapter 12
x	x	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4 (Commitment to Distribute in Appendix B)

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 8.14	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	Appendix F, Chapter 13
	x	Sections 9.1 and 9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	N/A
x		Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Chapter 9
x		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	Section 10.3

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 10.2.1
x	x	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 10.4.1
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Section 10.2.2, Section 10.3, See Appendix B
x	x	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Section 10.2.1
x	x	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	See Section 10.3, Appendix K

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4.3 (See Commitment to Distribute in Appendix B)
x	x	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4.4 (See Commitment to Distribute in Appendix B)
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 10.4.2 and 10.6
x	x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5 (See Commitment to Distribute in Appendix B)
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Appendix F, Chapter 13

2020 Urban Water Management Plan Guidebook

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	N/A
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Appendix F, Chapter 13



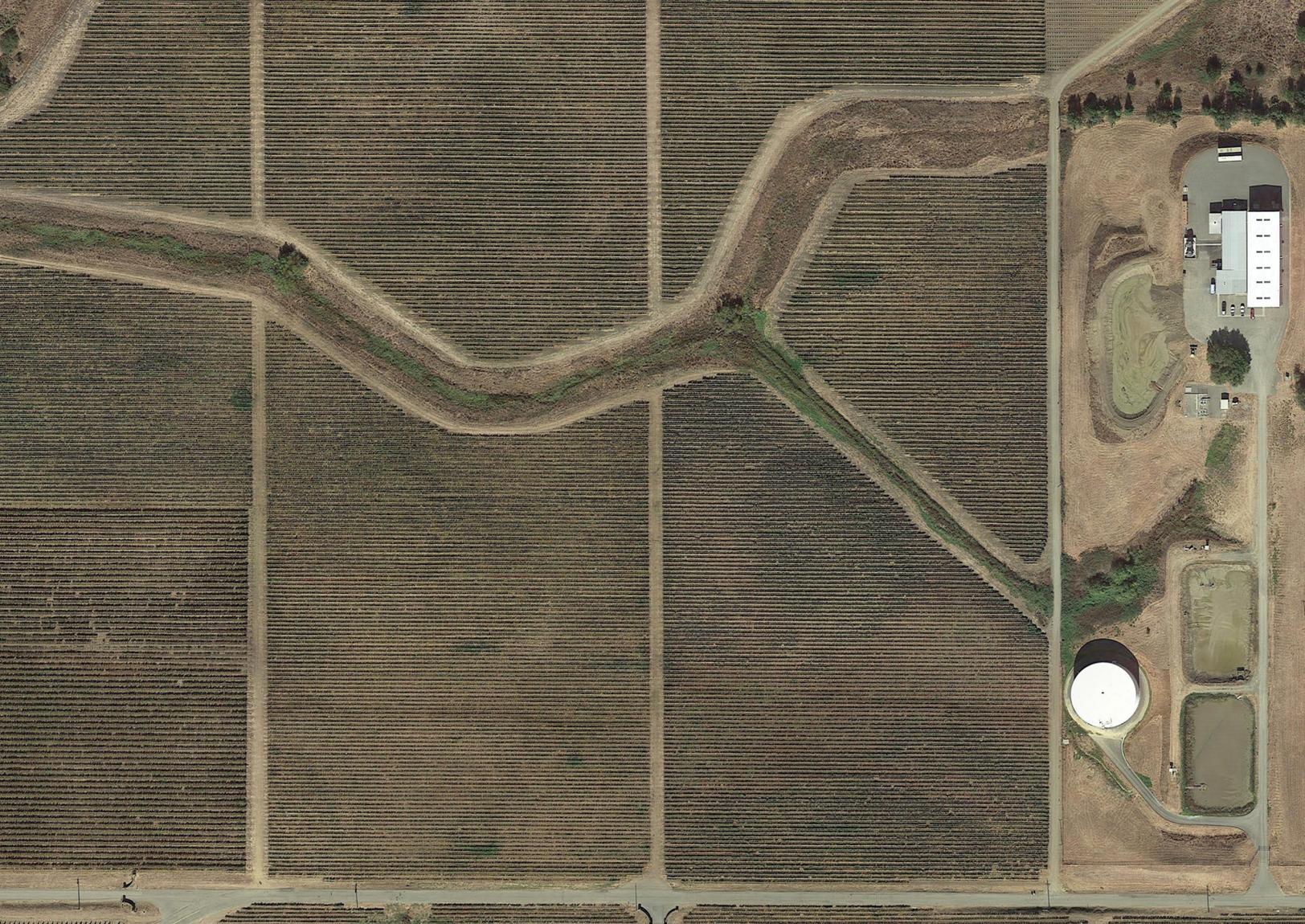
## Appendix K

# CITY ADOPTION RESOLUTIONS

*To be included with Final Urban Water Management Plan.*







# Executive Department

State of California

## EXECUTIVE ORDER B-37-16 MAKING WATER CONSERVATION A CALIFORNIA WAY OF LIFE

**WHEREAS** California has suffered through a severe multi-year drought that has threatened the water supplies of communities and residents, devastated agricultural production in many areas, and harmed fish, animals and their environmental habitats; and

**WHEREAS** Californians responded to the drought by conserving water at unprecedented levels, reducing water use in communities by 23.9% between June 2015 and March 2016 and saving enough water during this period to provide 6.5 million Californians with water for one year; and

**WHEREAS** severe drought conditions persist in many areas of the state despite recent winter precipitation, with limited drinking water supplies in some communities, diminished water for agricultural production and environmental habitat, and severely-depleted groundwater basins; and

**WHEREAS** drought conditions may persist in some parts of the state into 2017 and beyond, as warmer winter temperatures driven by climate change reduce water supply held in mountain snowpack and result in drier soil conditions; and

**WHEREAS** these ongoing drought conditions and our changing climate require California to move beyond temporary emergency drought measures and adopt permanent changes to use water more wisely and to prepare for more frequent and persistent periods of limited water supply; and

**WHEREAS** increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change; and

**WHEREAS** these activities are prioritized in the California Water Action Plan, which calls for concrete, measurable actions that "Make Conservation a California Way of Life" and "Manage and Prepare for Dry Periods" in order to improve use of water in our state.

**NOW, THEREFORE, I, EDMUND G. BROWN JR.,** Governor of the State of California, in accordance with the authority vested in me by the Constitution and statutes of the State of California, in particular California Government Code sections 8567 and 8571, do hereby issue this Executive Order, effective immediately.

**IT IS HEREBY ORDERED THAT:**

The orders and provisions contained in my January 17, 2014 Emergency Proclamation, my April 25, 2014 Emergency Proclamation, Executive Orders B-26-14, B-28-14, B-29-15, and B-36-15 remain in full force and in effect except as modified herein.

State agencies shall update temporary emergency water restrictions and transition to permanent, long-term improvements in water use by taking the following actions.

**USE WATER MORE WISELY**

1. The State Water Resources Control Board (Water Board) shall, as soon as practicable, adjust emergency water conservation regulations through the end of January 2017 in recognition of the differing water supply conditions across the state. To prepare for the possibility of another dry winter, the Water Board shall also develop, by January 2017, a proposal to achieve a mandatory reduction in potable urban water usage that builds off of the mandatory 25% reduction called for in Executive Order B-29-15 and lessons learned through 2016.
2. The Department of Water Resources (Department) shall work with the Water Board to develop new water use targets as part of a permanent framework for urban water agencies. These new water use targets shall build upon the existing state law requirements that the state achieve a 20% reduction in urban water usage by 2020. (Senate Bill No. 7 (7th Extraordinary Session, 2009-2010).) These water use targets shall be customized to the unique conditions of each water agency, shall generate more statewide water conservation than existing requirements, and shall be based on strengthened standards for:
  - a. Indoor residential per capita water use;
  - b. Outdoor irrigation, in a manner that incorporates landscape area, local climate, and new satellite imagery data;
  - c. Commercial, industrial, and institutional water use; and
  - d. Water lost through leaks.

The Department and Water Board shall consult with urban water suppliers, local governments, environmental groups, and other partners to develop these water use targets and shall publicly issue a proposed draft framework by January 10, 2017.

3. The Department and the Water Board shall permanently require urban water suppliers to issue a monthly report on their water usage, amount of conservation achieved, and any enforcement efforts.

## **ELIMINATE WATER WASTE**

4. The Water Board shall permanently prohibit practices that waste potable water, such as:
  - Hosing off sidewalks, driveways and other hardscapes;
  - Washing automobiles with hoses not equipped with a shut-off nozzle;
  - Using non-recirculated water in a fountain or other decorative water feature;
  - Watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and
  - Irrigating ornamental turf on public street medians.
5. The Water Board and the Department shall direct actions to minimize water system leaks that waste large amounts of water. The Water Board, after funding projects to address health and safety, shall use loans from the Drinking Water State Revolving Fund to prioritize local projects that reduce leaks and other water system losses.
6. The Water Board and the Department shall direct urban and agricultural water suppliers to accelerate their data collection, improve water system management, and prioritize capital projects to reduce water waste. The California Public Utilities Commission shall order investor-owned water utilities to accelerate work to minimize leaks.
7. The California Energy Commission shall certify innovative water conservation and water loss detection and control technologies that also increase energy efficiency.

## **STRENGTHEN LOCAL DROUGHT RESILIENCE**

8. The Department shall strengthen requirements for urban Water Shortage Contingency Plans, which urban water agencies are required to maintain. These updated requirements shall include adequate actions to respond to droughts lasting at least five years, as well as more frequent and severe periods of drought. While remaining customized according to local conditions, the updated requirements shall also create common statewide standards so that these plans can be quickly utilized during this and any future droughts.
9. The Department shall consult with urban water suppliers, local governments, environmental groups, and other partners to update requirements for Water Shortage Contingency Plans. The updated draft requirements shall be publicly released by January 10, 2017.

10. For areas not covered by a Water Shortage Contingency Plan, the Department shall work with counties to facilitate improved drought planning for small water suppliers and rural communities.

### **IMPROVE AGRICULTURAL WATER USE EFFICIENCY AND DROUGHT PLANNING**

11. The Department shall work with the California Department of Food and Agriculture to update existing requirements for Agricultural Water Management Plans to ensure that these plans identify and quantify measures to increase water efficiency in their service area and to adequately plan for periods of limited water supply.
12. The Department shall permanently require the completion of Agricultural Water Management Plans by water suppliers with over 10,000 irrigated acres of land.
13. The Department, together with the California Department of Food and Agriculture, shall consult with agricultural water suppliers, local governments, agricultural producers, environmental groups, and other partners to update requirements for Agricultural Water Management Plans. The updated draft requirements shall be publicly released by January 10, 2017.

The Department, Water Board and California Public Utilities Commission shall develop methods to ensure compliance with the provisions of this Executive Order, including technical and financial assistance, agency oversight, and, if necessary, enforcement action by the Water Board to address non-compliant water suppliers.

This Executive Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

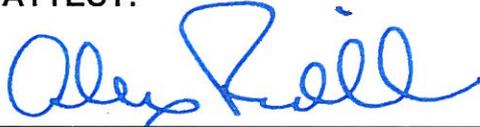
**I FURTHER DIRECT** that as soon as hereafter possible, this order be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this order.



**IN WITNESS WHEREOF** I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 9th day of May 2016.

  
EDMUND G. BROWN JR.  
Governor of California

**ATTEST:**

  
ALEX PADILLA  
Secretary of State



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## **TITLE**

Ad-Hoc Climate Action Committee Interim Report

## **RECOMMENDATION**

Receive and file Ad-Hoc Climate Action Committee Interim Report

## **CONTACT**

Jason Holley, City Manager

## **BACKGROUND & ANALYSIS**

On February 1, 2022, the City Council created the Climate Action Ad Hoc Committee (Joseph/Washington) (Resolution 2022-07). The Council further directed the Committee to:

1. Develop specific recommendations and measurable outcomes to achieve the goal of Net Zero Climate Pollutants by 2030 in the following areas: a. Transportation; b. Buildings; c. Renewable Energy and Storage; d. Other Environmental issues, including but not limited to, water conservation, urban agriculture and food composting, and recycling; e. Carbon Sequestration; f. Public Awareness and Education regarding individual actions, including individual lifestyles and business operations; and g. Climate Resiliency Efforts; and
2. Work with City staff, stakeholders and community leaders and organizations and the public at large; and
3. Identify funding sources and grant opportunities; and
4. Present its findings and recommendations within six months.

This Committee submitted its preliminary findings and recommendations on July 29 and now presents them to Council for review and consideration.

Staff recommends the City Council receive and file the Committee's interim report and requests direction from Council as to what (if any) next steps might be appropriate.

## **COUNCIL PRIORITY PROGRAMS AND PROJECTS**

Organizational Effectiveness: "Deliver exemplary government services."

**FISCAL IMPACT**

The Recommended Action (receive and file a report) will have no fiscal impact on the City's FY 2022/23 Budget. The extent of any fiscal impact of future actions can only be evaluated after the Council determines what next steps (if any) might be appropriate.

**ENVIRONMENTAL REVIEW**

15378(b) - The action is not a "Project" subject to the California Environmental Quality Act ("CEQA") because it does not qualify as a "Project" under Public Resources Code Sections 21065 and 21080 and in Section 15378(b) of Title 14 of the California Code of Regulations.

**ATTACHMENTS:**

- [1. American Canyon 2022 Climate Action Plan - Interim Report](#)

# Climate Action Interim Plan – City of American Canyon

## August 1, 2022

### **Introduction**

This report is the product of a City Council ad hoc committee (the Committee), consisting not only of two council members, but members of the public and stakeholders, all committed to “a goal of Net Zero Climate Pollution, measured in terms of net contribution to excess trapped heat, by or before 2030.” With adoption of a Climate Emergency Resolution on February 1, 2022 [Attachment 2], the City Council also created the Climate Action Ad Hoc Committee. This Committee has met regularly and now presents its preliminary findings and recommendations.

Even before this Committee, a Countywide Climate Action Committee (CAC) has met since 2019. It is an advisory body with representation from all jurisdictions in Napa County, including the same two Councilmembers representing the City on this Committee. It received several very informative and timely presentations on Climate Change topics and spearheaded a Countywide Greenhouse Gas (GHG) inventory, including an inventory of carbon dioxide and other long-lived gases, as well as the short-lived pollutant, methane. It is also considering the development of a Countywide Climate Action Plan. Such a regional approach would allow this Committee to focus on specific actions and programs, some of which would presumably be incorporated into the Countywide plan.

Given the fact that the GHG Inventory and a decision on a regional Climate Action Plan will occur *after* this Committee’s August 1 deadline, a summary of goals and projects are provided for now. After feedback is received from Council and the public, the Committee can proceed with more specific actions and details, such as timelines, resources and partnerships, and a more complete implementation plan. We would also coordinate our efforts with the more regional approach.

For now, this American Canyon Climate Action Plan focuses on four guiding principles:

- The plan should be data-driven, with a dashboard of key performance indicators and/or target completion dates.
- We need to “Lead by Example” (particularly the City itself) and consider the impacts on the Climate in all our actions, from procurement to disposal, including everyday activities.
- There should be an emphasis on public awareness and engagement, followed by individual actions and advocacy; and
- The Council should adopt, and staff implement, specific programs and activities.

### ***Data Driven***

There is a saying: “What gets measured, gets done.” In our research efforts we discovered there is a great deal of data that we can collect and monitor. We envision a dashboard of key indicators, such as the number of Solar Panel and battery storage installations, Electric Vehicle registrations, EV Charger installations, Gas appliances replaced with electric alternatives, energy efficiency audits and retrofits, etc. By tracking this data on a regular basis, we can monitor our effectiveness in reducing greenhouse gas emissions. We can also evaluate how effective we are in implementing the various programs and activities. The information can also be used to report to the public on our progress. Attached to this

report is a draft Dashboard [Attachment 1], that tracks ongoing metrics as well as one-time projects/studies. It will be refined during the next phase of this Action Plan.

Likewise, as the Emergency Resolution notes, the City needs to “evaluate all planning and policy decisions through the lens of this [Net Zero Climate Pollution] pledge.” As such, the Environmental Review portion of Council Agenda Staff Reports should consider the larger consequences of Climate Change when evaluating specific policy options for Council consideration.

### ***Lead by Example***

Addressing the impacts of Climate Change will be difficult in large part because it will mean making monumental changes in the way we live and do business. Fear of change—especially if we need to change too quickly—can become a powerful roadblock. Therefore, leading by example is critical. The City’s elected and appointed officials all need to recognize we must do our part to make changes. Even if our changes do not immediately appear to “move the needle” they are still important. For example, converting our fleet to electric, wherever possible, is an important step. Installing solar panels and battery storage units, and retrofitting City buildings, are additional examples. As individuals, we need to step up and make changes to our homes and travel modes. Other respected leaders in the community need to be encouraged to do the same.

### ***Encouraging Individual Actions***

One of the first major observations of the Committee was the realization that the biggest impact will occur if we can persuade our residents and businesses to make changes, since a substantial part of our climate footprint is from the energy use and transportation sectors at home and at work. A lot of people taking little steps will add up.

We learned about one online tool, for instance, currently known as Regeneration Napa, that offers three features: 1) the software can calculate your carbon footprint; 2) it offers a wide array of online resources and suggestions to reduce that footprint; and 3) it allows teams and other groups of individuals to “compete” with each other, to encourage greater participation. This program can be used to educate and motivate people to implement the changes we need to meet our long-term goals.

In addition, we want to work with community groups to promote climate actions at several events, such as Earth Day, in which we reach out to all segments of the community. We can develop small group sessions on healthy eating (plant-based diets, for example, are not only healthier but have a smaller impact on our environment), use of e-bikes and other ways of reducing vehicle miles traveled, or simple energy efficiency projects. Public and private advocacy are key to collective changes needed to implement emissions reduction policies at the speed and scale the science demands.

### ***Specific programs and activities***

Following is the Committee’s initial list of ideas for actions that can reduce the carbon footprint for this community. We have broken the items into several categories, such as transportation and buildings, and briefly outlined the programs consistent with those target areas. Once the full Council and public have had a chance to review this list and refine it, we will meet to include potential stakeholders and allies, discuss resources needed, and determine general timelines. Key metrics will also be identified,

whenever possible, so we can measure success. In effect, it is this list of programs/actions that will be used to track our progress and success.

With this summary in mind, we offer the following programs for Council consideration.

### **Target Area: Transportation**

#### ***Goal One: Reduce Vehicle Miles Traveled (VMT)***

1. ***Implement the City's 2019 Pedestrian/Bike Plan:*** The adopted plan, and any related amendments, should be a priority both for recreational and job opportunity purposes, as a means of reducing Vehicle Miles Traveled. Studies indicate most trips are less than 5 miles; this makes trips by bike (or e-bike) very competitive with vehicles, provided there are safe routes for bikers and pedestrians. Related to the physical aspects of the plan is the concept of traffic calming in general; that is, slowing vehicle speeds on local streets improves the safety of bikers and pedestrians to use our streets to bike/walk, while we build out our bike/ped network.
2. ***Increase Biking/Walking to Schools:*** Making it safer for children to walk or bike to school would reduce the number of vehicle miles traveled, particularly on local streets, and reduce idling emissions at school parking lots, which are harmful to both health and the climate. This would also require progress implementing the City's Bike/Pedestrian Plan. Further, as young children get comfortable walking/riding to school, it will hopefully spill over into their adult lives.
3. ***Support the completion of the Napa Valley Vine Trail:*** In addition to being an iconic recreational and visitor-serving amenity, the Vine Trail could also be used for employment and more functional purposes, particularly with the use of e-Bikes. It will connect all the Cities within the County when completed, thereby facilitating longer trips. Large portions of this Trail have already been completed or are under construction. American Canyon's portion is primarily driven by private development, with portions of the Trail built as a condition of approval. The City will eventually need to fund a "gap" project, connecting any remaining portions of the trail. Solano County is constructing the Trail from American Canyon to Vallejo, which will provide convenient access to ferries and buses to the larger Bay Area. Connections already exist (or under construction) connecting Napa City through Yountville, and St. Helena to Calistoga.
4. ***Increase the purchase and use of Bicycles and e-Bikes, and installation of supportive infrastructure:*** As noted above, many trips are five miles or less—this is a 10–15-minute bike ride. More local trips can convert to bike (or pedestrian) trips, especially if e-Bikes are considered. Electronic Bikes include a small electric motor which can be engaged as needed, either for climbing hills or if the rider wants a break from peddling. Because of this additional convenience, e-Bikes could easily make VMT reductions more appealing. Electric bikes are also far less expensive than Electric Vehicles, which could make them a viable alternative to a second vehicle altogether. And there are state programs available to support these efforts, as well as model programs in other Bay Area communities.
5. ***Increase the number of transit trips originating in American Canyon:*** Transit is a viable alternative for longer trips, particularly for residents who work throughout the Bay area. NVTa is doing a good job expanding express routes from American Canyon to BART or the Vallejo

Ferry, and more can be done. These lines have proven to be the most likely to grow in ridership. Increasing incentives for individuals to utilize such options will be important.

6. Track local employment by zip code: If the City modified its Business License application to require Employers to report both the number of employees and their residence by zip code, it would be easier to calculate employment related VMT. Hiring locally has several benefits, from increasing retail opportunities to improving a sense of community. In the context of Climate Action, the more locals working in town means less vehicle miles traveled, even if by vehicle. As noted above, a substantial number of these local trips could be converted to bike trips (or walking). This goal would necessarily require significant coordination within the City, especially in terms of housing availability and affordability.

**Goal Two: Increase the share of Electric Vehicles/equipment**

7. Monitor the number of Electric Vehicles registered in American Canyon: We should track how many new EV's are registered in American Canyon, as well as the overall total.
8. Require Electric Vehicle (EV) chargers as a condition of new development: Currently, American Canyon has relatively few EV Chargers. This number needs to increase significantly over the next few years. An amendment to the City's Zoning Ordinance should be adopted that would require EV Chargers as part of any new multi-family, retail, or commercial/industrial development. The specifics (for example, Level 2 chargers vs. Fast Chargers; number of stations/ports per site, etc.) would need to be refined, based on current industry standards. The City should also work with outside funding sources, such as MCE, PGE, and the Bay Area Air Quality Management District (BAAQMD), to ensure we can help reduce the capital investment. We also need to work with the private sector (Tesla, for example) to identify programs they may offer for businesses to expand their networks. These comments also apply for the next program area below.
9. Encourage installation of EV Chargers in existing developments: Since the City has less authority over existing developments, incentives and good working relationships need to be emphasized. Working with the Chamber of Commerce and outside funding groups, we need to promote retrofitting existing parking lots. A strong case can be made that these new charging stations could encourage more business. Financial incentives can help reduce the out-of-pocket expense, and service fees could be charged to provide a modest revenue stream.
10. Replace gas-powered equipment with electric powered: A variety of landscaping equipment can be converted from gas-powered to electric. The City should consider either a mandatory ban (similar to the Town of Yountville and others), a phasing-out of gas-powered equipment, or just encourage the conversion with cash incentives. At a minimum, the City should require its operations to only use electric equipment and that any of their contractors must have electric powered equipment. Looking beyond landscaping equipment, we could also work with our industrial businesses to convert to electric forklift trucks and other logistical equipment.
11. The City leads by example: The City has already committed to a more consistent vehicle replacement strategy—it needs to make EV conversion a priority. As noted above, it should accelerate the replacement of any gas-powered equipment in its operations and require any contractors we use to operate with electric-powered equipment. Lastly, although we have

installed solar panels on some of our buildings, we should explore expanding this program to most of our buildings, even if there is no immediate financial gain. With battery backup, it would still improve our carbon footprint and enhance our resilience in the case of emergencies.

### **Target Area: Buildings**

#### **Goal Three: Reduce Greenhouse Gas emissions from homes and businesses**

12. Increase the number of energy efficiency audits in existing residential and business areas: Although great strides have been made in new buildings, we still have a lot of older homes and businesses that could significantly reduce their GHG emissions by becoming more energy efficient. We need to work with PGE, MCE, and other groups to promote home audits, as well as in existing buildings. Rebates and other incentives need to be identified to ensure energy upgrades are cost-effective for property owners.
13. Reduce/eliminate gas powered appliances in existing homes/businesses: Water heaters, HVACs, clothes dryers, cooking stoves and other building appliances can now be converted to electric powered devices. We need to establish cash incentives to swap out gas powered devices, relying on PGE and other sources. We also need to promote the health aspects of reducing natural gas use inside buildings. In addition, consider the use of outdoor clothes lines as a low-tech alternative to a clothes dryer, whether gas or electric-powered.
14. Discourage, or ban outright, the use of wood-burning stoves and fireplaces: Most newer homes no longer include wood-burning fireplaces, so this is an issue for older homes. There are products on the market that electrically heats a room, but still provides the look of a wood-burning fireplace. As we encourage solar with battery backup, this conversion becomes even more cost-effective.
15. Eliminate natural gas for all new residential development and require new commercial and industrial uses to justify the use of natural gas: The so-called “all electric reach” building codes are likely to occur within the next few years; by acting earlier, we can avoid GHG emissions (and methane) in a more cost-effective manner. More and more jurisdictions are taking this action, and we can learn from their experiences. Allowing some discretion for non-residential uses may be necessary for bona fide business purposes.

#### **Goal Four: Increase the amount of renewable energy used, generated, or stored from homes and businesses**

16. Increase the number of solar installations: Often, it is financially beneficial to convert to solar, which should make it easier to sell—provided the customer understands this. Hence, we need to promote public awareness and education campaigns, as well as relying on private contractors. Trade shows hosted by the City is another method of increasing awareness of, and options for, solar.
17. Increase the percentage of “Deep Green” customers: Currently, very few customers opt for the 100% renewable energy, due to costs. Given that this added cost is quite modest, it could be addressed through local incentives. Customers with solar (and particularly with battery backup) should be able to upgrade with no real out-of-pocket cost (assuming their net energy is zero or less). This represents a relatively easy market segment to approach.

18. Encourage battery backup for existing solar customers: All existing solar customers without battery backup should be contacted about the benefits of battery backup. Quick building audits would be needed to verify if a battery can be installed and the relative cost.
19. Require all new construction to include battery backup: This would apply to residential and non-residential developments. Currently, State law requires new construction to be energy neutral, which generally means solar installation. But a battery is not required. Amending the City's building code to make that a requirement would assist in reducing peak energy demands, which is a major source of fossil fuel energy use by Energy Companies (and when renewable energy is at its lowest).
20. Consider using the Solar App+ program: This is an issue that has been discussed by the Countywide Climate Action Committee. There has been some pushback by our Building Officials, primarily due to the existing streamlined permitting processes already implemented. However, we should study the pros and cons of both approaches (particularly from the customer's perspective), as well as any financial incentives, before reaching a conclusion.
21. Explore the development of Solar Farms: Two viable options exist for this area. The first is a traditional solar farm at the abandoned landfill site. There may be some issues to be resolved, including landfill settling, working with an organization that is not motivated to act, and the economics of the project. A second option relates to our industrial park. Many existing industrial buildings at our Green Island Industrial Park may be suitable for solar panels. Although it may not be cost-effective for the building owner to install solar, it may be viable if MCE, the City, or some other group, "leased" the rooftops for a nominal fee and then installed solar and sold it to the Grid. Financing and legal arrangements would need to be worked out.
22. Explore the feasibility of requiring concrete with lower GHG emissions for all new construction: Particularly in our industrial park, the use of concrete is extensive. Concrete is also a major source of GHG emissions. Currently, there are several new techniques that generate a smaller carbon footprint. This issue should be studied in more detail, and include input from our industrial developers, to determine if the use of these new materials is cost-effective and viable.

### **Target Area: Public Awareness and Lifestyle Changes**

#### **Goal Five: Engage the Public in efforts to reduce Greenhouse Gas Emissions and Short-lived pollutants**

23. Encourage American Canyon residents to participate in the Napa County Climate Challenge: Formerly known as Regeneration Napa County, this app has three components: participants can develop their GHG profile and determine their overall carbon footprint; they can then look up a wide array of action items (from car purchases to lifestyle changes to solar installations) that can reduce that carbon footprint; and lastly, they can combine into groups and engage in healthy competition to see which groups can make the biggest impacts. The City should promote this program and work with local businesses to offer prizes and other inducements. Furthermore, the program's author has indicated a willingness to modify parts of the program—for example, can we make the program more appealing to students, since in many cases they are the best advocates for changing family behaviors. There are other online programs that we can promote, provided by [MCE](#) and [others](#).

24. Engage the community in programs and events that educate the public on Climate Change and personal actions individuals can take: There are many annual events and topics that support respect for our natural environment, from Earth Day to Healthy People/Healthy Planet, and even programs that highlight the latest in EV's and e-bikes. Several actions have co-benefits, such as the health benefits of a plant-based diet or more human-powered transit. Some bigger issues, such as keeping our population in check, could be discussed, even if we can only make a small impact. These efforts should be supported and encouraged in and around American Canyon. We should track the number of participants that attend and follow up with requests to join the Napa County Climate Challenge.
25. Support the development of the Eco-Center in American Canyon: Currently, the American Canyon Community Parks Foundation (ACCPF) is exploring the feasibility of converting the City's Corp Yard into an Eco-Center. This project could easily become the home base for environmental and climate action in American Canyon, if not the entire Napa Valley. Educational opportunities abound once this facility is up and running.

### **Target Area: Other Efforts**

#### **Goal Six: Preserve and enhance current levels of carbon sequestration and stocking:**

26. Wherever possible, preserve existing trees and forests: Consistent with the saying "Do no further harm", we should protect trees from removal to maintain and enhance the urban forest as a net carbon sink. Ways of avoiding tree removal should be considered in private and public improvement projects. A recent case in point is the Watson Ranch developer, who went to considerable expense to move and protect mature trees on his site. The City should also do the same when it comes to their capital improvements.
27. Increase tree planting on publicly owned properties in or around the City: Land owned by the City should be targeted for planting new trees. Although it will take decades before these trees make a big impact on carbon sequestration, they still need to be planted as soon as possible. Some areas include Newell Open Space Preserve, and land around Highway 29 at the south end of town.
28. Establish a Street Tree Canopy Program: Ensuring trees are planted along roadways provides shade to keep homes cooler, as well as aesthetics and cleaner air. Building Codes could be reviewed to ensure trees are required for new installations for residential and commercial development. Parkways or tree-lined medians could be encouraged as a means of increasing tree plantings. A potential opportunity site is Kimberly Drive, which is a wide street and could easily accommodate a tree-lined median.
29. Enhance the carbon sequestration of our Wetlands: Wetlands are very effective at sequestering carbon. A feasibility study should be conducted to accomplish two objectives: first, verify the estimated sequestration currently occurring in our Wetlands areas; and second, identify ways to expand/enhance the existing wetlands. Such expansion should also consider positive impacts on threatened species and recreational potentials.
30. Support efforts to reduce food and organic wastes from our landfill: The primary method is based on SB1383, in which 75% of food and organic wastes need to be diverted from our

landfill. Other steps to be taken would include zero waste events, and compostable food ware programs.

31. Reduce Methane leaks: Part of the GHG Inventory expected in the fall of 2022 will include methane leaks. We need to use that study to identify areas in American Canyon that have a high concentration of methane leaks. This could be residential areas, businesses or possibly the abandoned landfill, in which residual methane is being flared off. Because of the high climate potency of methane relative to carbon dioxide, especially in the short-term, these efforts should be given a priority to address.

**Goal Seven: Improve our Resiliency in the face of Climate Change**

32. Track development on our wetland edges for sea level rise: Current forecasts suggest we should be okay in the future, but such maps may be updated. Steps should be taken to avoid development too close to our wetland edges. Setbacks should be enhanced to ensure future safety to our community.
33. Develop our capacity to handle emergencies caused by Climate Change: As a community, we have been relatively fortunate compared to the rest of the Valley, in terms of wildland fires and power outages. Nonetheless, we need to include Climate Change impacts in all our Emergency Master plans, developed by the City, Fire District and Police Department.

**Implementation and Advocacy**

**Management:** The program should be based in the City Manager’s Office and be able to interact with all departments and the community. A volunteer-based support group should be established to assist in the implementation of this Plan, particularly as it relates to public outreach and engagement.

**Financial:** The City should provide a baseline level of financial support, above and beyond the Management staff support. Grants should be aggressively sought after, and a Climate Impact Fee, similar to our Zero Water Footprint fee, should be considered. In addition, there are a variety of databases and resources now available providing examples of ordinances and programs in other municipalities around the Bay Area, the state and country that can serve as models for our efforts, to avoid having to start from scratch.

**Monitoring:** Council and the public should receive quarterly updates on the progress of the above stated goals. The Information Dashboard that will be developed should be added to the City’s Website and updated at least monthly, based on the nature of the data inputs.

**Advocacy:** The Volunteer-based support group should monitor local, State and National actions relating to Climate Change and encourage the Council to support/oppose those actions, consistent with the Climate Action Plan.

**Marketing:** Outreach efforts have been discussed throughout this document, but we should also work to develop strong partners, including schools and students (in particular, we need to find Teacher Advocates); neighborhood groups (Neighborhood Watch, for example) and community groups such as the Moms Club or ACCPF. We can also sponsor an annual Video Contest in the schools and use the winning videos for marketing purposes.

Climate Action Dashboard--**DRAFT**

<u>Item</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2022</u>	<u>2027</u>
GHG Inventory – in Metric Tons	91,449*				
GHG Inventory—per capita	6.44*				
Short-lived Pollutants—in Metric Tons					
Short-lived Pollutants—per capita					

\* 2009 Draft Napa County Climate Action Plan

<u>Goal</u>	<u>Metric</u>	<u>Source</u>	<u>Frequency</u>	<u>Results</u>	<u>Date</u>
<b>Reduce Vehicle Miles Traveled (VMT)</b>					
	Ped/bike lanes built: this period/City total	City PW			
	E-Bike Rebates	City			
	Transit trips originating in American Canyon	NVTA			
	Local Hires/City Total	City Bus. Lic.			
<b>Increase Electric-powered Vehicles &amp; Equipment</b>					
	Electric Vehicle Car Registrations	DMV			
	EV Charging Stations Installed	City Planning			
	Battery-powered equipment rebates	City			
<b>Reduce GHG Emissions in Buildings and Homes</b>					
	Energy Audits Completed	City			
	Electric Appliance Rebates	City			
<b>Increase Renewal Energy</b>					
	Solar Installations	City Planning			
	Battery Backup Installations	City Planning			
	Deep Green Customers	MCE			
<b>Engage the Public</b>					
	Active “Climate Challenge” accounts	App			
	Active “Climate Challenge” teams	App			
	GHG Reduction (in Metric Tons)	App			
	Number of Climate Action events	City			
	Estimated Participants	City			
<b>Other Factors</b>					
	Tree Plantings	City			
	Organic Waste Diversion	Recology			
	Methane Leaks detected/fixed	City			

## PROJECT SUMMARY

<u>Project Description</u>	<u>Est. Start</u>	<u>Act. Start</u>	<u>Est. Finish</u>	<u>Act. Finish</u>	<u>Status</u>
EV Charging Ordinance					
All Electric Reach Code					
Electrified Yard Maintenance Equip. Ord.					
Climate Action Incentives Program					
Solar Farm Feasibility study					
Concrete Feasibility study					
Wetlands Enhancement study					
Tree Canopy Ordinance					
Climate Change/Emergency response					

**Status Codes:**

*Project on schedule*

*Minor delays/problems*

*Serious delays/problems*

*Project not approved/on hold*

**RESOLUTION NO. 2022-07****A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AMERICAN CANYON ADOPTING THE AD-HOC CLIMATE ACTION COMMITTEE'S RECOMMENDATION TO DECLARE A CLIMATE EMERGENCY**

**WHEREAS**, there is broad scientific consensus that climate change caused by human activity represents a growing danger to human health, safety, and economic prosperity, and the window of opportunity for long term climate preservation is rapidly closing; and

**WHEREAS**, 195 countries signed the "Paris Agreement" acknowledging the threat of climate change and urgent need to combat it, agreeing to keep global mean temperature "well below 2 degrees Celsius above pre-industrial levels" and to "pursue efforts to limit temperature increase to 1.5 degrees Celsius;" and

**WHEREAS**, the 2018 Intergovernmental Panel on Climate Change (IPCC) report, "Global Warming of 1.5 degrees Celsius," affirmed that "Limiting global warming to 1.5 degrees Celsius would require rapid, far-reaching and unprecedented changes in all aspects of society," and further projected the earth could reach and exceed this temperature threshold as soon as 2030, far earlier than previously anticipated; and

**WHEREAS**, the 2018 US government report, "Fourth National Climate Assessment," detailed the massive threat to the American economy posed by climate change and underscored the need for immediate climate emergency action at all levels of government; and

**WHEREAS**, California, Napa County and their residents, economy, and environment have already experienced dramatic adverse effects from climate change, including prolonged wildfire seasons, firestorms, rising temperatures, mudslides, severe droughts, property destruction, damage to infrastructure, and loss of life; and

**WHEREAS**, climate breakdown, while endangering all people, disproportionately impacts young and older residents and the most vulnerable, exacerbating existing social justice and other inequities; and

**WHEREAS**, today's children represent a particularly vulnerable group because increasing greenhouse gases and trapped heat will almost certainly have a profound negative impact throughout their lives, as well as the lives of future generations; and

**WHEREAS**, on June 18, 2019, the City Council issued a Proclamation to join with Napa County Jurisdictions dedicated to working together with community organizations, businesses, schools, and regional partners and jurisdictions to educate, mobilize, expand, and accelerate local, regional, and statewide support for comprehensive, immediate, and sustained action; and

**WHEREAS**, as used above, the term "Climate Emergency" does not refer to an "Emergency", a "Local Emergency", or a "State of Emergency" as defined in American Canyon Municipal Code Chapter 2.48 "Civil Defense and Disaster Relief, Article I "Organization of City for Emergency Response" and the City Council does not confer any emergency powers to the City Manager/Director of Emergency Services as it relates to this Proclamation.

**NOW, THEREFORE, BE IT RESOLVED**, that the City Council of the City of American Canyon hereby declares the following:

1. That a Climate Emergency exists, and that it threatens our city, state, country, and the planet;

2. That the City of American Canyon joins a growing list of communities committed to a goal of Net Zero Climate Pollution, measured in terms of net contribution to excess trapped heat, by or before 2030, and further commits to evaluate all planning and policy decisions through the lens of this pledge, and to implement both immediate and sustained actions in support of its achievement; and

3. That the City Council recognizing the need for full community participation and support, commits to providing leadership and services in working with community organizations, businesses, schools, and regional partners and jurisdictions to educate, mobilize, expand, and accelerate local, regional and statewide support for comprehensive, immediate, and sustained action to achieve its goal of net zero climate pollution by or before 2030; and

4. That the City Council will consider amendments to its General Plan and its 2012 Energy Efficiency/Climate Action Plan, consistent with its commitment to net zero climate pollution by or before 2030.

**BE IT FURTHER RESOLVED** that the City Council directs its Ad Hoc Climate Action Committee to complete the following:

1. Develop specific recommendations and measurable outcomes to achieve the goal of Net Zero Climate Pollutants by 2030 in the following areas:

- a. Transportation
- b. Buildings
- c. Renewable Energy and Storage
- d. Other Environmental issues, including but not limited to, water conservation, urban agriculture and food composting, and recycling
- e. Carbon Sequestration
- f. Public Awareness and Education regarding individual actions, including individual lifestyles and business operations
- g. Climate Resiliency Efforts

2. Work with City staff, stakeholders and community leaders and organizations and the public at large.

3. Identify funding sources and grant opportunities.

4. Present its findings and recommendations within six months.

**PASSED, APPROVED and ADOPTED** at a regularly scheduled meeting of the City Council of the City of American Canyon held on the 1<sup>st</sup> day of February, 2022, by the following vote:

AYES: Councilmembers Joseph, Oro, Washington, Vice Mayor Aboudamous, and Mayor Garcia  
NOES: None  
ABSTAIN: None  
ABSENT: None

DocuSigned by:  
*Leon Garcia*  
BA1BB3340BAC47C...  
Leon Garcia, Mayor

ATTEST:  
DocuSigned by:  
*Taresa Geilfuss*  
609347883BC94DC...  
Taresa Geilfuss, City Clerk

APPROVED AS TO FORM:  
DocuSigned by:  
*William Ross*  
285D50133D93421...  
William D. Ross, City Attorney



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## TITLE

Skatepark Relocation

## RECOMMENDATION

Adopt a Resolution of the City Council of the City of American Canyon:

1. Amending the FY 2022/23 Capital Improvement Program to include the Skatepark Relocation Project (PR22-0100) and authorizing a project budget of \$380,000;
2. Authorizing a budget transfer from the Park Impact Fee Fund (310-85-450-48310) to the Capital Project Fund (350-85-450-46110) in the amount of \$380,000;
3. Selecting an existing park location for the Skatepark Relocation Project (PR22-0100);
4. Authorizing the City Manager to award a construction contract to the lowest responsible and responsive bidder in an amount not to exceed the project budget; and
5. Authorizing the Public Works Director to approve and execute contract change orders in an aggregate amount not to exceed the Project Budget in conjunction with the relocation of the Skatepark Relocation Project (PR22-0100).

## CONTACT

Alexandra Ikeda, Parks and Recreation Director  
Erica Ahman Smithies, Public Works Director

## BACKGROUND & ANALYSIS

The City of American Canyon (City) has identified a need to relocate the Skatepark to accommodate the proposed exchange agreement between the City and the Napa Valley Unified School District (NVUSD). The Skatepark is in a temporary location behind the American Canyon Middle School and the Phillip West Aquatics Center; the current location is roughly 12,900 sq. ft. and is fenced and closed to the public during school hours.

City staff identified four potential existing park locations to relocate the Skatepark which include Silver Oak Park, Veterans Memorial Park, the Old Napa Junction Elementary School (on Napa Junction Road), and a lot across from the Old Napa Junction Elementary School (on Napa Junction Road). The Parks and Recreation Director presented the four locations to the City of American Canyon's Police Chief, Public Works Director, and Maintenance and Utilities Director for feedback; City staff identified unique characteristics and logistics for each location to consider.

On August 3, 2022, the Parks and Recreation Director met with the Parks and Community Services Commission (Commission) where they discussed the four potential existing park locations for the relocation of the Skatepark and reviewed staff comments and feedback. Of the four locations presented to the Commission for discussion, the Commission recommends relocating the Skatepark to Veterans Memorial Park ([Attachment 2](#)). The Commission finds Veterans Memorial Park to be the most optimal location to relocate the Skatepark due to the park's visible and active location, existing ample parking, the ability to accommodate a 13,000 sq. ft. concrete pad, and ease of accessibility for all ages within the City of American Canyon. The Skatepark would not be fenced and would be available for use during park hours from sunrise to sunset.

## **COUNCIL PRIORITY PROGRAMS AND PROJECTS**

Outdoors and Recreation: "Expand opportunities for use of outdoor recreation and an active and healthy lifestyle."

## **FISCAL IMPACT**

The total cost proposed for the Skatepark Relocation Project (PR22-0100) is \$380,000. The removal and installation of the equipment is approximately \$96,000; this does not include sales tax, bonding, or replacement parts if needed. The construction and installation of a 13,000 sq. ft. concrete pad for the Skatepark equipment to be installed on is roughly \$234,000; this is at a rate of \$18 per sq. ft. A contingency amount of \$50,000 (which is roughly 15% of the total project budget) has been added to cover unexpected project costs, including unforeseen equipment repairs.

Staff recommends a Project Budget of \$380,000 for the Skatepark Relocation Project (PR22-0100) with the funding source from the Park Impact Fee Fund (310-85-450-48310) transferred to the Capital Project Fund (350-85-450-46110). The Park Impact Fee Fund for FY 2022/23 is at \$1,683,000, where \$505,883 has been allocated for park improvement projects for FY 2022/23, with a remaining balance of \$1,177,117. The recommended action will reduce the Park Impact Fee Fund balance for FY 2022/23 to \$797,117 and increase the Parks Capital Project total to \$1,707,370.

## **ENVIRONMENTAL REVIEW**

The adoption of the Resolution to relocate the Skatepark to an existing City park is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alterations of existing facilities.

## **ATTACHMENTS:**

- [1. Resolution - Skatepark Relocation](#)
- [2. Exhibit A - Veterans Memorial Park - Proposed Skatepark Location](#)

RESOLUTION NO. 2022-\_\_\_\_\_

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AMERICAN CANYON 1) AMENDING THE FY2022/23 CAPITAL IMPROVEMENT PROGRAM TO INCLUDE THE SKATEPARK RELOCATION PROJECT (PR22-0100) AND AUTHORIZING A PROJECT BUDGET OF \$380,000; 2) AUTHORIZING A BUDGET TRANSFER FROM THE PARK IMPACT FEE FUND (310-85-450-48310) TO THE CAPITAL PROJECT FUND (FUND 350-85-450-46110) IN THE AMOUNT OF \$380,000; 3) SELECTING AN EXISTING PARK LOCATION FOR THE SKATEPARK RELOCATION PROJECT (PR22-0100); 4) AUTHORIZING THE CITY MANAGER TO AWARD A CONSTRUCTION CONTRACT TO THE LOWEST RESPONSIBLE AND RESPONSIVE BIDDER IN AN AMOUNT NOT TO EXCEED THE PROJECT BUDGET; AND 5) AUTHORIZING THE PUBLIC WORKS DIRECTOR TO APPROVE AND EXECUTE CONTRACT CHANGE ORDERS IN AN AGGREGATE AMOUNT NOT TO EXCEED THE PROJECT BUDGET IN CONJUNCTION WITH THE SKATEPARK RELOCATION.**

**WHEREAS**, the City of American Canyon has identified a need to relocate the Skatepark to accommodate the proposed property exchange agreement between the City of American Canyon and the Napa Valley Unified School District; and

**WHEREAS**, the Skatepark is located in a temporary location behind the American Canyon Middle School and the Phillip West Aquatics Center. The current footprint is approximately 12,900 sqft.; and

**WHEREAS**, skateparks bring people together from all different backgrounds and economic statuses, and skating is considered a diverse and multigenerational sport that is loved by many within the American Canyon community; and

**WHEREAS**, the Skatepark Relocation Project (PR22-0100) will relocate the City of American Canyon's Skatepark to an existing prominent, visible, and accessible park location for community residents to enjoy and use for years to come; and

**WHEREAS**, the relocation of the Skatepark will be determined by City Council with a minimum site footprint of 13,000 square feet to accommodate the current park equipment. City staff will determine the best configuration of the equipment to ensure optimal use and maximize play; and

**WHEREAS**, the City will solicit competitive bids from qualified vendors to disassemble and move the Skatepark equipment and construct and install the concrete pad; and

**WHEREAS**, staff will review the bid proposals to determine the lowest responsible and responsive bidder, and provide a recommendation to the City Manager as to award of the construction contract; and

**WHEREAS**, the Engineer's Estimate for Construction of the Project is \$330,000, and the estimated Project Budget is \$380,000; and

**WHEREAS**, there are sufficient funds available in Park Impact Fee Fund 310-85-450-48310 to appropriate \$380,000 to the project; and

**WHEREAS**, the relocation of the Skatepark to an existing community park is considered a minor alteration to an existing facility. The project site will not be located in an environmentally sensitive area and there

are no cumulative impacts, unusual circumstances, or other factors that would make the exemption inapplicable.

**NOW THEREFORE BE IT RESOLVED** that the American Canyon City Council hereby finds that adoption of this resolution is exempt from the requirements of CEQA pursuant to Section 15301, Class 1, which exempts the operation, leasing, or minor alteration of existing facilities.

**NOW THEREFORE BE IT FURTHER RESOLVED** that the American Canyon City Council does hereby resolve as follows:

1. Amends the Capital Improvement Program Budget for Fiscal Year 2022/23 to include the Skatepark Relocation Project (PR22-0100) and authorizes a project budget in the amount of \$380,000.
2. Authorizes a budget transfer from the Park Impact Fee Fund (310-85-450-48310) to the Capital Project Fund (350-85-450-46110) in the amount of \$380,000.
3. Selects (Existing City Park) as the preferred site location for the Skatepark Relocation Project (PR22-0100).
4. Authorizes the City Manager to award a construction contract to the lowest responsible and responsive bidder in an amount not to exceed the Project Budget.
5. Authorizes the Public Works Director to approve and execute Contract Change Orders in an aggregate amount not to exceed the Project Budget in conjunction with the relocation of the Skatepark project.

**PASSED, APPROVED and ADOPTED** at a regularly scheduled meeting of the City Council of the City of American Canyon held on the 6<sup>th</sup> day of September 2022, by the following vote:

AYES:  
NOES:  
ABSTAIN:  
ABSENT:

\_\_\_\_\_  
Leon Garcia, Mayor

ATTEST:

APPROVED AS TO FORM:

\_\_\_\_\_  
Taresa Geilfuss, CMC, City Clerk

\_\_\_\_\_  
William D. Ross, City Attorney

**VETERANS MEMORIAL PARK – 2801 Broadway Street, American Canyon CA**

