AGENDA

Engineering and Public Works Committee

Tuesday, December 30, 2025
7:00 PM
Temporary Village Hall
1000 E. Woodfield Rd.
Schaumburg, IL 60193

VILLAGE OF SCHAUMBURG
PROGRESS THROUGH THOUGHTFUL PLANNING

A G E N D A

I. CALL TO ORDER

II. APPROVAL OF MINUTES

A. December 4, 2025

III. NEW BUSINESS

A. Recommendation to Approve a Code Amendment to Title 15: Land Usage, Chapter 150 Flood Control

B. Recommendation to Authorize Participation in the Sourcewell Cooperative Purchasing Program and Award the Purchase of Fitness Equipment to Life Fitness, LLC

C. Recommendation to Approve Participation in the ISAWWA Water Ambassador Program and Authorize Staff to Pursue Water Ambassador Community Certification for the Village of Schaumburg, including Implementation of Outreach Initiatives and Promotion of the Water 1-2-3 Guide for Elected Officials

D. Recommendation to Approve Completion of the Plans and Specifications for Bidding of the FY 26/27 Street Improvement Program

E. Recommendation to Approve Ratification of Expenditures for the American Lane and Plaza Drive Improvements with Builders Paving

IV. COMMENTS FROM THE PUBLIC

V. ADJOURNMENT

VI. NEXT VILLAGE BOARD MEETING

A. January 13, 2026

In compliance with the Americans with Disabilities Act and other applicable Federal and State laws, the meeting will be accessible to individuals with disabilities. Persons requiring auxiliary aids and/or services should contact the Village Manager's Office at 847.923.4705, preferably no later than five days before the meeting.

VILLAGE OF SCHAUMBURG

AGENDA ITEM SUMMARY

December 4, 2025
12/30/25
Engineering and Public Works Committee

Presenter:
Lead Department: Engineering and Public Works

Executive Summary:

Recommended Action:

ATTACHMENTS:
- December 4, 2025

VILLAGE OF SCHAUMBURG
PROGRESS THROUGH THOUGHTFUL PLANNING

I have reviewed the following minutes and to the best of my knowledge, they correctly represent the actions taken at the meeting.

Michael Hall
Director of Engineering & Public Works

Village of Schaumburg
Engineering & Public Works
December 4, 2025

MEMBERS PRESENT: Mark Madej, Chairperson
Brian Bieschke, Trustee
Esha Patel, Trustee

OTHERS PRESENT: Paula Hewson, Assistant Village Manager
Michael Hall, Director of Engineering & Public Works
Ryan Franklin, Assistant Director of Community Development
Brian Rafferty, Fleet Division Manager
Ryan Rivard, Superintendent of Utility Services
Josh Orin, Water Division Supervisor
Mateusz Pec, Senior Civil Engineer
Tyler Quattrochi, Engineering Project Manager

Chairperson Madej called the Engineering and Public Works Committee Meeting to order at 7:00 p.m.

APPROVAL OF MINUTES:

Trustee Patel made a motion, seconded by Trustee Bieschke, to approve the minutes from the meeting of November 6, 2025. All Ayes. Motion carried.

CONSENT AGENDA:

None.

Engineering & Public Works
714 S. Plum Grove Road • Schaumburg, IL 60193-4329 • (847) 895-7100 • www.schaumburg.com

NEW BUSINESS:

A. Recommendation to Accept Public Improvements for Experior Property

Mr. Ryan Franklin, Assistant Director of Community Development, presented the first item. Staff recommends that the Village accept the public improvements associated with the Experior development. The new Metro Road, its lighting, and related watermain infrastructure have all been completed and inspected. The development was approved in 2022, with land development approval in 2023; the parking lot is finished, and other lots are still in various permitting stages.

ARCO is normally required to provide a 20% maintenance bond; it has not yet been submitted. Trustee Madej noted that it is unusual for the Village to accept improvements without a bond. Paula Hewson, Assistant Village Manager, explained that the developer is not in a good financial state at the moment and staff would like to get the road open, as it is a clear benefit to the Metro lot users. Engineering and Public Works have already been plowing the road, and in the interest of moving forward staff recommend opening the road. Staff recommends waiving the maintenance bond, noting that the Village's inspection of the infrastructure pose limited risk. A resolution, plat, and exhibit showing the improvements are included.

The request is for the committee to recommend that the Village Board accept the infrastructure, waive the maintenance bond, and direct staff to obtain the bill of sale for formal acceptance.

Trustee Bieschke made a motion, seconded by Trustee Patel, to recommend the Village Board accept the subject improvements as depicted in the Exhibits, waive the requirement for a maintenance bond, and direct staff to obtain a Bill of Sale, at no cost to the Village, from Experior Group, LLC for the subject improvements. All Ayes. Motion Carried.

B. Recommendation to Waive Competitive Bidding and Approve the Purchase of One Aerial Truck with Runnion Equipment Company

Mr. Brian Rafferty, Fleet Division Manager, presented the next item. At the beginning of the fiscal year, a truck purchase was approved through USSI without a finalized quote. When the quote arrived, it was $30,000 over budget. Staff looked into alternatives and worked with Runnion Equipment to design a comparable truck. The only major change being the aerial lift being Duralift instead of Versalift. After testing the demo unit, staff was satisfied with the alternative.

Purchasing the truck directly from Runnion is the least expensive option and falls within the budget prompting a request to waive competitive bidding. The truck is expected to arrive in FY 26/27 and funding will be budgeted for that year. Once the new truck is delivered, the old one will be sold on Public Surplus with an expected return of $10,000 to $20,000.

Trustee Patel made a motion, seconded by Trustee Bieschke, to recommend the Village Board waive competitive bidding and approve the purchase of one Aerial Truck with Runnion Equipment of Hodgkins, IL, in the amount of $308,641. All Ayes. Motion Carried.

C. Recommendation to Approve Utilization of Illinois Motor Fuel Tax Funds for Braintree Drive - Bode Road to Schaumburg Road, Schaumburg Road to Weathersfield Way, and Weathersfield Way to Wise Road - and Improvement Project.

Mr. Mateusz Pec, Senior Civil Engineer, presented the next item using Motor Fuel Tax (MFT) funds to cover the Village's share of costs for each section of the previously discussed Surface Transportation Program (STP) funded roadway project. The Illinois Department of Transportation (IDOT) requires the Village to submit paperwork signed by the Village Clerk, along with a resolution authorizing the Clerk to execute those documents.

The Village plans to use:

- $4.175 million in MFT funds for the Wise Road to Weathersfield Way section
- $470,700 for Weathersfield Way to Schaumburg Road
- $800,000 for Schaumburg Road to Bode.

When Trustee Bieschke asked whether there was any risk the funds would not be approved, the project manager explained that this process is routine, and this step is largely a formality.

Trustee Bieschke made a motion, seconded by Trustee Patel, to recommend the Village Board authorize the Village Clerk to execute the utilization of Illinois Motor Fuel Tax Funds for Braintree Drive - Bode Road to Schaumburg Road, Schaumburg Road to Weathersfield Way, and Weathersfield Way to Wise Road - Improvement Projects, and approve the required Resolutions. All Ayes. Motion Carried.

D. Recommendation to Approve Utilization of Illinois Motor Fuel Tax Funds for McConnor Parkway Reconstruction Project - Meacham Road to Roosevelt Boulevard and Roosevelt Boulevard to Golf Road

Mr. Tyler Quatrocchi, Engineering Project Manager, presented the next item. The Village plans to use MFT funds for the McConnor Parkway project from Meacham Road to Golf Road. The project was let last year and is expected to begin in March 2026. The Village intends to apply MFT funds to cover its participating share of $2,355,668.

To do this, the Village must adopt an ordinance or resolution appropriating the MFT funds. The Village will pay for the project invoices using budgeted Capital Improvement Plan (CIP) funds and then be reimbursed with MFT funds afterwards.

Trustee Bieschke made a motion, seconded by Trustee Patel, to recommend the Village Board authorize the Village Clerk to execute the utilization of Illinois Motor Fuel Tax Funds for McConnor Parkway Reconstruction Project - Meacham Road to Roosevelt Boulevard and Roosevelt Bouelvard to Golf Road, and approve the required Resolutions. All Ayes. Motion Carried.

E. Recommendation to Approve an Intergovernmental Agreement with the Village of Hoffman Estates for an Emergency Water Interconnect

Mr. Ryan Rivard, Superintendent of Utility Services, presented the next item; an Intergovernmental Agreement with Hoffman Estates, explaining that it formalizes emergency work previously completed during an emergency NSMJAWA shutdown. At the time, the Village quickly installed a valve and a six-pipe cross-connection to create an interconnect. The agreement formalizes that work and provides a framework for any future needs.

The current setup allows Hoffman Estates to draw limited water from the Village only when their reservoir is nearly empty, due to pressure differences. The Village cannot meter the flow at this interconnect so any water transfers will be based on estimates, such as prior arrangements completed with Elk Grove Village before their water meter was upgraded.

Trustee Bieschke made a motion, seconded by Trustee Patel, to recommend the Village Board authorize the Village President to execute an Intergovernmental Agreement for an Emergency Water Interconnect with the Village of Hoffman Estates, and approve the required Emergency Water Interconnect with the Village of Hoffman Estates, and approve the required Resolution. All Ayes. Motion Carried.

F. ISAWWA Water Ambassador Program/Water 1-2-3 Guide for Elected Officials - Informational

The last item was presented by Mr. Rivard, Superintendent of Utility Services. He presented an overview of the Illinois Section AWWA Water Ambassador Program, Water 1-2-3 Guide for Elected Officials. It highlights public education and the value of water and wastewater industry. The Village has already completed much of the required outreach through social media and newsletters and is working toward a Gold Level certificate.

Mr. Rivard summarized key notes from the Water 1-2-3 Guide, including where the water comes from (Lake Michigan, via the NSMJAWA connection), how it's treated, and the regulatory framework the Village follows. He noted ongoing industry challenges such as supply constraints, pollution risks, and aging infrastructure.

Trustee Bieschke asked about support for residents on private wells. Staff explained that most of the residents with well water are regulated by Cook County. The Village's well water is treated and tested monthly by our staff. Well water is a tertiary backup water supply and likely will only be used if Lake Michigan becomes unavailable.

This item was informational only.

UNFINISHED BUSINESS

None.

DEFERRALS

None.

COMMENTS FROM THE AUDIENCE/STAFF

None.

ADJOURNMENT

Trustee Bieschke made a motion, seconded by Trustee Patel, to adjourn the meeting at 7:26 p.m. All Ayes. Motion carried.

Respectfully submitted,

Stephanie Miller
Recording Secretary
Engineering & Public Works

VILLAGE OF SCHAUMBURG

AGENDA ITEM SUMMARY

Recommendation to Approve a Code Amendment to Title 15: Land Usage, Chapter 150 Flood Control
12/30/25
Engineering and Public Works Committee

Presenter: Ryan Franklin, Assistant Director, Community Development Department
Lead Department: Community Development

Executive Summary:

Schaumburg participates in the National Flood Insurance Program (NFIP). Participation in the program offers financial protection for property owners by providing coverage for flood damage. Some federally backed mortgages for homes in high-risk areas require participation in NFIP. Communities must also participate in the NFIP for residents to be eligible for some federal disaster assistance and grants.

The Village's Floodplain Ordinance is being revised to adopt the Federal Emergency Management Agency (FEMA) approved revised floodplain maps for Cook County, effective January 23, 2026. The ordinance is being updated to reference the new adoption date of the Flood Insurance Rate Maps (FIRMs). Being in this program requires the village to adopt the most current maps.

Currently, the Floodplain Ordinance contains references to Cook County FIRMs from 2008 and a couple of DuPage FIRM panels from 2019. With these new maps coming out, the Village Code will have to include references to: (1) Cook County FIRM panels from 2008, (2) the Cook County FIRM panels that will be updated effective 2026, and (3) the couple of DuPage FIRM panels from 2019. And to further clarify, only 3 of the Cook County FIRM panels within the Village are being updated; all others will keep their effective date of 2008.

In conjunction with updating the Code to match the upcoming FIRM effective dates, Illinois Department of Natural Resources is also requesting updates to the floodplain regulations based on their newest model language. Our engineering consultant, Christopher Burke Engineering, has reviewed the IDNR model ordinance. They have redlined our existing ordinance to identify which areas will need to be amended. The redline and proposed ordinance are attached for review.

The map update impacts three FIRM panels within the Village of Schaumburg limits. The floodplain boundary shown on the three panels largely remains unchanged. However, some buildings that were previously depicted outside the floodplain limits on the 2008 panels are now identified within the 100-year floodplain on the updated panels. This change is due to increases in the flood elevation based on updated stormwater studies. There are mechanisms in place from FEMA for the property owner to appeal / contest the need for flood insurance through the preparation of a certified survey and filing the appropriate paperwork.

Recommended Action:

The Village Manager recommends the Engineering and Public Works Committee recommend the Village Board approve the amendment to the municipal code Title 15: Land Usage, Chapter 150 Flood Control.

ATTACHMENTS:

- Schaumburg - Ordinance re_ Floodplain Regulations - final draftrf.docx
- CHAPTER_150____FLOOD_CONTROL_CBBEL121625 (3)rf1finalredlinepdf.pdf
- 2008-2026 FIRM Comparison - Schaumburg-F (1)rf.pdf

PUBLICATION OF:

ORDINANCE NO. 26-___

AN ORDINANCE AMENDING TITLE 15, CHAPTER 150 WITH REGARD TO FLOODPLAIN REGULATIONS

ADOPTED: _____, 2026

PUBLISHED IN PAMPHLET FORM PURSUANT TO AUTHORIZATION AND DIRECTION OF THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF SCHAUMBURG ON

_____, 2026

ORDINANCE NO. 26-___

AN ORDINANCE AMENDING TITLE 15, CHAPTER 150 WITH REGARD TO FLOODPLAIN REGULATIONS

WHEREAS, the Village of Schaumburg, as a home rule unit of local government as provided by Article VII, Section 6 of the Illinois Constitution of 1970, has the authority to exercise any power and perform any function pertaining to its government and affairs except as limited by Article VII, Section 6 of the Illinois Constitution of 1970; and

WHEREAS, the Village pursuant to the police powers granted to by the Illinois Municipal Code (65 ILCS 5/1-2-1, 5/11-12-12, 5/11-30-2, 5/11-30-8 and 5/11-31-2), wishes to establish eligibility in the National Flood Insurance Program and in order to do so must meet the requirements of Title 44 of the Code of Federal Regulations (CFR) Sections 59 to 79 of the National Flood Insurance Program Regulations, necessary for such participation; and

WHEREAS, the President and Board of Trustees of the Village of Schaumburg find it to be in the best interest of the Village to establish rules and regulations for floodplain management throughout the Village and superseding any less restrictive municipal rules and regulations therein.

NOW THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF SCHAUMBURG:

SECTION ONE: The recitals above shall be and are hereby incorporated in this Section 1 as if restated herein.

SECTION TWO: Title 15, Chapter 150 of the Schaumburg Village Code is hereby amended to read in its entirety as follows:

§ 150.01 PURPOSE.

This floodplain ordinance is enacted pursuant to the police powers granted to the village by 65 Illinois Compiled Statutes 5/2-21, 5/11-30-8, 5/11-31-2 and its home rule powers. The purpose of this chapter is to maintain this village's eligibility in the national flood insurance program; to minimize potential losses due to periodic flooding including loss of life, loss of property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare; and to preserve and enhance the quality of surface waters, conserve economic and natural values and provide for the wise utilization of water and related land resources. The ordinance codified herein is adopted in order to accomplish the following specific purposes:

(A) To meet the requirements of 615 Illinois Compiled Statutes 5/4.9 of the Rivers, Lakes and Streams Act of the State of Illinois, approved September 6, 1990, as amended;

(B) To assure that new development does not increase the flood or drainage hazards to others, or create unstable conditions susceptible to erosion;

(C) To protect new buildings and major improvements to buildings from flood damage;

(D) To protect human life and health from the hazards of flooding;

(E) To lessen the burden on the taxpayer for flood control projects, repairs to flood damaged public facilities and utilities, and flood rescue and relief operations;

(F) To make federally subsidized flood insurance available for property in the village by fulfilling the requirements of the national flood insurance program;

(G) To comply with the rules and regulations of the national flood insurance program codified as 44 CFR 59-79, as amended;

(H) To protect, conserve, and promote the orderly development of land and water resources;

(I) To preserve the natural hydrologic and hydraulic functions of watercourses and floodplains and to protect water quality and aquatic habitats;

(J) To preserve the natural characteristics of stream corridors in order to moderate flood and stormwater impacts, improve water quality, reduce soil erosion, protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits and enhance community and economic development.

§ 150.02 DEFINITIONS.

For the purposes of this chapter, the following definitions are adopted:

ACT: The Rivers, Lakes and Streams Act, 615 ILCS 5/4.9, September 6, 1990.

APPLICANT: Any person, firm, corporation or agency which submits an application.

APPROPRIATE USE: Only uses of the designated floodway that are permissible and will be considered for permit issuance. The only uses that will be allowed are as specified in subsection 150.07(B)(1) of this chapter.

BASE FLOOD: The flood having a one percent (1%) probability of being equaled or exceeded in any given year. The base flood is also known as the 100-year frequency flood event. Application of the base flood elevation at any location is as defined in section 150.05 of this chapter.

BASE FLOOD ELEVATION (BFE): The height in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified) of the crest of the base flood.

BUILDING: A structure that is principally aboveground and is enclosed by walls and a roof. The term includes a gas or liquid storage tank, a manufactured home, mobile home or a prefabricated building. This term also includes recreational vehicles and travel trailers to be installed on a site for more than one hundred eighty (180) days.

CHANNEL: Any river, stream, creek, brook, branch, natural or artificial depression, ponded area, flowage, slough, ditch, conduit, culvert, gully, ravine, wash, or natural or manmade drainageway, which has a definite bed and banks or shoreline, in or into which surface or groundwater flows, either perennially or intermittently.

CHANNEL MODIFICATION: Alteration of a channel by changing the physical dimensions or materials of its bed or banks. Channel modification includes: damming, riprapping (or other armoring), widening, deepening, straightening, relocating, lining and significant removal of bottom or woody vegetation. Channel modification does not include the clearing of dead or dying vegetation, debris, or trash from the channel. Channelization is a severe form of channel modification involving a significant change in the channel cross section and typically involving relocation of the existing channel (e.g., straightening).

COMPENSATORY STORAGE: An artificially excavated, hydraulically equivalent volume of storage within the SFHA used to balance the loss of natural flood storage capacity when artificial fill or structures are placed within the floodplain. The uncompensated loss of natural floodplain storage can increase off-site floodwater elevations and flows.

CONDITIONAL APPROVAL OF A DESIGNATED FLOODWAY MAP CHANGE: Preconstruction approval by IDNR/OWR and the Federal Emergency Management Agency of a proposed change to the floodway map. This preconstruction approval, pursuant to this title, gives assurances to the property owner that once an appropriate use is constructed according to permitted plans, the floodway map can be changed, as previously agreed, upon review and acceptance of as built plans.

CONDITIONAL LETTER OF MAP REVISION (CLOMR): A letter which indicates that the Federal Emergency Management Agency will revise base flood elevations, flood insurance rate zones, flood boundaries or floodway as shown on an effective flood hazard boundary map or Flood Insurance Rate Map, once the as built plans are submitted and approved.

CONTROL STRUCTURE: A structure designed to control the rate of flow that passes through the structure, given a specific upstream and downstream water surface elevation.

DAM: All obstructions, wall embankments or barriers, together with their abutments and appurtenant works, if any, constructed for the purpose of storing or diverting water or creating a pool. Undergroundwater storage tanks are not included.

DESIGNATED FLOODWAY: Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. In no case shall the designated height be more than 0.1 foot at any point within the community. The floodway for the floodplains shall be as delineated on the FIRM prepared by FEMA. For other areas, the entire floodplain shall be considered to be the floodway unless an analysis is approved by the IDNR/OWR demonstrating that a project site is outside of the floodway. If an floodway analysis is not required by IDNR/OWR under 17 ILL. ADM. Code 3700, the floodways shall be according to the best data available from the Federal, State, or other sources.

(A) The floodways are designated on panel numbers 17031C0179J, 17031C0183J, 17031C0184J, 17031C0187J, 17031C0188J, 17031C0189J, 17031C0191J, 17031C0192J,

17031C0193J, 17031C0194J, 17031C0307J, and 17031C0330J, dated August 19, 2008, of the countywide Flood Insurance Rate Maps for Cook County, Illinois and panel numbers 17031C0167K, 17031C0169K, and 17031C0186K, dated January 23, 2026, of the countywide Flood Insurance Rate Maps for Cook County, Illinois, and panel numbers 17043C0051J and 17043C0052J, dated August 1, 2019, of the countywide Flood Insurance Rate Maps for DuPage County, prepared by FEMA. When two (2) floodway maps exist for a waterway, the more restrictive floodway limit shall prevail.

(B) The floodways for those parts of unincorporated Cook County that are within the one and one-half (1½) mile extraterritorial jurisdiction of the village and may be annexed into the village are shown on panel numbers 17031C0156K and 17031C0178K, dated January 23, 2026, of the countywide Flood Insurance Rate Maps for Cook County prepared by FEMA, and panel numbers 17043C0051J and 17043C0052J, dated August 1, 2019, of the countywide Flood Insurance Rate Maps for DuPage County prepared by FEMA.

(C) To locate the designated floodway boundary on any site, the designated floodway boundary should be scaled off the designated floodway map and located on a site plan, using reference marks common to both maps. Where interpretation is needed to determine the exact location of the designated floodway boundary, IDNR/OWR should be contacted for the interpretation.

DEVELOPMENT: Any manmade change to real estate, including:

(A) Construction, reconstruction, repair, or placement of a building or any addition to a building;

(B) Drilling, mining, installing utilities, construction of roads, bridges, or similar projects;

(C) Demolition of a structure or redevelopment of a site;

(D) Clearing of land as an adjunct of construction;

(E) Construction or erection of levees, walls, fences, dams, or culverts; channel modification; filling, dredging, grading, excavating, paving, or other nonagricultural alterations of the ground surface; storage of materials;

(F) Any other activity of man that might change the direction, height, or velocity of flood or surface water, including extensive vegetation removal.

DIRECTOR OF ENGINEERING AND PUBLIC WORKS: The duly appointed head of the department of engineering and public works or his or her designee.

ELEVATION CERTIFICATES: A form published by the federal emergency management agency that is used to certify the elevation to which a building has been elevated.

EROSION: The general process whereby soils are moved by flowing water or wave action.

EXEMPT ORGANIZATIONS: Organizations which are exempt from this chapter per the Illinois Compiled Statutes including state, federal or local units of government.

***EXISTING MANUFACTURED HOME PARK OR SUBDIVISION*:** A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed or buildings to be constructed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION: The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

FEMA: Federal Emergency Management Agency and its regulations at 44 CFR 59-79, as amended.

FLOOD: A general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waves, or the unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD FREQUENCY: A period of years, based on a statistical analysis, during which a flood of a stated magnitude may be expected to be equaled or exceeded.

FLOOD FRINGE: That portion of the floodplain outside of the designated floodway.

FLOOD INSURANCE RATE MAPS (FIRM): A map prepared by the Federal Emergency Management Agency that depicts the special flood hazard area (SFHA) within a community. This map includes insurance rate zones and floodplains and may or may not depict floodways.

FLOOD INSURANCE STUDY (FIS): An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

FLOOD PROTECTION ELEVATION (FPE): The elevation of the base flood or 100-year frequency flood plus two feet (2') of freeboard at any given location in the SFHA.

FLOODPLAIN AND SPECIAL FLOOD HAZARD AREA (SFHA) : These two terms are synonymous. SFHA is the land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. Those lands within the jurisdiction of the community and the extraterritorial jurisdiction of the community, or that may be annexed into the community, that are subject to inundation by the base flood. The floodplains of the community are identified as such on panel number(s) of the countywide FIRM prepared by the FEMA. The area may be designated as Zone A on the FHBM. After detailed ratemaking has

been completed in preparation for publication of the Flood Insurance Rate Map, Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, or V1-30, VE, or V. SFHA may also refer to areas identified by the community that are flood prone and designated from other federal state or local sources of data including but not limited to historical flood information reflecting high water marks, previous flood inundation areas, and flood prone soils associated with a watercourse.

(A) The floodplains are those lands within the jurisdiction of the village that are subject to inundation by the base flood or 100-year frequency flood. The BFEs for the floodplains shall be as delineated on the base flood profiles in the countywide Flood Insurance Study (FIS) of Cook County prepared by FEMA and dated January 23, 2026. Flood Insurance Rate Map (FIRM) panel numbers 17031C0167K, 17031C0169K, and 17031C0186K, dated January 23, 2026 and Flood Insurance Rate Map (FIRM) panel numbers 17031C0179J, 17031C0183J, 17031C0184J, 17031C0187J, 17031C0188J, 17031C0189J, 17031C0191J, 17031C0192J, 17031C0193J, 17031C0194J, 17031C0307J, and 17031C0330J, dated August 19, 2008. The BFEs for the floodplains shall be as delineated on the base flood profiles in the countywide Flood Insurance Study (FIS) of DuPage County prepared by FEMA and dated August 1, 2019. Flood Insurance Rate Map (FIRM) panel numbers 17043C0051J and 17043C0052J, dated August 1, 2019.

(B) The SFHAs of those parts of unincorporated Cook County that are within the one and one-half (1½) mile extraterritorial jurisdiction of the village and may be annexed into the village are shown on panel numbers 17031C0156K and 17031C0178K, dated January 23, 2026, of the countywide Flood Insurance Rate Maps for Cook County prepared by FEMA, and panel numbers 17043C0051J and 17043C0052J, dated August 1, 2019, of the countywide Flood Insurance Rate Maps for DuPage County prepared by FEMA.

(C) USGS-NIPC hydrologic investigation atlases (floods of record) if included as best available data in the Illinois State Water Survey Floodplain Information Repository.

FLOODPROOFING: Any combination of structural and nonstructural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODPROOFING CERTIFICATE: A form published by the Federal Emergency Management Agency that is used to certify that a building has been designed and constructed to be structurally dry floodproofed to the flood protection elevation.

FLOODWAY: See definition of Designated Floodway.

FREEBOARD: An increment of elevation added to the base flood elevation to provide a factor of safety for uncertainties in calculations, unknown localized conditions, wave actions and unpredictable effects such as those caused by ice or debris jams.

HISTORIC STRUCTURE: Any structure that is:

(A) Listed individually in the National Register of Historic Places or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register.

(B) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district.

(C) Individually listed on the state inventory of historic places by the Illinois Historic Preservation Agency.

(D) Individually listed on a local inventory of historic places that has been certified by the Illinois Historic Preservation Agency.

HYDROLOGIC AND HYDRAULIC CALCULATIONS: Engineering analyses which determine expected flood flows and flood elevations based on land characteristics and rainfall events.

IDNR/OWR: Illinois Department of Natural Resources, Office of Water Resources.

LETTER OF MAP AMENDMENT (LOMA): Official determination by FEMA that a specific structure is not in a 100-year flood zone; amends the effective flood hazard boundary map or FIRM.

LETTER OF MAP REVISION (LOMR): Letter that revises base flood or 100-year frequency flood elevations, flood insurance rate zones, flood boundaries or floodways as shown on an effective FHBM or FIRM.

LOWEST FLOOR: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered a building's lowest floor. Provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Section 6 of this ordinance.

MANUFACTURED HOME: A building, transportable in one or more sections that is built on a permanent chassis and is designed to be used with or without a permanent foundation when connected to required utilities.

MANUFACTURED HOME PARK OR SUBDIVISION: A parcel (or contiguous parcels) of land divided into two or more lots for rent or sale.

MITIGATION: Includes those measures necessary to minimize the negative effects which floodplain development activities might have on the public health, safety and welfare. Examples of mitigation include: compensatory storage, soil erosion and sedimentation control, and channel restoration.

NATURAL: When used in reference to channels means those channels formed by the existing surface topography of the earth prior to changes made by man. A natural stream tends to follow a meandering path; its floodplain is not constrained by levees; the area near the bank has not been cleared, mowed or cultivated; the stream flows over soil and geologic materials typical of the area with no substantial alteration of the course or cross section of the stream caused by filling or excavating. A modified channel may regain some natural characteristics over time as the channel meanders and vegetation is reestablished. Similarly, a modified channel may be restored to more natural conditions by man through regrading and revegetation.

NAVD: North American Vertical Datum of 1988. The vertical datum for orthometric heights established for vertical control surveying in the United States.

NEW CONSTRUCTION: Structures for which the start of construction commenced on or after the effective date of floodplain management regulations adopted by a community and includes any subsequent improvements of such structures.

NEW MANUFACTURED HOME PARK OR SUBDIVISION: A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed or buildings to be constructed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of the floodplain management regulations adopted by a community.

NFIP: National Flood Insurance Program.

NGVD: National geodetic vertical datum of 1929. Reference surface set by the national geodetic survey deduced from a continental adjustment of all existing adjustments in 1929.

ORDINARY HIGH WATER MARK (OHWM): The point on the bank or shore up to which the presence and action of surface water is so continuous so as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation or other easily recognized characteristics.

PUBLIC FLOOD CONTROL PROJECT: A flood control project which will be operated and maintained by a public agency to reduce flood damages to existing buildings and structures which includes a hydrologic and hydraulic study of the existing and proposed conditions of the watershed. Nothing in this definition shall preclude the design, engineering, construction or financing, in whole or in part, of a flood control project by persons or parties who are not public agencies.

PUBLICLY NAVIGABLE WATERS: All streams and lakes capable of being navigated by watercraft.

RECREATIONAL VEHICLE OR TRAVEL TRAILER: A vehicle which is:

(A) Built on a single chassis;

(B) Four hundred (400) square feet or less in size, when measured at the largest horizontal projection;

(C) Designed to be self-propelled or permanently towable by a light duty truck; and

(D) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

REGISTERED LAND SURVEYOR: A land surveyor registered in the State of Illinois, under the Illinois Professional Land Surveyors Act of 1989.

REGISTERED PROFESSIONAL ENGINEER: An engineer registered in the State of Illinois, under the Illinois Professional Engineering Act of 1989.

State law reference(s)—225 ILCS 330 et seq.

REPETITIVE LOSS: Flood-related damages sustained by a structure on two separate occasions during a ten year period for which the cost of repairs at the time of each such flood event on the average equals or exceeds twenty-five percent (25%) of the market value of the structure before the damage occurred.

RETENTION/DETENTION FACILITY: A retention facility stores stormwater runoff without a gravity release. A detention facility provides for storage of stormwater runoff and controlled release of this runoff during and after a flood or storm.

RIVERINE SFHA: Any SFHA subject to flooding from a river, creek, intermittent stream, ditch, on stream lake system or any other identified channel. This term does not include areas subject to flooding from lakes, ponding areas, areas of sheet flow, or other areas not subject to overbank flooding.

RUNOFF: The water derived from melting snow or rain falling on the land surface, flowing over the surface of the ground or collected in channels or conduits.

SEDIMENTATION: The processes that deposit soils, debris, and other materials either on other ground surfaces or in bodies of water or watercourses.

START OF CONSTRUCTION: Includes substantial improvement and means the date the building permit was issued. This, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement or other improvement, was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation or placement of a manufactured home on a foundation. For a substantial improvement, actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building whether or not that alteration affects the external dimensions of the building.

STRUCTURE: The results of a manmade change to the land constructed on or below the ground, including the construction, reconstruction or placement of a building or any addition to a building.

SUBSTANTIAL DAMAGE: Damage of any origin sustained by a structure whereby the (cumulative) percentage of damage during a ten (10) year period equals or exceeds fifty percent (50%) of the market value of the structure before the damage occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination. The term includes "Repetitive Loss Buildings" (see definition).

SUBSTANTIAL IMPROVEMENT Any reconstruction, rehabilitation, repair, addition or improvement of a structure taking place during a ten (10) year period in which the (cumulative) percentage of improvements equals or exceeds fifty percent (50%) of the market value of the structure before the improvement or repair is started and/or increases the floor area by more than twenty percent (20%).

TRANSITION SECTION: Reaches of the stream or floodway where water flows from a narrow cross section to a wide cross section or vice versa.

VARIANCE: A grant of relief by a community from the terms of a flood plain management regulation.

VILLAGE: The Village of Schaumburg, a home rule municipality located in Cook and DuPage Counties.

VIOLATION: The failure of a structure or other development to be fully compliant with this ordinance.

§ 150.03 USE OF THIS CHAPTER.

The director of engineering and public works shall be responsible for fulfilling all of the duties listed in section 150.04 of this chapter. To fulfill those duties, the director of engineering and public works first should use the criteria listed in section 150.05, "Base Flood Elevation", of this chapter, to help determine to the best of his knowledge whether the development site is located within a floodplain. In the event the director of engineering and public works deems it necessary, he may require verification be supplied by the applicant, from IDNR/OWR, FEMA or the corps of engineers to determine whether the area is in a designated floodplain. Once it has been determined that a site is located within a floodplain, a detailed engineering study must be submitted to the director of engineering and public works to determine whether the development site is within a flood fringe, a designated floodway, or within a SFHA or floodplain on which no floodway has been identified. If the site is within a flood fringe, the director of engineering and public works shall require that the minimum requirements of section 150.06 of this chapter be met. If the site is within a floodway, the director of engineering and public works shall require that the minimum requirements of section 150.07 of this chapter be met. If the site is located

within a SFHA or floodplain for which no detailed study has been completed and approved, the director of engineering and public works shall require that the minimum requirements of section 150.08 of this chapter be met. In addition, the general requirements of section 150.09 of this chapter shall be met for all developments meeting the requirements of sections 150.06, 150.07 or 150.08 of this chapter. The director of engineering and public works shall assure that all subdivision proposals shall meet the requirements of section 150.10 of this chapter. If a variance is to be granted for a proposal, the director of engineering and public works shall review the requirements of section 150.11 of this chapter to make sure they are met. In addition, the director of engineering and public works shall complete all notification requirements.

In order to assure that property owners obtain permits as required in this chapter, the director of engineering and public works may take any and all actions as outlined in section 150.13 of this chapter.

§ 150.04 DUTIES OF THE ENFORCEMENT OFFICIAL(S).

The director of engineering and public works shall be responsible for the general administration and enforcement of this chapter which shall include the following:

(A) Floodplain Designation: In the event the director of engineering and public works deems it necessary, he may require that verification be supplied by the applicant, from IDNR/OWR, FEMA, or the army corps of engineers to determine whether the development site is in an SFHA. A detailed engineering study may be required by the director of engineering and public works to determine whether the development is within an SFHA. If the development sites are in an SFHA, determine whether they are in a floodway, flood fringe or in a floodplain on which a detailed study has not been conducted which drains more than one (1) square mile.

(B) Professional Engineer Review: If the development site is within a floodway or in a floodplain on which a detailed study has not been conducted which drains more than one (1) square mile then the permit shall be referred to a registered professional engineer (PE) under the employ or contract of the village, or approved by the director of engineering and public works, for review to ensure that the development meets the requirements of section 150.07 of this chapter. In the case of an appropriate use, the PE shall state in writing that the development meets the requirements of section 150.07 of this chapter.

(C): Substantial Damage/Substantial Improvement Requirements: Establish procedures for administering and documenting determinations, as outlined below, of substantial improvement and substantial damage:

(1) Determine the market value or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building before the start of construction of the proposed work. In the case of repair, the market value of the building shall be the market value before the damage occurred and before any repairs are made.

(2) Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building. Substantial damage determinations take into account all damage sustained to the structure regardless if the structure is repair or not.

(3) Determine and document whether the proposed work constitutes substantial improvement or substantial damage.

(4) Notify property owner of all determinations and responsibilities for permitting and mitigation of the structure.

(D) Dam Safety Requirements: Ensure that an IDNR/OWR dam safety permit has been issued or a letter indicating no dam safety permit is required, if the proposed development activity includes construction of a "dam" as defined in section 150.02 of this chapter. Regulated dams may include weirs, restrictive culverts or impoundment structures.

(E) Other Permit Requirements: Ensure that any and all required federal, state and local permits are received prior to the issuance of a land development permit.

(F) Plan Review and Permit Issuance: Ensure that all development activities within the SFHAs of the jurisdiction of the village meet the requirements of this chapter and issue a land development permit in accordance with the provisions of this chapter and other regulations of this community when the development meets the conditions of this chapter.

(G) Inspection Review: Inspect all development projects before, during and after construction to assure proper elevation of the structure and to ensure that they comply with the provisions of this chapter.

(H) Elevation and Floodproofing Certificates: Maintain in the permit files an elevation certificate certifying the elevation of the lowest floor (including basement) of a residential or non-residential building or the elevation to which a non-residential building has been floodproofed, using a floodproofing certificate, for all buildings subject to section 150.09 of this chapter for public inspection and provide copies of same. No certificate of occupancy shall be issued without a floodproofing certificate or elevation certificate being on file with the village engineering and public works department, if required.

(I) Records for Public Inspection: Maintain for public inspection and furnish upon request base flood data, SFHA and designated floodway maps, copies of federal or state permit documents, variance documentation, conditional letter of map revision, letter of map revision, letter of map amendment and "as built" elevation and floodproofing or elevation and floodproofing certificates for all buildings constructed subject to this chapter.

(J) State Permits: Ensure that construction authorization has been granted by the Illinois Department of Natural Resources, for all development projects subject to sections 150.07,

"Occupation and Use of Identified Floodways", and 150.08, "Occupation and Use of SFHA Areas Where Floodways Are Not Identified, Draining More Than One Square Mile", of this chapter, unless enforcement responsibility has been delegated to the village. Upon acceptance of this chapter by IDNR/OWR and FEMA, responsibility is hereby delegated to the village as per 92 Illinois Administrative Code 708, for construction in the designated floodway and floodplain when floodways have not been defined in sections 150.07 and 150.08 of this chapter. However, the following review approvals are not delegated to the village and shall require review or permits from IDNR/OWR:

(1) Organizations which are exempt from this chapter, as per the Illinois Compiled Statutes;

(2) Department of transportation projects, dams or impoundment structures as defined in section 150.02 of this chapter and all other state, federal or local unit of government projects, including projects of the village and county, except for those projects meeting the requirements of subsection 150.07(B)(6) of this chapter;

(3) An engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, per subsection 150.07(B)(2)(e) of this chapter;

(4) An engineer's analysis of the flood profile due to subsection 150.07(B)(2)(d) of this chapter;

(5) Alternative transition sections and hydraulically equivalent compensatory storage as indicated in subsections 150.07(B)(2)(a), (B)(2)(b) and (B)(2)(h) of this chapter;

(6) Permit issuance of structures within or over publicly navigable rivers, lakes and streams;

(7) Any changes in the base flood elevation or floodway locations; and

(8) Base flood elevation determinations where none now exist.

(K) Cooperation With Other Agencies: Cooperate with state and federal floodplain management agencies to improve base flood or 100-year frequency flood and floodway data and to improve the administration of this chapter. Submit data to IDNR/OWR and the Federal Emergency Management Agency for proposed revisions of a designated map. Submit reports as required for the national flood insurance program. Notify the Federal Emergency Management Agency of any proposed amendments to this chapter.

(L) Letters of Map Revision. The director of engineering and public works shall require a CLOMR prior to issuance of a development permit for:

(1) Proposed floodway encroachments that will cause an increase in the BFE; and

(2) Proposed development which will increase the BFE by more than 0.1 feet in riverine area where FEMA has provided a BFE but no floodway.

Once a CLOMR has been issued by FEMA, the development permit may be issued for site grading and structures necessary in the area of the map change to achieve the final LOMR. Upon completion, the applicant shall submit as-built certifications, as required by FEMA, to achieve a final LOMR prior to the release of final development permits.

§ 150.05 BASE FLOOD ELEVATION.

This section's protection standard is based on the countywide flood insurance study for Cook and DuPage Counties and those additional designated floodways noted in section 150.02 of this chapter. If a base flood elevation or 100-year frequency flood elevation is not available for a particular site, then the protection standard shall be according to the best existing data available in the Illinois State Water Survey's Floodplain Information Repository. When a party disagrees with the best available data, he/she may finance the detailed engineering study needed to replace existing data with better data and submit it to IDNR/OWR and FEMA.

(A) The BFE for the floodplains shall be as delineated on the base flood profiles in the countywide Flood Insurance Study of Cook and DuPage Counties, prepared by FEMA dated January 23, 2026, and August 1, 2019, respectively, and such amendments to such study and maps as may be prepared from time to time. Flood Insurance Rate Map (FIRM) map numbers 17031C0179J, 17031C0183J, 17031C0184J, 17031C0187J, 17031C0188J, 17031C0189J, 17031C0191J, 17031C0192J, 17031C0193J, 17031C0194J, 17031C0307J, and 17031C0330J, dated August 19, 2008, of the countywide Flood Insurance Rate Maps for Cook County, Illinois and map numbers 17031C0167K, 17031C0169K, and 17031C0186K, dated January 23, 2026, of the countywide Flood Insurance Rate Maps for Cook County, Illinois, and map numbers 17043C0051J and 17043C0052J dated August 1, 2019, of the countywide Flood Insurance Rate Maps for DuPage County, prepared by the Federal Emergency Management Agency.

(B) The base flood or 100-year frequency flood elevation for the SFHAs of those parts of unincorporated Cook and DuPage Counties that are within the extraterritorial jurisdiction of the Village of Schaumburg or that may be annexed into the village are noted in subsection (B) of the definition of "designated floodway", section 150.02 of this chapter.

(C) The base flood or 100-year frequency flood elevation for each SFHA delineated as an "AH zone" or "AO zone" shall be that elevation (or depth) delineated on the Flood Insurance Rate Map.

(D) The base flood or 100-year frequency flood elevation for each of the remaining SFHAs delineated as an "A zone" on the maps listed in section 150.02 of this chapter shall be according to the best existing data available in the Illinois State Water Survey Floodplain Information Repository. When no base flood or 100-year frequency flood elevation exists, the base flood or 100-year frequency flood elevation for a riverine SFHA shall be determined from a backwater model, such as HEC-II, WSP-2, or a dynamic model such as HIP. The flood flows used in the hydraulic models shall be obtained from a hydrologic

model, such as HEC-I TR-20, or HIP, or by techniques presented in various publications prepared by the United States geological survey for estimating peak flood discharges. Flood flows should be based on anticipated future land use conditions in the watershed as determined from adopted local and regional land use plans. Along any watercourses draining more than one (1) square mile, the above analyses shall be submitted to IDNR/OWR for approval, once approved it must be submitted to the Illinois State Water Survey Floodplain Information Repository for filing. For a non-riverine SFHA, the base flood elevation shall be the historic flood of record plus three feet (3'), unless calculated by a detailed engineering study and approved by the Illinois State Water Survey.

(E) Establishing a BFE is required in a Zone A for all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser.

(F) The BFE for each of the remaining floodplains delineated as an "A Zone" on the FIRM shall be according to the best data available from federal, state, or other sources. Should no other data exist, an engineering study must be financed by the applicant to determine BFEs.

§ 150.06 OCCUPATION AND USE OF FLOOD FRINGE AREAS.

Development in and/or filling of the flood fringe will be permitted if protection is provided against the base flood or 100-year frequency flood by proper elevation, and compensatory storage and other provisions of this chapter are met. No use will be permitted which adversely affects the capacity of drainage facilities or systems. Developments located within the flood fringe shall meet the requirements of this section, along with the requirements of section 150.09 of this chapter.

(A) Land Development Permit: No person, firm, corporation, or governmental body not exempted by state law shall commence any development in the SFHA without first obtaining a land development permit from the village.

(1) Application for a land development permit, as required in section 151.17 of this title, shall be made on a form provided by the village. The application shall be accompanied by drawings of the site, drawn to scale, showing property line dimensions and legal description for the property and sealed by a licensed engineer, architect or land surveyor; existing grade elevations in MSL, 1988 datum or NAVD and all changes in grade resulting from excavation or filling; the location and dimensions of all buildings and additions to buildings. For all proposed buildings, the elevation of the lowest floor (including basement) and lowest adjacent grade shall be shown on the submitted plans and the development will be subject to the requirements of section 150.09 of this chapter.

(2) Upon receipt of a land development permit application, the director of engineering and public works shall compare the elevation of the site to the base flood or 100-year frequency flood. Any development located on land that can be shown to have been

higher than the base flood elevation as of the site's first Flood Insurance Rate Map identification is not in the SFHA and, therefore, not subject to the requirements of this chapter. The director of engineering and public works shall maintain documentation of the existing ground elevation at the development site and certification that this ground elevation existed prior to the date of the site's first Flood Insurance Rate Map identification.

(3) A soil erosion and sedimentation control plan for disturbed areas shall be submitted, as required in section 151.09 of this title. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure post construction maintenance.

(4) The director of engineering and public works shall ensure all other local state and federal permits, approvals or permit not required letters that may be required for this type of activity shall be obtained prior to the issuance of the permit. The director of engineering and public works shall obtain copies of said permit, permit not required letters or approvals.

(B) Preventing Increased Damages: No development in the flood fringe shall create a threat to public health and safety.

(1) Elevation of Site: If fill is being used to elevate the site above the base flood or 100-year frequency flood elevation, the applicant shall submit sufficient data and obtain a letter of map revision (LOMR) from FEMA for the purpose of removing the site from the floodplain.

(2) Compensatory Storage: Whenever any portion of a floodplain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation. The excavation volume shall be at least equal to 1.25 times the volume of storage lost due to the fill or structure. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All floodplain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All floodplain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse.

§ 150.07 OCCUPATION AND USE OF IDENTIFIED FLOODWAYS.

This section applies to proposed development, redevelopment, site modification or building modification within a designated floodway. The designated floodway for those streams listed in

section 150.02 of this chapter shall be as delineated on the designated floodway maps designated by IDNR/OWR and referenced in section 150.02 of this chapter. Only those uses and structures will be permitted which meet the criteria in this section. All floodway modifications shall be the minimum necessary to accomplish the purpose of the project. The development shall also meet the requirements of section 150.09 of this chapter.

(A) Land Development Permit: No person, firm, corporation or governmental body not exempted by state law shall commence any development in a floodway without first obtaining a land development permit from the director of engineering and public works.

(1) Application for a land development permit shall be made on a form provided by the director of engineering and public works. The application shall include the following information:

(a) Name and address of applicant;

(b) Site location (including legal description) of the property, drawn to scale, on the designated floodway map;

(c) Name of stream or body of water affected;

(d) Description of proposed activity;

(e) Statement of purpose of proposed activity;

(f) Anticipated dates of initiation and completion of activity;

(g) Name and mailing address of the owner of the subject property if different from the applicant;

(h) Signature of applicant or the applicant's agent;

(i) If the applicant is a corporation, the president or other authorized officer shall sign the application form;

(j) If the applicant is a partnership, each partner shall sign the application form;

(k) If the applicant is a land trust, the trust officer shall sign the name of the trustee by him (her) as trust officer. A disclosure affidavit shall be filed with the application, identifying each beneficiary of the trust by name and address and defining the respective interests therein;

(l) Plans of the proposed activity shall be provided which include as a minimum:

1. A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow,

2. A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the structure or work,

elevations in mean sea level (1988 adjustment) datum or NAVD, adjacent property lines and ownership, drainage and flood control easements, location of any channels and any existing or future access roads, designated floodway limit, floodplain limit, specifications and dimensions of any proposed channel modifications, locations and orientation of cross sections, north arrow, and a graphic or numerical scale,

3. Cross section views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in plan view existing and proposed elevations, normal water elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphic or numerical scales (horizontal and vertical),
4. A soil erosion and sedimentation control plan for disturbed areas as required in section 151.09 of this title. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure post construction maintenance,
5. A copy of the designated floodway map, marked to reflect any proposed change in the designated floodway location.

(m) Any and all other local, state and federal permits or approval letters that may be required for this type of development;

(n) Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the permit criteria of subsection (B) of this section;

(o) If the designated floodway delineation, base flood or 100-year frequency flood elevation will change due to the proposed project, the application will not be considered complete until IDNR/OWR has indicated conditional approval of the designated floodway map change. No structures may be built until a letter of map revision has been approved by FEMA;

(p) The application for a structure shall be accompanied by drawings of the site, drawn to scale showing property line dimensions and existing ground elevations and all changes in grade resulting from any proposed excavation or filling, and floodplain and floodway limits; sealed by a registered professional engineer; the location and dimensions of all buildings and additions to buildings; and the elevation of the lowest floor (including basement) of all proposed buildings subject to the requirements of section 150.09 of this chapter;

(q) If the proposed project involves a channel modification, the applicant shall submit the following information:

1. A discussion of the purpose of and need for the proposed work,
2. A discussion of the feasibility of using alternative locations or methods to accomplish the purpose of the proposed work,
3. An analysis of the extent and permanence of the impacts the project would have on the physical and biological conditions of the body of water affected,
4. An analysis of the extent and permanence of the impacts each feasible alternative identified in subsection (B)(2)(d)1 of this section would have on the physical and biological conditions of the body of water affected,
5. An analysis of the impacts of the proposed project, considering cumulative effects on the physical and biological conditions of the body of water affected.

(2) The director of engineering and public works shall ensure all other local, state and federal permits and approvals or permit not required letters that may be required for this type of activity shall be obtained prior to the issuance of the permit. The director of engineering and public works shall obtain copies of said permit, permit not required letters, or approvals. A registered professional engineer, under the employ or contract of the village shall review and approve applications reviewed under this chapter.

(B) Preventing Increased Damages and a List of Appropriate Uses: The only development in a floodway which will be allowed are appropriate uses, which will not cause a rise in the base flood elevation, and which will not create a damaging or potentially damaging increase in flood heights or velocity or be a threat to public health and safety and welfare or impair the natural hydrologic and hydraulic functions of the floodway or channel, or permanently impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this chapter. Only those appropriate uses listed in 92 Illinois Administrative Code 708 will be allowed. Appropriate uses do not include the construction or placement of any new structures, fill, building additions, buildings on stilts, excavation or channel modifications done to accommodate otherwise nonappropriate uses in the floodway, fencing (including landscaping or planting designed to act as a fence) and storage of materials except as specifically defined above as an appropriate use.

(1) Approved Uses: The approved appropriate uses are as follows:

(a) Flood control structures, dikes, dams and other public works or private improvements relating to the control of drainage, flooding, erosion, or water quality or habitat for fish and wildlife;

(b) Structures or facilities relating to the use of, or requiring access to, the water or shoreline, such as pumping and treatment facilities, and facilities and

improvements related to recreational boating, and other functionally water dependant uses;

(c) Storm and sanitary sewer outfalls;

(d) Underground and overhead utilities;

(e) Recreational facilities such as playing fields and trail systems including any related fencing (at least fifty percent (50%) open when viewed from any one direction) built parallel to the direction flood flows, and including open air pavilions;

(f) Bridges, culverts, roadways, sidewalks, railways, runways and taxiways and any modification thereto;

(g) Parking lots and any modifications thereto (where depth of flooding at the 100-year frequency flood event will not exceed 1.0 foot) and aircraft parking aprons built at or below ground elevation;

(h) Designated floodway regrading, without fill, to create a positive nonerosive slope toward a watercourse;

(i) Floodproofing activities to protect previously existing lawful structures including the construction of watertight window wells, elevating structures, or construction of floodwalls around residential, commercial or industrial principal structures where the outside toe of the floodwall shall be no more than ten feet (10') away from the exterior wall of the existing structure, and which are not considered substantial improvements to the structure;

(j) In the case of damaged or replacement buildings, reconstruction or repairs made to a building that are valued at less than fifty percent (50%) of the market value of the building before it was damaged or replaced, and which do not increase the outside dimensions of the building;

(k) Additions to existing buildings above the BFE that do not increase the building's footprint and are valued at less than fifty percent (50%) of the market value of the building.

(2) Engineering and Mitigation Criteria: Within the designated floodway as identified on the designated floodway maps designated by IDNR/OWR, the construction of an appropriate use, will be considered permissible provided that the proposed project meets the following engineering and mitigation criteria and is so stated in writing with supporting plans, calculations and data by a registered professional engineer and provided that any structure meets the protection requirements of section 150.09 of this chapter:

(a) Preservation of Flood Conveyance, so as not to Increase Flood Stages Upstream: For appropriate uses other than bridge or culvert crossings, on stream structures or

dams, all effective designated floodway conveyance lost due to the project will be replaced for all flood events up to and including the 100-year frequency flood. In calculating effective designated floodway conveyance, the following factors shall be taken into consideration:

1. Designated floodway conveyance,

$$K = \frac{1.486 \times AR^{2/3}}{n}$$

Where:

"n" is Manning's roughness factor,

"A" is the effective area of the cross section,

"R" is the ratio of the area to the wetted perimeter.

(See "Open Channel Hydraulics", Ven Te Chow, 1959, McGraw-Hill Book Company, New York)

2. The same Manning's "n" value shall be used for both existing and proposed conditions unless a recorded maintenance agreement with a federal, state, or local unit of government can assure the proposed conditions will be maintained or the land cover is changing from a vegetative to a nonvegetative land cover.

3. Transition sections shall be provided and used in calculations of effective designated floodway conveyance. The following expansion and contraction ratios shall be used unless applicant's engineer can prove to IDNR/OWR through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:

    A. When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot (1') horizontal for every four feet (4') of the flooded stream's length.

    B. When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot (1') horizontal for every one foot (1') of the flooded stream's length.

    C. When expanding or contracting flows in a vertical direction, a minimum of one foot (1') vertical transition for every ten feet (10') of stream length shall be used.

D. Transition sections shall be provided between cross sections with rapid expansions and contractions and when meeting the designated floodway delineation on adjacent properties.

E. All cross sections used in the calculations shall be located perpendicular to flood flows.

(b) Preservation of Floodway Storage so as not to Increase Downstream Flooding: Compensatory storage shall be provided for any designated floodway storage lost due to the proposed work from the volume of fill or structures placed and the impact of any related flood control projects. Compensatory storage for fill or structures shall be equal to at least 1.25 times the volume of floodplain storage lost. Artificially created storage lost due to a reduction in head loss behind a bridge shall not be required to be replaced. The compensatory designated floodway storage shall be placed between the proposed normal water elevation and the proposed 100-year flood elevation. All designated floodway storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All designated floodway storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse. If the compensatory storage will not be placed at the location of the proposed construction, the applicant's engineer shall demonstrate to IDNR/OWR through a determination of flood discharges and water surface elevations that the compensatory storage is hydraulically equivalent. Finally, there shall be no reduction in floodway surface area as a result of a floodway modification, unless such modification is necessary to reduce flooding at the existing structure.

(c) Preservation of Floodway Velocities SO AS NOT To Increase Stream Erosion or Flood Heights: For all appropriate uses, except bridges or culverts or on stream structures, the proposed work will not result in an increase in the average channel or designated floodway velocities or stage, for all flood events up to and including the 100-year frequency event. However, in the case of bridges or culverts or on stream structures built for the purpose of backing up water in the stream during normal or flood flows, velocities may be increased at the structure site if scour, erosion and sedimentation will be avoided by the use of riprap or other design measures.

(d) Construction of New Bridges or Culvert Crossings and Roadway Approaches: The proposed structure shall not result in an increase of upstream flood stages greater than 0.1 foot when compared to the existing conditions for all flood events up to and including the 100-year frequency event; or the upstream flood stage increases will be contained within the channel banks (or within existing vertical extensions of the banks) such as within the design protection grade of existing

levees or flood walls or within recorded flood easements. If the proposed construction will increase upstream flood stages greater than 0.1 foot the developer must contact IDNR/OWR, dam safety section, for a dam safety permit or waiver.

1. The engineering analysis of upstream flood stages must be calculated using the flood study flows, and corresponding flood elevations for tailwater conditions for the flood study specified in section 150.05 of this chapter. Culverts must be analyzed using the U.S. DOT, FHWA hydraulic chart for the selection of highway culverts. Bridges must be analyzed using the U.S. DOT/federal highway administration hydraulics of bridge waterways calculation procedures.
2. Lost floodway storage must be compensated for per subsection (B)(2)(b) of this section.
3. Velocity increases must be mitigated per subsection (B)(2)(c) of this section.
4. If the crossing is proposed over a public water that is used for recreational or commercial navigation, a department of transportation permit must be received.
5. The hydraulic analysis for the backwater caused by the bridge showing the existing condition and proposed designated profile must be submitted to IDNR/OWR for concurrence that a LOMR is not required by subsection 150.06(B) of this chapter.
6. All excavations for the construction of the crossing shall be designed per subsection (B)(2)(h) of this section.

(e) Reconstruction or Modification of Existing Bridges, Culverts, and Approach Roads:

1. The bridge or culvert and roadway approach reconstruction or modification shall be constructed with no more than 0.1 foot increase in backwater over the existing flood profile for all flood frequencies up to and including the 100-year event, if the existing structure is not a source of flood damage.
2. If the existing bridge or culvert and roadway approach is a source of flood damage to buildings or structures in the upstream floodplain, the applicant's engineer shall evaluate the feasibility of redesigning the structure to reduce the existing backwater, taking into consideration the effects on flood stages on upstream and downstream properties.
3. The determination as to whether or not the existing crossing is a source of flood damage and should be redesigned must be prepared in accordance with the department of transportation rules 92 Illinois Administrative Code 708

(floodway construction in northeastern Illinois) and submitted to the division for review and concurrence before a permit is issued.

(f) On Stream Structures Built for the Purpose of Backing Up Water: Any increase in upstream flood stages greater than 0.0 foot when compared to the existing conditions, for all flood events up to and including the 100-year frequency event shall be contained within the channel banks (or within existing vertical extensions of the channel banks) such as within the design protection grade of existing levees or flood walls or within recorded flood easements. A permit or letter indicating a permit is not required must be obtained from IDNR/OWR, dam safety section, for a dam safety permit or waiver for any structure built for the purpose of backing up water in the stream during normal or flood flow. All dams and impoundment structures as defined in section 150.02 of this chapter shall meet the permitting requirements of 92 Illinois Administrative Code 702 (construction and maintenance of dams). If the proposed activity involves a modification of the channel or floodway to accommodate an impoundment, it shall be demonstrated that:

1. The impoundment is determined to be in the public interest by providing flood control, public recreation, or regional stormwater detention;
2. The impoundment will not prevent the migration of indigenous fish species, which require access to upstream areas as part of their life cycle, such as for spawning;
3. The impoundment will not cause or contribute to degraded water quality or habitat conditions. Impoundment design should include gradual bank slopes, appropriate bank stabilization measures, and a presedimentation basin;
4. A nonpoint source control plan has been implemented in the upstream watershed to control the effects of sediment runoff as well as minimize the input of nutrients, oil and grease, metals, and other pollutants. If there is more than one municipality in the upstream watershed, the municipality in which the impoundment is constructed should coordinate with upstream municipalities to ensure comprehensive watershed control;
5. The project otherwise complies with the requirements of this section.

(g) Floodproofing of Existing Habitable, Residential and Commercial Structures: If construction is required beyond the outside dimensions of the existing building, the outside perimeter of the floodproofing construction shall be placed no further than ten feet (10') from the outside of the building. Compensation of lost storage and conveyance will not be required for floodproofing activities.

(h) Excavation in the Floodway: When excavation is proposed in the design of bridges and culvert openings including the modifications to and replacement of

existing bridge and culvert structures, or to compensate for lost conveyance for other appropriate uses, transition section shall be provided for the excavation. The following expansion and contraction ratios shall be used unless an applicant's engineer can prove to IDNR/OWR through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:

1. When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot (1') horizontal for every four feet (4') of the flooded stream's length;
2. When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot (1') horizontal for every one foot (1') of the flooded stream's length;
3. When expanding or contracting flows in a vertical direction, a minimum of one foot (1') vertical transition for every ten feet (10') of stream length shall be used;
4. Erosion/scour protection shall be provided inland upstream and downstream of the transition sections.

(i) Channel Modification: If the proposed activity involves a channel modification, it shall be demonstrated that:

1. There are no practicable alternatives to the activity which would accomplish its purpose with less impact to the natural conditions of the body of water affected. Possible alternatives include levees, bank stabilization, flood proofing of existing structures, removal of structures from the floodplain, clearing the channel, high flow channel, or the establishment of a stream side buffer strip or greenbelt. Channel modification is acceptable if the purpose is to restore natural conditions and improve water quality and fish and wildlife habitat.
2. Water quality, habitat, and other natural functions would be significantly improved by the modification and no significant habitat area may be destroyed, or the impacts are offset by the replacement of an equivalent degree of natural resource values.
3. The activity has been planned and designed and will be constructed in a way which will minimize its adverse impacts on the natural conditions of the body of water affected, consistent with the following criteria:
    A. The physical characteristics of the modified channel shall match as closely as possible those of the existing channel in length, cross section, slope and sinuosity. If the existing channel has been previously modified, restoration of more natural physical

conditions should be incorporated into channel modification design, where practical.

B. Hydraulically effective transitions shall be provided at both the upstream and downstream ends of the project, designed such that they will prevent erosion.

C. One sided construction of a channel shall be used when feasible. Removal of streamside (riparian) vegetation should be limited to one (1) side of the channel, where possible, to preserve the shading and stabilization effects of the vegetation.

D. Clearing of vegetation shall be limited to that which is essential for construction of the channel.

E. Channel banks shall be constructed with a side slope no steeper than three to one (3:1) horizontal to vertical, wherever practicable. Natural vegetation and gradual side slopes are the preferred methods for bank stabilization. Where high velocities or sharp bends necessitate the use of alternative stabilization measures, natural rock or riprap are preferred materials. Artificial materials such as concrete, gabions, or construction rubble should be avoided unless there are no practicable alternatives.

F. All disturbed areas associated with the modification shall be seeded or otherwise stabilized as soon as possible upon completion of construction. Erosion blanket or an equivalent material shall be required to stabilize disturbed channel banks prior to establishment of the vegetative cover.

G. If the existing channel contains considerable bottom diversity such as deep pools, riffles, and other similar features, such features shall be provided in the new channel. Spawning and nesting areas and flow characteristics compatible with fish habitat shall also be established, where appropriate.

H. A sediment basin shall be installed at the downstream end of the modification to reduce sedimentation and degradation of downstream water quality.

I. New or relocated channels should be built in the dry and all items of construction, including vegetation, should be completed prior to diversion of water into the new channel.

J. There shall be no increases in stage or velocity as the channel enters or leaves the project site for any frequency flood unless

necessitated by a public flood control project or unless such an increase is justified as part of a habitat improvement or erosion control project.

K. Unless the modification is for a public flood control project, there shall be no reduction in the volume of floodwater storage outside the floodway as a result of the modification.

4. The project otherwise complies with the requirements of this section.

(j) Seeding and Stabilization Plan: For all activities located in a floodway, a seeding and stabilization plan shall be submitted by the applicant.

(k) Soil Erosion and Sedimentation Measures: For all activities in the floodway, including grading, filling and excavation, in which there is potential for erosion of exposed soil, soil erosion and sedimentation control measures shall be employed consistent with the following criteria and in accordance with section 151.09 of this title:

1. The construction area shall be minimized to preserve the maximum vegetation possible. Construction shall be scheduled to minimize the time soil is exposed and unprotected. In no case shall the existing natural vegetation be destroyed, removed, or disturbed more than fifteen (15) days prior to the initiation of improvements.

2. Temporary and/or permanent soil stabilization shall be applied to denuded areas as soon as possible. As a minimum, soil stabilization shall be provided within fifteen (15) days after final grade is reached on any portion of the site, and within fifteen (15) days to denuded areas which may not be at final grade but will remain undisturbed for longer than sixty (60) days.

3. Sedimentation control measures shall be installed before any significant grading or filling is initiated on the site to prevent the movement of eroded sediments off site or into the channel. Potential sediment control devices include filter fences, straw bale fences, check dams, diversion ditches, and sediment basins.

4. A vegetated buffer strip of at least twenty-five feet (25') in width shall be preserved and/or reestablished, where possible, along existing channels (see subsection (B)(2)(p) of this section). Construction vehicle use of channels shall be minimized. Temporary stream crossings shall be constructed, where necessary, to minimize erosion. Necessary construction in or along channels shall be restabilized immediately.

5. Soil erosion and sedimentation control measures shall be designed and implemented consistent with "Procedures and Standards For Urban Soil

Erosion and Sedimentation Control in Illinois" (1988) also known as the "Green Book" and "Standards And Specifications For Soil Erosion And Sediment Control" (IEPA, 1987).

(l) Public Flood Control Projects: For public flood control projects, the permitting requirements of this section will be considered met if the applicant can demonstrate to IDNR/OWR through hydraulic and hydrologic calculations that the proposed project will not singularly or cumulatively result in increased flood heights outside the project right-of-way or easements for all flood events up to and including the 100-year frequency event.

(m) General Criteria for Analysis of Flood Elevations:

1. The flood profiles, flows and floodway data in the designated floodway study, referenced in section 150.05 of this chapter, must be used for analysis of the base conditions. If the study data appears to be in error or conditions have changed, IDNR/OWR shall be contacted for approval and concurrence on the appropriate base conditions data to use.

2. If the 100-year designated floodway elevation at the site of the proposed construction is affected by backwater from a downstream receiving stream with a larger drainage area, the proposed construction shall be shown to meet the requirements of this section for the 100-year frequency flood elevations of the designated floodway conditions and conditions with the receiving stream at normal water elevations.

3. If the applicant learns from IDNR/OWR, local governments, or a private owner that a downstream restrictive bridge or culvert is scheduled to be removed, reconstructed, modified, or a regional flood control project is scheduled to be built, removed, constructed or modified within the next five (5) years, the proposed construction shall be analyzed and shown to meet the requirements of this section for both the existing conditions and the expected flood profile conditions when the bridge, culvert or flood control project is built.

(n) Conditional Letter of Map Revision: If the appropriate use would result in a change in the designated floodway location or the 100-year frequency flood elevation, the applicant shall submit to IDNR/OWR and to FEMA all the information, calculations and documents necessary to be issued a conditional designated floodway map revision and receive from IDNR/OWR a conditional approval of the designated floodway change before a permit is issued. However, the final designated floodway map will not be changed by IDNR/OWR until as built plans or record drawings are submitted and accepted by FEMA and IDNR/OWR. In the case of nongovernment projects, the municipality in incorporated areas and the county in unincorporated areas shall concur with the

proposed conditional designated floodway map revision before IDNR/OWR approval can be given. No filling, grading, dredging or excavating shall take place until a conditional approval is issued. No further development activities shall take place until a final letter of map revision (LOMR) is issued by FEMA and IDNR/OWR. Within six (6) months, FEMA shall be notified of physical changes in the Base Flood Elevation (increases or decreases) by submitting technical or scientific data through the Letter of Map Change (LOMC) process, so that insurance rates and floodplain management requirements will be based on current data.

(o) Professional Engineer's Supervision: All engineering analyses shall be performed by or under the supervision of a registered professional engineer.

(p) Construction Near Channel: For all activities in the floodway involving construction within twenty-five feet (25') of the channel, the following criteria shall be met:

1. A natural vegetation buffer strip shall be preserved within at least twenty-five feet (25') of the ordinary high water mark of the channel.
2. Where it is impossible to protect this buffer strip during the construction of an appropriate use, a vegetated buffer strip shall be established upon completion of construction.
3. The use of native riparian vegetation is preferred in the buffer strip. Access through this buffer strip shall be provided, when necessary, for stream maintenance purposes.

(q) Designated Floodway Designation Change: After receipt of conditional approval of the designated floodway change and issuance of a permit and a conditional letter of map revision, construction as necessary to change the designated floodway designation may proceed but no buildings or structures or other construction that is not an appropriate use may be placed in that area until the designated floodway map is changed and a final letter of map revision is received. The designated floodway map will be revised upon acceptance and concurrence by IDNR/OWR and FEMA of the "as built" plans.

(3) State Review: For those projects listed below located in a designated floodway, the following criteria shall be submitted to IDNR/OWR for their review and concurrence prior to the issuance of a permit:

(a) IDNR/OWR will review an engineer's analysis of the flood profile due to a proposed bridge pursuant to subsection (B)(2)(d) of this section.

(b) IDNR/OWR will review an engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, pursuant to subsection (B)(2)(e) of this section.

(c) The IDNR/OWR will review alternative transition sections and hydraulically equivalent storage pursuant to subsections (B)(2)(a), (B)(2)(b) and (B)(2)(h) of this section.

(d) The IDNR/OWR will review and approve prior to the start of construction any department projects, dams (as defined in section 150.02 of this chapter) and all other state, federal or local units of government projects, including projects of the municipality or county.

(4) Other Permits: In addition to the other requirements of this chapter, a development permit for a site located in a floodway shall not be issued unless the applicant first obtains a permit or written documentation that a permit is not required from IDNR/OWR, issued pursuant to 615 ILCS 5/5 et seq. No permit from IDNR/OWR shall be required if the division has delegated this responsibility to the village, and has been accepted by the Village of Schaumburg.

(5) Dam Safety Permits: Any work involving the construction, modification or removal of a "dam" as defined in section 150.02 of this chapter per 92 Illinois Administrative Code 702 (rules for construction of dams) shall obtain an IDNR/OWR dam safety permit prior to the start of construction of a dam. If the director of engineering and public works finds a dam that does not have an IDNR/OWR permit, the director of engineering and public works shall immediately notify the dam safety section of the IDNR/OWR. If the director of engineering and public works finds a dam which is believed to be in unsafe condition, the director of engineering and public works shall immediately notify the owner of the dam, IDNR/OWR, dam safety section in Springfield and the Illinois Emergency Services and Disaster Agency (ESDA).

(6) Activities That Do Not Require a Registered Professional Engineer's Review: The following activities may be permitted without a registered professional engineer's review, unless otherwise required by Village of Schaumburg ordinance or other governmental laws. Such activities shall still meet the other requirements of this chapter, including the mitigation requirements.

(a) Underground and overhead utilities that:

1. Do not result in any increase in existing ground elevations; or

2. Do not require the placement of above ground structures in the floodway; or

3. In the case of underground stream crossings, the top of the pipe or encasement is buried a minimum of three feet (3') below the existing streambed; and

4. In the case of overhead utilities, no supporting towers are placed in the watercourse and are designed in such a fashion as not to catch debris.

(b) Storm and sanitary sewer outfalls that:

1. Do not extend riverward or lakeward of the existing adjacent natural bank slope; and
2. Do not result in an increase in ground elevation; and
3. Are designed so as not to cause stream erosion at the outfall location.

(c) Construction of sidewalks, athletic fields (excluding fences), properly anchored playground equipment and patios at grade.

(d) Construction of shoreline and stream bank protection that:

1. Does not exceed one thousand feet (1,000') in length;
2. Materials are not placed higher than the existing top of bank;
3. Materials are placed so as not to reduce the cross sectional area of the stream channel or bank of the lake;
4. Vegetative stabilization and gradual side slopes are the preferred mitigation methods for existing erosion problems. Where high channel velocities, sharp bends or wave action necessitate the use of alternative stabilization measures, natural rock or riprap are preferred materials. Artificial materials such as concrete, construction rubble, and gabions should be avoided unless there are no practicable alternatives.

(e) Temporary stream crossings in which:

1. The approach roads will be one-half foot or less above natural grade.
2. The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage tile or outfall invert.
3. The top of the roadway fill in the channel will be at least two feet (2') below the top of the lowest bank. Any fill in the channel shall be nonerosive material, such as riprap or gravel.
4. All disturbed stream banks will be seeded or otherwise stabilized as soon as possible upon installation and again upon removal of construction.
5. The access road and temporary crossings will be removed within one year after authorization.

§ 150.08 OCCUPATION AND USE OF SFHA AREAS WHERE FLOODWAYS ARE NOT IDENTIFIED, DRAINING MORE THAN ONE SQUARE MILE.

(A) Development Not to Worsen Flooding: In SFHA or floodplains, where no floodways have been identified and no base flood or 100-year frequency flood elevations have been established by FEMA, and draining more than a square mile, no development shall be permitted unless the cumulative effect of the proposals, when combined with all other existing and anticipated uses and structures, shall not significantly impede or increase the flow and passage of the floodwaters nor significantly increase the base flood or 100-year frequency flood elevation.

(1) Land Development Permit: No person, firm, corporation, or governmental body, not exempted by state law, shall commence any development in a SFHA or floodplain without first obtaining a land development permit from the director of engineering and public works. Application for a land development permit shall be made on a form provided by the Village of Schaumburg. The application shall be accompanied by drawings of the site, drawn to scale showing property line dimensions; and existing grade elevations and all changes in grade resulting from excavation or filling, sealed by a licensed engineer, the location and dimensions of all buildings and additions to buildings; and the elevations of the lowest floor (including basement) of all proposed buildings subject to the requirements of section 150.09 of this chapter. The application for a land development permit shall also include the following information:

(a) A detailed description of the proposed activity, its purpose, and intended use;

(b) Site location (including legal description) of the property, drawn to scale, on the designated floodway maps;

(c) Anticipated dates of initiation and completion of activity;

(d) Plans of the proposed activity shall be provided which include as a minimum:

1. A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow,

2. A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the structure or work, elevations in mean sea level (1988 adjustment) datum or NAVD, adjacent property lines and ownership, drainage and flood control easements, floodplain limit, location and orientation of cross sections, north arrow, and a graphical or numerical scale,

3. Cross section views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in "plan view," existing and proposed elevations, normal water

elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphical or numerical scales (horizontal and vertical), and

4. A soil erosion and sedimentation control plan for disturbed areas as required in section 151.09 of this title. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure post construction maintenance.

(e) Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the criteria of subsection (B) of this section;

(f) Any and all other local, state and federal permits or approvals that may be required for this type of development.

(2) Elevation: Based on the best available existing data according to the Illinois State Water Survey's Floodplain Information Repository, the director of engineering and public works shall compare the elevation of the site to the base flood or 100-year frequency flood elevation. Should no elevation information exist for the site, the developer's engineer shall calculate the elevation according to subsection 150.05(D) of this chapter. Any development located on land that can be shown to have been higher than the base flood elevation as of the site's first Flood Insurance Rate Map identification is not in the SFHA and, therefore, not subject to the requirements of this section. The director of engineering and public works shall maintain documentation of the existing ground elevation at the development site and certification that this ground elevation existed prior to the date of the site's first Flood Insurance Rate Map identification.

(3) Federal Permits: The director of engineering and public works shall ensure that copies of all other local, state, and federal permits, approvals or permit not required letters that may be required for this type of activity shall be obtained prior to issuance of the permit. The director of engineering and public works shall obtain copies of said permit, permit not required letters, or approvals. The director of engineering and public works shall not issue the development permit unless all required local, state and federal permits have been obtained.

(B) Preventing Increased Damages: No development in the SFHA, where a floodway has not been determined shall create a damaging or potentially damaging increase in flood heights or velocity or threat to public health, safety and welfare or impair the natural hydrologic and hydraulic functions of the floodway or channel, or impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this chapter.

(1) Floodway Not Determined: Within all riverine SFHAs where the floodway has not been determined, the following standards shall apply:

(a) The developer shall have a registered professional engineer state in writing and show through supporting plans, calculations, and data that the project meets the engineering requirements of subsections 150.07(B)(2)(a) through (B)(2)(l) of this chapter for the entire floodplain as calculated under the provisions of subsection 150.05(D) of this chapter. As an alternative, the developer should have an engineering study performed to determine a floodway and submit that engineering study to IDNR/OWR for acceptance as a designated floodway. Upon acceptance of the floodway by the department, the developer shall then demonstrate that the project meets the requirements of section 150.07 of this chapter for the designated floodway. The "floodway" shall be defined according to the definition in section 150.02 of this chapter.

(b) A land development permit shall not be issued unless the applicant first obtains a permit from IDNR/OWR or written documentation that a permit is not required from IDNR/OWR.

(c) No permit from IDNR/OWR shall be required if the division has delegated permit responsibility to the village per 92 Illinois Administrative Code, part 708 for designated floodways, per IDNR/OWR's state-wide permit entitled "Construction in Floodplains With No Designated Floodways in Northeastern Illinois".

(d) Any work involving the construction, modification or removal of a "dam" or an on stream "structure" to impound water as defined in section 150.02 of this chapter shall obtain an Illinois Division of Water Resources dam safety permit or letter indicating a permit is not required prior to the start of construction of a dam. If the director of engineering and public works finds a dam that does not have an IDNR/OWR permit, then he or she shall immediately notify the dam safety section of the IDNR/OWR. If the director of engineering and public works finds a dam which is believed to be in unsafe condition, then he or she shall immediately notify the owner of the dam and the Illinois Emergency Services and Disaster Agency (ESDA), IDNR/OWR, dam safety section in Springfield.

(e) The following activities may be permitted without a registered professional engineer's review or calculation of a base flood elevation and designated floodway. Such activities shall still meet the other requirements of this chapter, other village ordinances or other governmental laws:

1. Underground and overhead utilities that:

A. Do not result in any increase in existing ground elevations, or

B. Do not require the placement of above ground structures in the floodway, or

C. In the case of underground stream crossings, the top of the pipe or encasement is buried a minimum of three feet (3') below the existing streambed, and

D. In the case of overhead utilities, no supporting towers are placed in the watercourse and are designed in such a fashion as not to catch debris;

2. Storm and sanitary sewer outfalls that:

A. Do not extend riverward or lakeward of the existing adjacent natural bank slope, and

B. Do not result in an increase in ground elevation, and

C. Are designed so as not to cause stream bank erosion at the outfall location;

3. Construction of shoreline and streambed protection that:

A. Does not exceed one thousand feet (1,000') in length or two (2) cubic yards per linear foot of streambed;

B. Materials are not placed higher than the existing top of bank;

C. Materials are placed so as not to reduce the cross sectional area of the stream channel by more than ten percent (10%);

D. Vegetative stabilization and gradual side slopes are the preferred mitigation methods for existing erosion problems. Where high channel velocities, sharp bends or wave action necessitate the use of alternative stabilization measures, natural rock or riprap are preferred materials. Artificial materials such as concrete, construction rubble, and gabions should be avoided unless there are no practicable alternatives.

4. Temporary stream crossings in which:

A. The approach roads will be one-half foot or less above natural grade,

B. The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage tile or outfall invert,

C. The top of the roadway fill in the channel will be at least two feet (2') below the top of the lowest bank. Any fill in the channel shall be nonerosive material, such as riprap or gravel,

D. All disturbed stream banks will be seeded or otherwise stabilized as soon as possible upon installation and again upon removal of construction,

E. The access road and temporary crossings will be removed within one (1) year after authorization;

5. The construction of light poles, signposts and similar structures;

6. The construction of sidewalks, driveways, athletic fields (excluding fences), patios and similar surfaces which are built at grade;

7. The construction of properly anchored, unwalled, open structures such as playground equipment, pavilions, and carports built at or below existing grade that would not obstruct the flow of floodwaters;

8. Minor maintenance dredging of a stream channel where:

A. The affected length of stream is less than one thousand feet (1,000'),

B. The work is confined to reestablishing flows in natural stream channels, or

C. The cross sectional area of the dredged channel conforms to that of the natural channel upstream and downstream of the site.

(f) The flood-carrying capacity within any altered or relocated watercourse shall be maintained.

(2) Compensatory Storage: Whenever any portion of a floodplain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation. The excavation volume shall be at least equal to 1.25 times the volume of storage lost due to the fill or structure. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All floodplain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All floodplain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse.

§ 150.09 PERMITTING REQUIREMENTS APPLICABLE TO ALL FLOODPLAIN AREAS.

In addition to the requirements found in sections 150.06, 150.07 and 150.08 of this chapter for development in flood fringes, designated floodways, and SFHA or floodplains where no floodways have been identified (zones A, AO, AH, AE, A99, VE, V, X or D), the following requirements shall be met:

(A) Public Health Standards:

(1) No developments in the SFHA shall include locating or storing chemicals, explosives, buoyant materials, animal wastes, fertilizers, flammable liquids, pollutants, or other hazardous or toxic materials below the floodplain elevation, and/or as otherwise provided in this code.

(2) New and replacement water supply systems, wells, sanitary sewer lines and on site waste disposal systems may be permitted providing all manholes or other above ground openings located below the FPE are watertight.

(B) Carrying Capacity And Notification: For all projects involving channel modification, fill, or stream maintenance (including levees), the flood-carrying capacity of the watercourse shall be maintained. In addition, the village shall notify adjacent communities in writing thirty (30) days prior to the issuance of a permit for the alteration or relocation of the watercourse.

(C) Protecting Buildings: All buildings located within a 100-year floodplain also known as an SFHA, shall be protected from flood damage below the flood protection elevation.

(1) However, existing buildings located within a designated floodway shall also meet the more restrictive appropriate use standards included in section 150.07 of this chapter. This building protection criteria applies to the following situations:

(a) Construction or placement of a new building.

(b) A structural alteration to an existing building that either increases the first floor area by more than twenty percent (20%) and/or the building's market value by more than fifty percent (50%).

(2) A residential, substantially improved, or non-residential building, when allowed, may be constructed on permanent land fill in accordance with the following:

(a) The lowest floor (including basement) shall be at or above the flood protection elevation. See definition of Flood Protection Elevation in section 150.02 of this chapter.

(b) The fill shall be placed in layers no greater than one foot (1') deep before compaction and should extend at least ten feet (10') beyond the foundation of the building before sloping below the flood protection elevation. The top of the fill

shall be above the flood protection elevation. However, the ten foot (10') minimum may be waived if a structural engineer certifies an alternative method to protect the building from damages due to hydrostatic pressures. The fill shall be protected against erosion and scour. The fill shall not adversely effect the flow or surface drainage from or onto neighboring properties.

(3) A residential (including manufactured homes) or non-residential building may be elevated in accordance with the following:

(a) The building or improvements shall be elevated on crawl space, piles, walls, or other foundation that is permanently open to floodwaters and not subject to damage by hydrostatic pressures of the base flood or 100-year frequency flood. The permanent openings shall be no more than one foot (1') above grade, and consists of a minimum of two (2) openings. The openings must have a total net area of not less than one (1) square inch for every one (1) square foot of enclosed area subject to flooding below the base flood elevation.

(b) The foundation and supporting members shall be anchored and aligned in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as current, waves, ice and floating debris.

(c) All areas below the flood protection elevation shall be constructed of materials resistant to flood damage. The lowest floor (including basement) and all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the flood protection elevation. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the flood protection elevation.

(d) No area below the flood protection elevation shall be used for storage of items or materials.

(4) Only a non-residential building may be structurally dry floodproofed (in lieu of elevation) provided that a registered professional engineer shall certify that the building has been structurally dry floodproofed below the flood protection elevation, the structure and attendant utility facilities are watertight and capable of resisting the effects of the base flood or 100-year frequency flood. The building design shall take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effects of buoyancy, and impacts from debris or ice. Floodproofing measures shall be operable without human intervention and without an outside source of electricity (levees, berms, floodwalls and similar works are not considered floodproofing for the purpose of this subsection).

(5) Nonconforming structures located in a designated floodway may remain in use, but may not be enlarged, replaced or structurally altered. A nonconforming structure damaged by flood, fire, wind or other natural or manmade disaster may be restored

unless the damage exceeds fifty percent (50%) of its market value before it was damaged, in which case it shall conform to this chapter.

(6) All new construction and substantial improvements shall:

(a) Be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy,

(b) Be constructed with materials resistant to flood damage, and

(c) Be constructed by methods and practices that minimize flood damages.

(7) All manufactured homes are to be elevated and anchored to resist flotation, collapse, or lateral movement.

(8) Recreational vehicles are not permitted in the floodplain.

§ 150.10 OTHER DEVELOPMENT REQUIREMENTS.

The board of trustees shall take into account flood hazards, to the extent that they are known in all official actions related to land management, use and development.

(A) New subdivisions, annexation agreements, and planned unit developments (PUDs) within the SFHA shall be reviewed to assure that the proposed developments are consistent with sections 150.06, 150.07, 150.08 and 150.09 of this chapter and be reasonably safe from flooding and public utilities and facilities are constructed so as to minimize flood damage. Plats or plans for new subdivisions, and planned unit developments (PUDs) shall include a signed statement by a registered professional engineer that the plat accounts for changes in the drainage of surface waters in accordance with the Plat Act, that the plat must contain a certificate from a registered land surveyor that the property is situated within five hundred feet (500') of a watercourse serving or not serving a tributary area of six hundred forty (640) acres or more. See chapter 151, "Subdivision and Land Development", of this title for detailed requirements.

State law reference(s) 765 ILCS 205/2.

(B) Proposals for new subdivisions, planned unit developments (PUDs) and additions to subdivisions shall include base flood or 100-year frequency flood elevation data and floodway delineations. Where this information is not available from an existing study filed with the Illinois state water survey, the applicant's engineer shall be responsible for calculating the base flood or 100-year frequency flood elevation per subsection 150.05(D) of this chapter and the floodway delineation per section 150.02 of this chapter and submitting it to the state water survey and IDNR/OWR for review and approval as best available designated data.

(C) Streets, blocks, lots, parks and other public grounds shall be located and laid out in such a manner as to preserve and utilize natural streams and channels. Wherever possible, the floodplains shall be included within parks or other public grounds.

(D) The board of trustees shall not approve any planned unit development (PUD) or plat of subdivision located outside the corporate limits unless such agreement or plat is in accordance with the provisions of this chapter.

§ 150.11 VARIANCES.

No variances shall be granted to any development located in "designated floodway" as defined in section 150.02 of this chapter. However, when a development proposal is located outside of a designated floodway, and whenever the standards of this chapter place undue hardship on a specific development proposal, the applicant may apply to the director of engineering and public works for a variance. The director of engineering and public works shall review the applicant's request for a variance and shall submit its recommendation to the board of trustees.

(A) No variance shall be granted unless the applicant demonstrates that:

(1) The development activity cannot be located outside the SFHA;

(2) An exceptional hardship would result if the variance were not granted;

(3) The relief requested is the minimum necessary;

(4) There will be no additional threat to public health, safety, beneficial stream uses and functions, especially aquatic habitat, or creation of a nuisance;

(5) There will be no additional public expense for flood protection, lost environmental stream uses and functions, rescue or relief operations, policing, or repairs to streambeds and banks, roads, utilities, or other public facilities;

(6) The provisions of subsections 150.06(B) and 150.08(B) of this chapter shall still be met;

(7) The activity is not in a designated floodway;

(8) The applicant's circumstances are unique and do not represent a general problem; and

(9) The granting of the variance will not alter the essential character of the area involved including existing stream uses.

(B) The director of engineering and public works shall notify an applicant in writing that a variance from the requirements of section 150.09 of this chapter that would lessen the degree of protection to a building will:

(1) Result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars ($25.00) for one hundred dollars ($100.00) of insurance coverage;

(2) Increase the risks to life and property; and

(3) Require that the applicant proceed with knowledge of these risks and that he will acknowledge in writing that he assumes the risk and liability.

(C) Variances requested in connection with restoration of a site or building listed on the National Register of Historical Places or documented as worthy of preservation by the Illinois Historic Preservation Agency may be granted using criteria more permissive than the requirements of subsections (A) and (B) of this section.

§ 150.12 DISCLAIMER OF LIABILITY.

The degree of flood protection required by this chapter is considered reasonable for designated purposes and is based on available information derived from engineering and scientific methods of study. Larger floods may occur or flood heights may be increased by manmade or natural causes. This chapter does not imply that development, either inside or outside of the SFHA, will be free from flooding or damage. This chapter does not create liability on the part of the village or any officer or employee thereof for any flood damage that results from reliance on this chapter or any administrative decision made lawfully thereunder.

§ 150.13 PENALTY.

Failure to comply with the requirements of a permit or conditions of a variance resolution shall be deemed to be a violation of this chapter. Upon due investigation, the director of engineering and public works may determine that a violation of the minimum standards of this chapter exist. The director of engineering and public works shall notify the owner in writing of such violation.

(A) If such owner fails after ten (10) days' notice to correct the violation:

(1) The village may make application to the circuit court for an injunction requiring conformance with this chapter or make such other order as the court deems necessary to secure compliance with the chapter.

(2) Any person who violates this chapter shall, upon conviction thereof, be fined as required in an amount not less than one hundred dollars ($100.00) nor more than one thousand dollars ($1,000.00) per day for each violation of this chapter.

(B) The director of engineering and public works shall inform the owner that any such violation is considered a wilful act to increase flood damages and, therefore, may cause coverage by a standard flood insurance policy to be suspended.

(C) Nothing herein shall prevent the village from taking such other lawful action to prevent or remedy any violation. All costs connected therewith shall accrue to the person or persons responsible.

§ 150.14 ABROGATION AND GREATER RESTRICTIONS.

This chapter is not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. Where this chapter and other ordinance, easements, covenants, or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail. The ordinance codified in this chapter is intended to repeal the original ordinance or resolution which was adopted to meet the national flood insurance program regulations, but is not intended to repeal the resolution which the village passed in order to establish initial eligibility for the program.

ORDINANCE NO. 26-___

AN ORDINANCE AMENDING TITLE 15, CHAPTER 150 WITH REGARD TO FLOODPLAIN REGULATIONS

§ 150.15 SEPARABILITY.

The provisions and sections of this chapter shall be deemed separable and the invalidity of any portion of this chapter shall not affect the validity of the remainder.

SECTION THREE: That this Ordinance shall be in full force and effect after passage, approval and publication as required by law.

AYES:
NAYS:
ABSENT:

PASSED AND APPROVED this _____day of _____, 2026.

_____
Tom Dailly, Village President

ATTEST:

_____
Jane Lentino, Village Clerk

CHAPTER 150: FLOOD CONTROL

Section

§ 150.01 PURPOSE.

This floodplain ordinance is enacted pursuant to the police powers granted to the village by 65 Illinois Compiled Statutes 5/2-21, 5/11-30-8, 5/11-31-2 and its home rule powers. The purpose of this chapter is to maintain this village's eligibility in the national flood insurance program; to minimize potential losses due to periodic flooding including loss of life, loss of property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare; and to preserve and enhance the quality of surface waters, conserve economic and natural values and provide for the wise utilization of water and related land resources. The ordinance codified herein is adopted in order to accomplish the following specific purposes:

(A) To meet the requirements of 615 Illinois Compiled Statutes 5/4.9 of the Rivers, Lakes and Streams Act of the State of Illinois, approved September 6, 1990, as amended;

(B) To assure that new development does not increase the flood or drainage hazards to others, or create unstable conditions susceptible to erosion;

(C) To protect new buildings and major improvements to buildings from flood damage;

(D) To protect human life and health from the hazards of flooding;

(E) To lessen the burden on the taxpayer for flood control projects, repairs to flood damaged public facilities and utilities, and flood rescue and relief operations;

(F) To make federally subsidized flood insurance available for property in the village by fulfilling the requirements of the national flood insurance program;

(G) To comply with the rules and regulations of the national flood insurance program codified as 44 CFR 59-79, as amended;

(H) To protect, conserve, and promote the orderly development of land and water resources;

(I) To preserve the natural hydrologic and hydraulic functions of watercourses and floodplains and to protect water quality and aquatic habitats;

(J) To preserve the natural characteristics of stream corridors in order to moderate flood and stormwater impacts, improve water quality, reduce soil erosion, protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits and enhance community and economic development.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000)

§ 150.02 DEFINITIONS.

For the purposes of this chapter, the following definitions are adopted:

ACT: The Rivers, Lakes and Streams Act, 615 ILCS 5/4.9, September 6, 1990.

APPLICANT: Any person, firm, corporation or agency which submits an application.

APPROPRIATE USE: Only uses of the designated floodway that are permissible and will be considered for permit issuance. The only uses that will be allowed are as specified in subsection 150.07(B)(1) of this chapter.

BASE FLOOD: The flood having a one percent (1%) probability of being equaled or exceeded in any given year. The base flood is also known as the 100-year frequency flood event. Application of the base flood elevation at any location is as defined in section 150.05 of this chapter.

BASE FLOOD ELEVATION (BFE): The height in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified) of the crest of the base flood.

BUILDING: A structure that is principally aboveground and is enclosed by walls and a roof. The term includes a gas or liquid storage tank, a manufactured home, mobile home or a prefabricated building. This term also includes recreational vehicles and travel trailers to be installed on a site for more than one hundred eighty (180) days.

CHANNEL: Any river, stream, creek, brook, branch, natural or artificial depression, ponded area, flowage, slough, ditch, conduit, culvert, gully, ravine, wash, or natural or manmade drainageway, which has a definite bed and banks or shoreline, in or into which surface or groundwater flows, either perennially or intermittently.

CHANNEL MODIFICATION: Alteration of a channel by changing the physical dimensions or materials of its bed or banks. Channel modification includes: damming, riprapping (or other armoring), widening, deepening, straightening, relocating, lining and significant removal of bottom or woody vegetation. Channel modification does not include the clearing of dead or dying vegetation, debris, or trash from the channel. Channelization is a severe form of channel modification involving a significant change in the channel cross section and typically involving relocation of the existing channel (e.g., straightening).

COMPENSATORY STORAGE: An artificially excavated, hydraulically equivalent volume of storage within the SFHA used to balance the loss of natural flood storage capacity when artificial fill or structures are placed within the floodplain. The uncompensated loss of natural floodplain storage can increase off-site floodwater elevations and flows.

CONDITIONAL APPROVAL OF A DESIGNATED FLOODWAY MAP CHANGE: Preconstruction approval by IDNR/OWR and the Federal Emergency Management Agency of a proposed change to the floodway map. This preconstruction approval, pursuant to this title, gives assurances to the property owner that once an appropriate use is constructed according to permitted plans, the floodway map can be changed, as previously agreed, upon review and acceptance of as built plans.

CONDITIONAL LETTER OF MAP REVISION (CLOMR): A letter which indicates that the Federal Emergency Management Agency will revise base flood elevations, flood insurance rate zones, flood boundaries or floodway as shown on an effective flood hazard boundary map or ~~flood insurance rate map~~Flood Insurance Rate Map, once the as built plans are submitted and approved.

CONTROL STRUCTURE: A structure designed to control the rate of flow that passes through the structure, given a specific upstream and downstream water surface elevation.

DAM: All obstructions, wall embankments or barriers, together with their abutments and appurtenant works, if any, constructed for the purpose of storing or diverting water or creating a pool. Undergroundwater storage tanks are not included.

DESIGNATED FLOODWAY: Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. In no case shall the designated height be more than 0.1 foot at any point within the community. The floodway for the floodplains shall be as delineated on the FIRM prepared by FEMA. For other areas, the entire floodplain shall be considered to be the floodway unless an analysis is approved by the IDNR/OWR demonstrating that a project site is outside of the floodway. If an floodway analysis is not required by IDNR/OWR under 17 ILL. ADM. Code 3700, the floodways shall be according to the best data available

from the Federal, State, or other sources. ~~The channel, including on stream lakes, and that portion of the floodplain adjacent to a stream or watercourse as designated by FEMA, which is needed to store and convey the existing 100-year frequency flood discharge with no more than a 0.1 foot increase in stage due to the loss of flood conveyance or storage, and no more than a ten percent (10%) increase in velocity.~~

(A) ~~—~~The floodways are designated on ~~the following map~~panel ~~number 17031C and panel~~ numbers ~~0167J, 0169J,~~ 17031C0179J, 17031C0183J, 17031C0184J, ~~0186J,~~ 17031C0187J, 17031C0188J, 17031C0189J, 17031C0191J, 17031C0192J, 17031C0193J, 17031C0194J, 17031C0307J, and 17031C0330J, dated August 19, 2008, of the countywide Flood Insurance Rate Maps for Cook County, Illinois and panel numbers 17031C0167K, 17031C0169K, and 17031C0186K, dated January 23, 2026,~~ of the countywide ~~f~~Flood ~~i~~Insurance ~~r~~Rate M~~m~~aps for Cook County, Illinois, and ~~map~~ panel numbers 17043C0051J and 17043C0052J, dated August 1, 2019, of the countywide ~~f~~Flood ~~i~~Insurance R~~r~~ate ~~m~~Maps for DuPage County, prepared by ~~the Federal Emergency Management Agency~~FEMA. When two (2) floodway maps exist for a waterway, the more restrictive floodway limit shall prevail.

(B) The floodways for those parts of unincorporated Cook County that are within the one and one-half (1½) mile extraterritorial jurisdiction of the village and may be annexed into the village are shown on panel numbers 17031C0156K and 17031C0178K, dated January 23, 2026, of the countywide Flood Insurance Rate Maps for Cook County prepared by FEMA, and panel numbers 17043C0051J and 17043C0052J, dated August 1, 2019, of the countywide Flood Insurance Rate Maps for DuPage County prepared by FEMA. ~~for those parts of unincorporated Cook County that are within the one and one-half (1½) mile extraterritorial jurisdiction of the Village of Schaumburg and may be annexed into the village are designated for Poplar Creek tributary, Salt Creek and various tributaries of, on the following map number 17031C, dated August 19, 2008, of the countywide flood insurance rate map for Cook County prepared by the Federal Emergency Management Agency.~~

(C) To locate the designated floodway boundary on any site, the designated floodway boundary should be scaled off the designated floodway map and located on a site plan, using reference marks common to both maps. Where interpretation is needed to determine the exact location of the designated floodway boundary, IDNR/OWR should be contacted for the interpretation.

DEVELOPMENT: Any manmade change to real estate, including:

(A) Construction, reconstruction, repair, or placement of a building or any addition to a building;

(B) Drilling, mining, installing utilities, construction of roads, bridges, or similar projects;

(C) Demolition of a structure or redevelopment of a site;

(D) Clearing of land as an adjunct of construction;

(E) Construction or erection of levees, walls, fences, dams, or culverts; channel modification; filling, dredging, grading, excavating, paving, or other nonagricultural alterations of the ground surface; storage of materials;

(F) Any other activity of man that might change the direction, height, or velocity of flood or surface water, including extensive vegetation removal.

~~"Development" does not include maintenance of existing buildings and facilities such as reroofing or resurfacing of roads when there is no increase in elevation, or gardening, plowing, and similar agricultural practices that do not involve filling, grading, or construction of levees.~~

DIRECTOR OF ENGINEERING AND PUBLIC WORKS: The duly appointed head of the department of engineering and public works or his or her designee.

ELEVATION CERTIFICATES: A form published by the federal emergency management agency that is used to certify the elevation to which a building has been elevated.

EROSION: The general process whereby soils are moved by flowing water or wave action.

EXEMPT ORGANIZATIONS: Organizations which are exempt from this chapter per the Illinois Compiled Statutes including state, federal or local units of government.

EXISTING MANUFACTURED HOME PARK OR SUBDIVISION: A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed or buildings to be constructed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION: The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

FEMA: Federal Emergency Management Agency and its regulations at 44 CFR 59-79, as amended. ~~effective as of October 1, 1988. This incorporation does not include any later editions or amendments.~~

FLOOD: A general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waves, or the unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD FREQUENCY: A period of years, based on a statistical analysis, during which a flood of a stated magnitude may be expected to be equaled or exceeded.

FLOOD FRINGE: That portion of the floodplain outside of the designated floodway.

FLOOD INSURANCE RATE MAPS (FIRM): A map prepared by the Federal Emergency Management Agency that depicts the special flood hazard area (SFHA) within a community. This map includes insurance rate zones and floodplains and may or may not depict floodways.

FLOOD INSURANCE STUDY (FIS): An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

FLOOD PROTECTION ELEVATION (FPE): The elevation of the base flood or 100-year frequency flood plus two feet (2') of freeboard at any given location in the SFHA.

FLOODPLAIN AND SPECIAL FLOOD HAZARD AREA (SFHA) : These two terms are synonymous. SFHA is the land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. Those lands within the jurisdiction of the community and the extraterritorial jurisdiction of the community, or that may be annexed into the community, that are subject to inundation by the base flood. The floodplains of the community are identified as such on panel number(s) of the countywide FIRM prepared by the FEMA. The area may be designated as Zone A on the FHBM. After detailed ratemaking has been completed in preparation for publication of the Flood Insurance Rate Map, Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, or V1-30, VE, or V. SFHA may also refer to areas identified by the community that are flood prone and designated from other federal state or local sources of data including but not limited to historical flood information reflecting high water marks, previous flood inundation areas, and flood

prone soils associated with a watercourse.~~That land typically adjacent to a body of water with ground surface elevations at or below the base flood or the 100-year frequency flood elevation. Floodplains may also include special flood hazard areas, ponding areas, etc. The floodplain is also known as the special flood hazard area (SFHA).~~

(A) The floodplains are those lands within the jurisdiction of the village that are subject to inundation by the base flood or 100-year frequency flood. ~~The SFHAs~~The BFEs for the floodplains shall be as delineated on the base flood profiles in the countywide Flood Insurance Study (FIS) of Cook County prepared by FEMA and dated January 23, 2026. ~~of the Village of Schaumburg are generally identified as~~ Flood Insurance Rate Map (FIRM) panel numbers 17031C0167K, 17031C0169K, and 17031C0186K, dated January 23, 2026 and Flood Insurance Rate Map (FIRM) panel numbers 17031C0179J, 17031C0183J, 17031C0184J, 17031C0187J, 17031C0188J, 17031C0189J, 17031C0191J, 17031C0192J, 17031C0193J, 17031C0194J, 17031C0307J, and 17031C0330J, dated August 19, 2008. The BFEs for the floodplains shall be as delineated on the base flood profiles in the countywide Flood Insurance Study (FIS) of DuPage County prepared by FEMA and dated August 1, 2019. Flood Insurance Rate Map (FIRM) panel numbers 17043C0051J and 17043C0052J, dated August 1, 2019. ~~such on the following map number 17031C, panels 0167J, 0169J, 0179J, 0183J, 0184J, 0186J, 0187J, 0188J, 0189J, 0191J, 0192J, 0193J, 0194J, 0307J, and 0330J, dated August 19, 2008, of the countywide flood insurance rate map for Cook County, and also map numbers 17043C0051J and 17043C0052J on the countywide flood insurance rate maps for DuPage County, dated August 1, 2019, prepared by the Federal Emergency Management Agency (FEMA).~~

(B) The SFHAs of those parts of unincorporated Cook County that are within the one and one-half (1½) mile extraterritorial jurisdiction of the village and may be annexed into the village are shown on ~~map~~ panel number~~s 170197~~17031C~~, panels 0156J~~ 0156K and 17031C~~0178J~~0178K, dated ~~August 19, 2008~~January 23, 2026, of the countywide ~~flood insurance rate map~~Flood Insurance Rate Maps for Cook County prepared by FEMA, and ~~map~~ panel numbers 17043C0051J and 17043C0052J~~ for DuPage County~~, dated August 1, 2019, of the countywide Flood Insurance Rate Maps for DuPage County prepared by ~~the Federal Emergency Management Agency (~~FEMA~~)~~.

(C) USGS-NIPC hydrologic investigation atlases (floods of record) if included as best available data in the Illinois State Water Survey Floodplain Information Repository.

FLOODPROOFING: Any combination of structural and nonstructural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODPROOFING CERTIFICATE: A form published by the Federal Emergency Management Agency that is used to certify that a building has been designed and constructed to be structurally dry floodproofed to the flood protection elevation.

FLOODWAY: See definition of Designated Floodway.

FREEBOARD: An increment of elevation added to the base flood elevation to provide a factor of safety for uncertainties in calculations, unknown localized conditions, wave actions and unpredictable effects such as those caused by ice or debris jams.

HISTORIC STRUCTURE: Any structure that is:

(A) Listed individually in the National Register of Historic Places or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register.

(B) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district.

(C) Individually listed on the state inventory of historic places by the Illinois Historic Preservation Agency.

(D) Individually listed on a local inventory of historic places that has been certified by the Illinois Historic Preservation Agency.

HYDROLOGIC AND HYDRAULIC CALCULATIONS: Engineering analyses which determine expected flood flows and flood elevations based on land characteristics and rainfall events.

IDNR/OWR: Illinois Department of Natural Resources, Office of Water Resources.

LETTER OF MAP AMENDMENT (LOMA): Official determination by FEMA that a specific structure is not in a 100-year flood zone; amends the effective flood hazard boundary map or FIRM.

LETTER OF MAP REVISION (LOMR): Letter that revises base flood or 100-year frequency flood elevations, flood insurance rate zones, flood boundaries or floodways as shown on an effective FHBM or FIRM.

LOWEST FLOOR: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered a building's lowest floor. Provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Section 6 of this ordinance.

MANUFACTURED HOME: A building, transportable in one or more sections that is built on a permanent chassis and is designed to be used with or without a permanent foundation when connected to required utilities.

MANUFACTURED HOME PARK OR SUBDIVISION: A parcel (or contiguous parcels) of land divided into two or more lots for rent or sale.

MITIGATION: Includes those measures necessary to minimize the negative effects which floodplain development activities might have on the public health, safety and welfare. Examples of mitigation include: compensatory storage, soil erosion and sedimentation control, and channel restoration.

NATURAL: When used in reference to channels means those channels formed by the existing surface topography of the earth prior to changes made by man. A natural stream tends to follow a meandering path; its floodplain is not constrained by levees; the area near the bank has not been cleared, mowed or cultivated; the stream flows over soil and geologic materials typical of the area with no substantial alteration of the course or cross section of the stream caused by filling or excavating. A modified channel may regain some natural characteristics over time as the channel meanders and vegetation is reestablished. Similarly, a modified channel may be restored to more natural conditions by man through regrading and revegetation.

NAVD: North American Vertical Datum of 1988. The vertical datum for orthometric heights established for vertical control surveying in the United States.

NEW CONSTRUCTION: Structures for which the start of construction commenced on or after the effective date of floodplain management regulations adopted by a community and includes any subsequent improvements of such structures.

NEW MANUFACTURED HOME PARK OR SUBDIVISION: A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed or buildings to be constructed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of the floodplain management regulations adopted by a community.

NFIP: National Flood Insurance Program.

NGVD: National geodetic vertical datum of 1929. Reference surface set by the national geodetic survey deduced from a continental adjustment of all existing adjustments in 1929.

ORDINARY HIGH WATER MARK (OHWM): The point on the bank or shore up to which the presence and action of surface water is so continuous so as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation or other easily recognized characteristics.

PUBLIC FLOOD CONTROL PROJECT: A flood control project which will be operated and maintained by a public agency to reduce flood damages to existing buildings and structures which includes a hydrologic and hydraulic study of the existing and proposed conditions of the watershed. Nothing in this definition shall preclude the design, engineering, construction or financing, in whole or in part, of a flood control project by persons or parties who are not public agencies.

PUBLICLY NAVIGABLE WATERS: All streams and lakes capable of being navigated by watercraft.

RECREATIONAL VEHICLE OR TRAVEL TRAILER: A vehicle which is:

(A) Built on a single chassis;

(B) Four hundred (400) square feet or less in size, when measured at the largest horizontal projection;

(C) Designed to be self-propelled or permanently towable by a light duty truck; and

(D) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

REGISTERED LAND SURVEYOR: A land surveyor registered in the State of Illinois, under the Illinois Professional Land Surveyors Act of 1989.

REGISTERED PROFESSIONAL ENGINEER: An engineer registered in the State of Illinois, under the Illinois Professional Engineering Act of 1989.

State law reference(s)—225 ILCS 330 et seq.

REPETITIVE LOSS: Flood-related damages sustained by a structure on two separate occasions during a ten year period for which the cost of repairs at the time of each such flood event on the average equals or exceeds twenty-five percent (25%) of the market value of the structure before the damage occurred.

~~***REPAIR, REMODELING OR MAINTENANCE***: Development activities which do not result in any increases in the outside dimensions of a building or any changes to the dimensions of a structure.~~

RETENTION/DETENTION FACILITY: A retention facility stores stormwater runoff without a gravity release. A detention facility provides for storage of stormwater runoff and controlled release of this runoff during and after a flood or storm.

RIVERINE SFHA: Any SFHA subject to flooding from a river, creek, intermittent stream, ditch, on stream lake system or any other identified channel. This term does not include areas subject to flooding from lakes, ponding areas, areas of sheet flow, or other areas not subject to overbank flooding.

RUNOFF: The water derived from melting snow or rain falling on the land surface, flowing over the surface of the ground or collected in channels or conduits.

SEDIMENTATION: The processes that deposit soils, debris, and other materials either on other ground surfaces or in bodies of water or watercourses.

~~***SPECIAL FLOOD HAZARD AREA (SFHA)***: Any base flood area subject to flooding from a river, creek, intermittent stream, ditch, or any other identified channel or ponding and shown on a flood hazard boundary map or flood insurance rate map as zone A, AO, AE, A99, AH, X or D.~~***START OF CONSTRUCTION***: Includes substantial improvement and means the date the building permit was issued. This, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement or other improvement, was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns or

any work beyond the stage of excavation or placement of a manufactured home on a foundation. For a substantial improvement, actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building whether or not that alteration affects the external dimensions of the building.

STRUCTURE: The results of a manmade change to the land constructed on or below the ground, including the construction, reconstruction or placement of a building or any addition to a building.

SUBSTANTIAL DAMAGE: Damage of any origin sustained by a structure whereby the (cumulative) percentage of damage during a ten (10) year period equals or exceeds fifty percent (50%) of the market value of the structure before the damage occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination. The term includes "Repetitive Loss Buildings" (see definition).

SUBSTANTIAL IMPROVEMENT Any reconstruction, rehabilitation, repair, addition or improvement of a structure taking place during a ten (10) year period in which the (cumulative) percentage of improvements equals or exceeds fifty percent (50%) of the market value of the structure before the improvement or repair is started and/or increases the floor area by more than twenty percent (20%). ~~: Any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either: a) before the improvement or repair is started, or b) if the structure has been damaged, and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either: a) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or b) any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places.~~

TRANSITION SECTION: Reaches of the stream or floodway where water flows from a narrow cross section to a wide cross section or vice versa.

VARIANCE: A grant of relief by a community from the terms of a flood plain management regulation.

VILLAGE: The Village of Schaumburg, a home rule municipality located in Cook and DuPage Counties.

VIOLATION: The failure of a structure or other development to be fully compliant with this ordinance.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000; Am. Ord. 04-02, passed 1-13-2004; Am. Ord. 05-214, passed 12-13-2005; Am. Ord. 07-110, passed 7-24-2007; Am. Ord. 07-198, passed 12-11-2007; Am. Ord. 08-090, passed 6-24-2008; Am. Ord. 19-061, passed 7-9-2019)

§ 150.03 USE OF THIS CHAPTER.

The director of engineering and public works shall be responsible for fulfilling all of the duties listed in section 150.04 of this chapter. To fulfill those duties, the director of engineering and public works first should use the criteria listed in section 150.05, "Base Flood Elevation", of this chapter, to help determine to the best of his knowledge whether the development site is located within a floodplain. In the event the director of engineering and public works deems it necessary, he may require verification be supplied by the applicant, from IDNR/OWR, FEMA or the corps of engineers to determine whether the area is in a designated floodplain. Once it has been determined that a site is located within a floodplain, a detailed engineering study must be submitted to the director of engineering and public works to determine whether the development site is within a flood fringe, a designated floodway, or within a SFHA or floodplain on which no floodway has been identified. If the site is within a flood fringe, the director of engineering and public works shall require that the minimum requirements of section 150.06 of this chapter be met. If the site is within a floodway, the director of engineering and public works shall

require that the minimum requirements of section 150.07 of this chapter be met. If the site is located within a SFHA or floodplain for which no detailed study has been completed and approved, the director of engineering and public works shall require that the minimum requirements of section 150.08 of this chapter be met. In addition, the general requirements of section 150.09 of this chapter shall be met for all developments meeting the requirements of sections 150.06, 150.07 or 150.08 of this chapter. The director of engineering and public works shall assure that all subdivision proposals shall meet the requirements of section 150.10 of this chapter. If a variance is to be granted for a proposal, the director of engineering and public works shall review the requirements of section 150.11 of this chapter to make sure they are met. In addition, the director of engineering and public works shall complete all notification requirements.

In order to assure that property owners obtain permits as required in this chapter, the director of engineering and public works may take any and all actions as outlined in section 150.13 of this chapter.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000; Am. Ord. 07-198, passed 12-11-2007)

§ 150.04 DUTIES OF THE ENFORCEMENT OFFICIAL(S).

The director of engineering and public works shall be responsible for the general administration and enforcement of this chapter which shall include the following:

(A) Floodplain Designation: In the event the director of engineering and public works deems it necessary, he may require that verification be supplied by the applicant, from IDNR/OWR, FEMA, or the army corps of engineers to determine whether the development site is in an SFHA. A detailed engineering study may be required by the director of engineering and public works to determine whether the development is within an SFHA. If the development sites are in an SFHA, determine whether they are in a floodway, flood fringe or in a floodplain on which a detailed study has not been conducted which drains more than one (1) square mile.

(B) Professional Engineer Review: If the development site is within a floodway or in a floodplain on which a detailed study has not been conducted which drains more than one (1) square mile then the permit shall be referred to a registered professional engineer (PE) under the employ or contract of the village, or approved by the director of engineering and public works, for review to ensure that the development meets the requirements of section 150.07 of this chapter. In the case of an appropriate use, the PE shall state in writing that the development meets the requirements of section 150.07 of this chapter.

(C): Substantial Damage/Substantial Improvement Requirements: Establish procedures for administering and documenting determinations, as outlined below, of substantial improvement and substantial damage:

(1) Determine the market value or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building before the start of construction of the proposed work. In the case of repair, the market value of the building shall be the market value before the damage occurred and before any repairs are made.

(2) Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building. Substantial damage determinations take into account all damage sustained to the structure regardless if the structure is repair or not.

(3) Determine and document whether the proposed work constitutes substantial improvement or substantial damage.

(4) Notify property owner of all determinations and responsibilities for permitting and mitigation of the structure.

(~~C~~D) Dam Safety Requirements: Ensure that an IDNR/OWR dam safety permit has been issued or a letter indicating no dam safety permit is required, if the proposed development activity includes construction of a "dam" as defined in section 150.02 of this chapter. Regulated dams may include weirs, restrictive culverts or impoundment structures.

(E~~D~~) Other Permit Requirements: Ensure that any and all required federal, state and local permits are received prior to the issuance of a land development permit.

(F~~E~~) Plan Review and Permit Issuance: Ensure that all development activities within the SFHAs of the jurisdiction of the village meet the requirements of this chapter and issue a land development permit in accordance with the provisions of this chapter and other regulations of this community when the development meets the conditions of this chapter.

(~~F~~G) Inspection Review: Inspect all development projects before, during and after construction to assure proper elevation of the structure and to ensure that they comply with the provisions of this chapter.

(H~~G~~) Elevation and Floodproofing Certificates: Maintain in the permit files an elevation certificate certifying the elevation of the lowest floor (including basement) of a residential or ~~nonresidential~~non-residential building or the elevation to which a ~~nonresidential~~non-residential building has been floodproofed, using a floodproofing certificate, for all buildings subject to section 150.09 of this chapter for public inspection and provide copies of same. No certificate of occupancy shall be issued without a floodproofing certificate or elevation certificate being on file with the village engineering and public works department, if required.

(I~~H~~) Records for Public Inspection: Maintain for public inspection and furnish upon request base flood data, SFHA and designated floodway maps, copies of federal or state permit documents, variance documentation, conditional letter of map revision, letter of map revision, letter of map amendment and "as built" elevation and floodproofing or elevation and floodproofing certificates for all buildings constructed subject to this chapter.

(~~I~~J) State Permits: Ensure that construction authorization has been granted by the Illinois ~~d~~Department of ~~n~~Natural ~~r~~Resources, for all development projects subject to sections 150.07, "Occupation and Use of Identified Floodways", and 150.08, "Occupation and Use of SFHA Areas Where Floodways Are Not Identified, Draining More Than One Square Mile", of this chapter, unless enforcement responsibility has been delegated to the village. Upon acceptance of this chapter by IDNR/OWR and FEMA, responsibility is hereby delegated to the village as per 92 Illinois Administrative Code 708, for construction in the designated floodway and floodplain when floodways have not been defined in sections 150.07 and 150.08 of this chapter. However, the following review approvals are not delegated to the village and shall require review or permits from IDNR/OWR:

(1) Organizations which are exempt from this chapter, as per the Illinois Compiled Statutes;

(2) Department of transportation projects, dams or impoundment structures as defined in section 150.02 of this chapter and all other state, federal or local unit of government projects, including projects of the village and county, except for those projects meeting the requirements of subsection 150.07(B)(6) of this chapter;

(3) An engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, per subsection 150.07(B)(2)(e) of this chapter;

(4) An engineer's analysis of the flood profile due to subsection 150.07(B)(2)(d) of this chapter;

(5) Alternative transition sections and hydraulically equivalent compensatory storage as indicated in subsections 150.07(B)(2)(a), (B)(2)(b) and (B)(2)(h) of this chapter;

(6) Permit issuance of structures within or over publicly navigable rivers, lakes and streams;

(7) Any changes in the base flood elevation or floodway locations; and

(8) Base flood elevation determinations where none now exist.

(K~~J~~) Cooperation With Other Agencies: Cooperate with state and federal floodplain management agencies to improve base flood or 100-year frequency flood and floodway data and to improve the administration of this chapter. Submit data to IDNR/OWR and the Federal Emergency Management Agency for proposed revisions of a designated map. Submit reports as required for the national flood insurance program. Notify the Federal Emergency Management Agency of any proposed amendments to this chapter.

(L) Letters of Map Revision. The director of engineering and public works shall require a CLOMR prior to issuance of a development permit for:

(1) Proposed floodway encroachments that will cause an increase in the BFE; and

(2) Proposed development which will increase the BFE by more than 0.1 feet in riverine area where FEMA has provided a BFE but no floodway.

Once a CLOMR has been issued by FEMA, the development permit may be issued for site grading and structures necessary in the area of the map change to achieve the final LOMR. Upon completion, the applicant shall submit as-built certifications, as required by FEMA, to achieve a final LOMR prior to the release of final development permits.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000; Am. Ord. 07-110, passed 7-24-2007; Am. Ord. 07-198, passed 12-11-2007)

§ 150.05 BASE FLOOD ELEVATION.

This section's protection standard is based on the countywide flood insurance study for Cook and DuPage Counties and those additional designated floodways noted in section 150.02 of this chapter. If a base flood elevation or 100-year frequency flood elevation is not available for a particular site, then the protection standard shall be according to the best existing data available in the Illinois State Water Survey's Floodplain Information Repository. When a party disagrees with the best available data, he/she may finance the detailed engineering study needed to replace existing data with better data and submit it to IDNR/OWR and FEMA.

(A) The ~~base flood or 100-year frequency flood elevation for the SFHAs of streams listed in section 150.02 of this chapter shall be as delineated on the 100-year~~BFE for the floodplains shall be as delineated on the base flood profiles in the countywide F~~f~~lood ~~i~~Insurance S~~s~~tudy of Cook and DuPage Counties, prepared by FEMA dated ~~August 19, 2008~~January 23, 2026, and August 1, 2019, respectively, and such amendments to such study and maps as may be prepared from time to time. Flood Insurance Rate Map (FIRM) map numbers 17031C0179J, 17031C0183J, 17031C0184J, 17031C0187J, 17031C0188J, 17031C0189J, 17031C0191J, 17031C0192J, 17031C0193J, 17031C0194J, 17031C0307J, and 17031C0330J, dated August 19, 2008, of the countywide Flood Insurance Rate Maps for Cook County, Illinois and map numbers 17031C0167K, 17031C0169K, and 17031C0186K, dated January 23, 2026, of the countywide Flood Insurance Rate Maps for Cook County, Illinois, and map numbers 17043C0051J and 17043C0052J dated August 1, 2019, of the countywide Flood Insurance Rate Maps for DuPage County, prepared by the Federal Emergency Management Agency.

(B) The base flood or 100-year frequency flood elevation for the SFHAs of those parts of unincorporated Cook and DuPage Counties that are within the extraterritorial jurisdiction of the Village of Schaumburg or that may be annexed into the village are noted in subsection (B) of the definition of "designated floodway", section 150.02 of this chapter.

(C) The base flood or 100-year frequency flood elevation for each SFHA delineated as an "AH zone" or "AO zone" shall be that elevation (or depth) delineated on the ~~flood insurance rate map~~Flood Insurance Rate Map.

(D) The base flood or 100-year frequency flood elevation for each of the remaining SFHAs delineated as an "A zone" on the maps listed in section 150.02 of this chapter shall be according to the best existing data available in the Illinois State Water Survey Floodplain Information Repository. When no base flood or 100-year frequency flood elevation exists, the base flood or 100-year frequency flood elevation for a riverine SFHA shall be determined from a backwater model, such as HEC-II, WSP-2, or a dynamic model such as HIP. The flood flows used in the hydraulic models shall be obtained from a hydrologic model, such as HEC-I TR-20, or HIP, or by techniques presented in various publications prepared by the United States geological survey for estimating peak flood discharges. Flood flows should be based on anticipated future land use conditions in the watershed as determined from adopted local and regional land use plans. Along any watercourses draining more than one (1) square mile, the above analyses shall be submitted to IDNR/OWR for approval, once approved it must be submitted to the Illinois State Water Survey Floodplain Information Repository for filing. For a non-riverine SFHA, the base flood elevation shall be the historic flood of record plus three feet (3'), unless calculated by a detailed engineering study and approved by the Illinois State Water Survey.

(E) Establishing a BFE is required in a Zone A for all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser.

(F) The BFE for each of the remaining floodplains delineated as an “A Zone” on the FIRM shall be according to the best data available from federal, state, or other sources. Should no other data exist, an engineering study must be financed by the applicant to determine BFEs.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000; Am. Ord. 08-090, passed 6-24-2008; Am. Ord. 19-061, passed 7-9-2019)

§ 150.06 OCCUPATION AND USE OF FLOOD FRINGE AREAS.

Development in and/or filling of the flood fringe will be permitted if protection is provided against the base flood or 100-year frequency flood by proper elevation, and compensatory storage and other provisions of this chapter are met. No use will be permitted which adversely affects the capacity of drainage facilities or systems. Developments located within the flood fringe shall meet the requirements of this section, along with the requirements of section 150.09 of this chapter.

(A) Land Development Permit: No person, firm, corporation, or governmental body not exempted by state law shall commence any development in the SFHA without first obtaining a land development permit from the village.

(1) Application for a land development permit, as required in section 151.17 of this title, shall be made on a form provided by the village. The application shall be accompanied by drawings of the site, drawn to scale, showing property line dimensions and legal description for the property and sealed by a licensed engineer, architect or land surveyor; existing grade elevations in MSL, 1988 datum or NAVD and all changes in grade resulting from excavation or filling; the location and dimensions of all buildings and additions to buildings. For all proposed buildings, the elevation of the lowest floor (including basement) and lowest adjacent grade shall be shown on the submitted plans and the development will be subject to the requirements of section 150.09 of this chapter.

(2) Upon receipt of a land development permit application, the director of engineering and public works shall compare the elevation of the site to the base flood or 100-year frequency flood. Any development located on land that can be shown to have been higher than the base flood elevation as of the site's first ~~flood insurance rate map~~Flood Insurance Rate Map identification is not in the SFHA and, therefore, not subject to the requirements of this chapter. The director of engineering and public works shall maintain documentation of the existing ground elevation at the development site and certification that

this ground elevation existed prior to the date of the site's first ~~flood insurance rate map~~Flood Insurance Rate Map identification.

(3) A soil erosion and sedimentation control plan for disturbed areas shall be submitted, as required in section 151.09 of this title. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure post construction maintenance.

(4) The director of engineering and public works shall ensure all other local state and federal permits, approvals or permit not required letters that may be required for this type of activity shall be obtained prior to the issuance of the permit. The director of engineering and public works shall obtain copies of said permit, permit not required letters or approvals.

(B) Preventing Increased Damages: No development in the flood fringe shall create a threat to public health and safety.

(1) Elevation of Site: If fill is being used to elevate the site above the base flood or 100-year frequency flood elevation, the applicant shall submit sufficient data and obtain a letter of map revision (LOMR) from FEMA for the purpose of removing the site from the floodplain.

(2) Compensatory Storage: Whenever any portion of a floodplain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation. The excavation volume shall be at least equal to 1.25 times the volume of storage lost due to the fill or structure. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All floodplain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All floodplain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000; Am. Ord. 07-198, passed 12-11-2007; Am. Ord. 19-061, passed 7-9-2019)

§ 150.07 OCCUPATION AND USE OF IDENTIFIED FLOODWAYS.

This section applies to proposed development, redevelopment, site modification or building modification within a designated floodway. The designated floodway for those streams listed in section 150.02 of this chapter shall be as delineated on the designated floodway maps designated by IDNR/OWR and referenced in section 150.02 of this chapter. Only those uses and structures will be permitted which meet the criteria in this section. All floodway modifications shall be the minimum necessary to accomplish the purpose of the project. The development shall also meet the requirements of section 150.09 of this chapter.

(A) Land Development Permit: No person, firm, corporation or governmental body not exempted by state law shall commence any development in a floodway without first obtaining a land development permit from the director of engineering and public works.

(1) Application for a land development permit shall be made on a form provided by the director of engineering and public works. The application shall include the following information:

(a) Name and address of applicant;

(b) Site location (including legal description) of the property, drawn to scale, on the designated floodway map;

(c) Name of stream or body of water affected;

(d) Description of proposed activity;

(e) Statement of purpose of proposed activity;

(f) Anticipated dates of initiation and completion of activity;

(g) Name and mailing address of the owner of the subject property if different from the applicant;

(h) Signature of applicant or the applicant's agent;

(i) If the applicant is a corporation, the president or other authorized officer shall sign the application form;

(j) If the applicant is a partnership, each partner shall sign the application form;

(k) If the applicant is a land trust, the trust officer shall sign the name of the trustee by him (her) as trust officer. A disclosure affidavit shall be filed with the application, identifying each beneficiary of the trust by name and address and defining the respective interests therein;

(l) Plans of the proposed activity shall be provided which include as a minimum:

1. A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow,

2. A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the structure or work, elevations in mean sea level (1988 adjustment) datum or NAVD, adjacent property lines and ownership, drainage and flood control easements, location of any channels and any existing or future access roads, designated floodway limit, floodplain limit, specifications and dimensions of any proposed channel modifications, locations and orientation of cross sections, north arrow, and a graphic or numerical scale,

3. Cross section views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in plan view existing and proposed elevations, normal water elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphic or numerical scales (horizontal and vertical),

4. A soil erosion and sedimentation control plan for disturbed areas as required in section 151.09 of this title. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure post construction maintenance,

5. A copy of the designated floodway map, marked to reflect any proposed change in the designated floodway location.

(m) Any and all other local, state and federal permits or approval letters that may be required for this type of development;

(n) Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the permit criteria of subsection (B) of this section;

(o) If the designated floodway delineation, base flood or 100-year frequency flood elevation will change due to the proposed project, the application will not be considered complete until

IDNR/OWR has indicated conditional approval of the designated floodway map change. No structures may be built until a letter of map revision has been approved by FEMA;

(p) The application for a structure shall be accompanied by drawings of the site, drawn to scale showing property line dimensions and existing ground elevations and all changes in grade resulting from any proposed excavation or filling, and floodplain and floodway limits; sealed by a registered professional engineer; the location and dimensions of all buildings and additions to buildings; and the elevation of the lowest floor (including basement) of all proposed buildings subject to the requirements of section 150.09 of this chapter;

(q) If the proposed project involves a channel modification, the applicant shall submit the following information:

1. A discussion of the purpose of and need for the proposed work,
2. A discussion of the feasibility of using alternative locations or methods to accomplish the purpose of the proposed work,
3. An analysis of the extent and permanence of the impacts the project would have on the physical and biological conditions of the body of water affected,
4. An analysis of the extent and permanence of the impacts each feasible alternative identified in subsection (B)(2)(d)1 of this section would have on the physical and biological conditions of the body of water affected,
5. An analysis of the impacts of the proposed project, considering cumulative effects on the physical and biological conditions of the body of water affected.

(2) The director of engineering and public works shall ensure all other local, state and federal permits and approvals or permit not required letters that may be required for this type of activity shall be obtained prior to the issuance of the permit. The director of engineering and public works shall obtain copies of said permit, permit not required letters, or approvals. A registered professional engineer, under the employ or contract of the village shall review and approve applications reviewed under this chapter.

(B) Preventing Increased Damages and a List of Appropriate Uses: The only development in a floodway which will be allowed are appropriate uses, which will not cause a rise in the base flood elevation, and which will not create a damaging or potentially damaging increase in flood heights or velocity or be a threat to public health and safety and welfare or impair the natural hydrologic and hydraulic functions of the floodway or channel, or permanently impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this chapter. Only those appropriate uses listed in 92 Illinois Administrative Code 708 will be allowed. Appropriate uses do not include the construction or placement of any new structures, fill, building additions, buildings on stilts, excavation or channel modifications done to accommodate otherwise nonappropriate uses in the floodway, fencing (including landscaping or planting designed to act as a fence) and storage of materials except as specifically defined above as an appropriate use.

(1) Approved Uses: The approved appropriate uses are as follows:

(a) Flood control structures, dikes, dams and other public works or private improvements relating to the control of drainage, flooding, erosion, or water quality or habitat for fish and wildlife;

(b) Structures or facilities relating to the use of, or requiring access to, the water or shoreline, such as pumping and treatment facilities, and facilities and improvements related to recreational boating, and other functionally water dependant uses;

(c) Storm and sanitary sewer outfalls;

(d) Underground and overhead utilities;

(e) Recreational facilities such as playing fields and trail systems including any related fencing (at least fifty percent (50%) open when viewed from any one direction) built parallel to the direction flood flows, and including open air pavilions;

(f) Bridges, culverts, roadways, sidewalks, railways, runways and taxiways and any modification thereto;

(g) Parking lots and any modifications thereto (where depth of flooding at the 100-year frequency flood event will not exceed 1.0 foot) and aircraft parking aprons built at or below ground elevation;

(h) Designated floodway regrading, without fill, to create a positive nonerosive slope toward a watercourse;

(i) Floodproofing activities to protect previously existing lawful structures including the construction of watertight window wells, elevating structures, or construction of floodwalls around residential, commercial or industrial principal structures where the outside toe of the floodwall shall be no more than ten feet (10') away from the exterior wall of the existing structure, and which are not considered substantial improvements to the structure;

(j) In the case of damaged or replacement buildings, reconstruction or repairs made to a building that are valued at less than fifty percent (50%) of the market value of the building before it was damaged or replaced, and which do not increase the outside dimensions of the building;

(k) Additions to existing buildings above the BFE that do not increase the building's footprint and are valued at less than fifty percent (50%) of the market value of the building.

(2) Engineering and Mitigation Criteria: Within the designated floodway as identified on the designated floodway maps designated by IDNR/OWR, the construction of an appropriate use, will be considered permissible provided that the proposed project meets the following engineering and mitigation criteria and is so stated in writing with supporting plans, calculations and data by a registered professional engineer and provided that any structure meets the protection requirements of section 150.09 of this chapter:

(a) Preservation of Flood Conveyance, so as not to Increase Flood Stages Upstream: For appropriate uses other than bridge or culvert crossings, on stream structures or dams, all effective designated floodway conveyance lost due to the project will be replaced for all flood events up to and including the 100-year frequency flood. In calculating effective designated floodway conveyance, the following factors shall be taken into consideration:

1. Designated floodway conveyance,

$$"K" = \frac{1.486}{n} \times AR^{2/3}$$

Where:

"n" is Manning's roughness factor,

"A" is the effective area of the cross section,

"R" is the ratio of the area to the wetted perimeter.

(See "Open Channel Hydraulics", Ven Te Chow, 1959, McGraw-Hill Book Company, New York)

2. The same Manning's "n" value shall be used for both existing and proposed conditions unless a recorded maintenance agreement with a federal, state, or local unit of government can assure the proposed conditions will be maintained or the land cover is changing from a vegetative to a nonvegetative land cover.

3. Transition sections shall be provided and used in calculations of effective designated floodway conveyance. The following expansion and contraction ratios shall be used unless applicant's engineer can prove to IDNR/OWR through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:

    A. When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot (1') horizontal for every four feet (4') of the flooded stream's length.

    B. When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot (1') horizontal for every one foot (1') of the flooded stream's length.

    C. When expanding or contracting flows in a vertical direction, a minimum of one foot (1') vertical transition for every ten feet (10') of stream length shall be used.

    D. Transition sections shall be provided between cross sections with rapid expansions and contractions and when meeting the designated floodway delineation on adjacent properties.

    E. All cross sections used in the calculations shall be located perpendicular to flood flows.

(b) Preservation of Floodway Storage so as not to Increase Downstream Flooding: Compensatory storage shall be provided for any designated floodway storage lost due to the proposed work from the volume of fill or structures placed and the impact of any related flood control projects. Compensatory storage for fill or structures shall be equal to at least 1.25 times the volume of floodplain storage lost. Artificially created storage lost due to a reduction in head loss behind a bridge shall not be required to be replaced. The compensatory designated floodway storage shall be placed between the proposed normal water elevation and the proposed 100-year flood elevation. All designated floodway storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All designated floodway storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse. If the compensatory storage will not be placed at the location of the proposed construction, the applicant's engineer shall demonstrate to IDNR/OWR through a determination of flood discharges and water surface elevations that the compensatory storage is hydraulically equivalent. Finally, there shall be no reduction in floodway surface area as a result of a floodway modification, unless such modification is necessary to reduce flooding at the existing structure.

(c) Preservation of Floodway Velocities SO AS NOT To Increase Stream Erosion or Flood Heights: For all appropriate uses, except bridges or culverts or on stream structures, the proposed work will not result in an increase in the average channel or designated floodway velocities or stage, for all flood events up to and including the 100-year frequency event. However, in the case of bridges or culverts or on stream structures built for the purpose of backing up water in the stream during normal or flood flows, velocities may be increased at the structure site if scour, erosion and sedimentation will be avoided by the use of riprap or other design measures.

(d) Construction of New Bridges or Culvert Crossings and Roadway Approaches: The proposed structure shall not result in an increase of upstream flood stages greater than 0.1 foot when compared to the existing conditions for all flood events up to and including the 100-year frequency event; or the upstream flood stage increases will be contained within the channel banks (or within existing vertical extensions of the banks) such as within the design protection grade of existing levees or flood walls or within recorded flood easements. If the proposed construction will increase upstream flood stages greater than 0.1 foot the developer must contact IDNR/OWR, dam safety section, for a dam safety permit or waiver.

1. The engineering analysis of upstream flood stages must be calculated using the flood study flows, and corresponding flood elevations for tailwater conditions for the flood study specified in section 150.05 of this chapter. Culverts must be analyzed using the U.S. DOT, FHWA hydraulic chart for the selection of highway culverts. Bridges must be analyzed using the U.S. DOT/federal highway administration hydraulics of bridge waterways calculation procedures.
2. Lost floodway storage must be compensated for per subsection (B)(2)(b) of this section.
3. Velocity increases must be mitigated per subsection (B)(2)(c) of this section.
4. If the crossing is proposed over a public water that is used for recreational or commercial navigation, a department of transportation permit must be received.
5. The hydraulic analysis for the backwater caused by the bridge showing the existing condition and proposed designated profile must be submitted to IDNR/OWR for concurrence that a LOMR is not required by subsection 150.06(B) of this chapter.
6. All excavations for the construction of the crossing shall be designed per subsection (B)(2)(h) of this section.

(e) Reconstruction or Modification of Existing Bridges, Culverts, and Approach Roads:

1. The bridge or culvert and roadway approach reconstruction or modification shall be constructed with no more than 0.1 foot increase in backwater over the existing flood profile for all flood frequencies up to and including the 100-year event, if the existing structure is not a source of flood damage.
2. If the existing bridge or culvert and roadway approach is a source of flood damage to buildings or structures in the upstream floodplain, the applicant's engineer shall evaluate the feasibility of redesigning the structure to reduce the existing backwater, taking into consideration the effects on flood stages on upstream and downstream properties.
3. The determination as to whether or not the existing crossing is a source of flood damage and should be redesigned must be prepared in accordance with the department of transportation rules 92 Illinois Administrative Code 708 (floodway construction in northeastern Illinois) and submitted to the division for review and concurrence before a permit is issued.

(f) On Stream Structures Built for the Purpose of Backing Up Water: Any increase in upstream flood stages greater than 0.0 foot when compared to the existing conditions, for all flood events up to and including the 100-year frequency event shall be contained within the channel banks (or within existing vertical extensions of the channel banks) such as within the design protection grade of existing levees or flood walls or within recorded flood easements. A permit or letter indicating a permit is not required must be obtained from IDNR/OWR, dam safety section, for a dam safety permit or waiver for any structure built for the purpose of backing up water in the stream during normal or flood flow. All dams and impoundment structures as defined in section

150.02 of this chapter shall meet the permitting requirements of 92 Illinois Administrative Code 702 (construction and maintenance of dams). If the proposed activity involves a modification of the channel or floodway to accommodate an impoundment, it shall be demonstrated that:

1. The impoundment is determined to be in the public interest by providing flood control, public recreation, or regional stormwater detention;
2. The impoundment will not prevent the migration of indigenous fish species, which require access to upstream areas as part of their life cycle, such as for spawning;
3. The impoundment will not cause or contribute to degraded water quality or habitat conditions. Impoundment design should include gradual bank slopes, appropriate bank stabilization measures, and a presedimentation basin;
4. A nonpoint source control plan has been implemented in the upstream watershed to control the effects of sediment runoff as well as minimize the input of nutrients, oil and grease, metals, and other pollutants. If there is more than one municipality in the upstream watershed, the municipality in which the impoundment is constructed should coordinate with upstream municipalities to ensure comprehensive watershed control;
5. The project otherwise complies with the requirements of this section.

(g) Floodproofing of Existing Habitable, Residential and Commercial Structures: If construction is required beyond the outside dimensions of the existing building, the outside perimeter of the floodproofing construction shall be placed no further than ten feet (10') from the outside of the building. Compensation of lost storage and conveyance will not be required for floodproofing activities.

(h) Excavation in the Floodway: When excavation is proposed in the design of bridges and culvert openings including the modifications to and replacement of existing bridge and culvert structures, or to compensate for lost conveyance for other appropriate uses, transition section shall be provided for the excavation. The following expansion and contraction ratios shall be used unless an applicant's engineer can prove to IDNR/OWR through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:

1. When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot (1') horizontal for every four feet (4') of the flooded stream's length;
2. When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot (1') horizontal for every one foot (1') of the flooded stream's length;
3. When expanding or contracting flows in a vertical direction, a minimum of one foot (1') vertical transition for every ten feet (10') of stream length shall be used;
4. Erosion/scour protection shall be provided inland upstream and downstream of the transition sections.

(i) Channel Modification: If the proposed activity involves a channel modification, it shall be demonstrated that:

1. There are no practicable alternatives to the activity which would accomplish its purpose with less impact to the natural conditions of the body of water affected. Possible alternatives include levees, bank stabilization, flood proofing of existing structures, removal of structures from the floodplain, clearing the channel, high flow channel, or the establishment of a stream side buffer strip or greenbelt. Channel modification is acceptable

if the purpose is to restore natural conditions and improve water quality and fish and wildlife habitat.

2. Water quality, habitat, and other natural functions would be significantly improved by the modification and no significant habitat area may be destroyed, or the impacts are offset by the replacement of an equivalent degree of natural resource values.

3. The activity has been planned and designed and will be constructed in a way which will minimize its adverse impacts on the natural conditions of the body of water affected, consistent with the following criteria:

    A. The physical characteristics of the modified channel shall match as closely as possible those of the existing channel in length, cross section, slope and sinuosity. If the existing channel has been previously modified, restoration of more natural physical conditions should be incorporated into channel modification design, where practical.

    B. Hydraulically effective transitions shall be provided at both the upstream and downstream ends of the project, designed such that they will prevent erosion.

    C. One sided construction of a channel shall be used when feasible. Removal of streamside (riparian) vegetation should be limited to one (1) side of the channel, where possible, to preserve the shading and stabilization effects of the vegetation.

    D. Clearing of vegetation shall be limited to that which is essential for construction of the channel.

    E. Channel banks shall be constructed with a side slope no steeper than three to one (3:1) horizontal to vertical, wherever practicable. Natural vegetation and gradual side slopes are the preferred methods for bank stabilization. Where high velocities or sharp bends necessitate the use of alternative stabilization measures, natural rock or riprap are preferred materials. Artificial materials such as concrete, gabions, or construction rubble should be avoided unless there are no practicable alternatives.

    F. All disturbed areas associated with the modification shall be seeded or otherwise stabilized as soon as possible upon completion of construction. Erosion blanket or an equivalent material shall be required to stabilize disturbed channel banks prior to establishment of the vegetative cover.

    G. If the existing channel contains considerable bottom diversity such as deep pools, riffles, and other similar features, such features shall be provided in the new channel. Spawning and nesting areas and flow characteristics compatible with fish habitat shall also be established, where appropriate.

    H. A sediment basin shall be installed at the downstream end of the modification to reduce sedimentation and degradation of downstream water quality.

    I. New or relocated channels should be built in the dry and all items of construction, including vegetation, should be completed prior to diversion of water into the new channel.

    J. There shall be no increases in stage or velocity as the channel enters or leaves the project site for any frequency flood unless necessitated by a public flood control project or unless such an increase is justified as part of a habitat improvement or erosion control project.

K. Unless the modification is for a public flood control project, there shall be no reduction in the volume of floodwater storage outside the floodway as a result of the modification.

4. The project otherwise complies with the requirements of this section.

(j) Seeding and Stabilization Plan: For all activities located in a floodway, a seeding and stabilization plan shall be submitted by the applicant.

(k) Soil Erosion and Sedimentation Measures: For all activities in the floodway, including grading, filling and excavation, in which there is potential for erosion of exposed soil, soil erosion and sedimentation control measures shall be employed consistent with the following criteria and in accordance with section 151.09 of this title:

1. The construction area shall be minimized to preserve the maximum vegetation possible. Construction shall be scheduled to minimize the time soil is exposed and unprotected. In no case shall the existing natural vegetation be destroyed, removed, or disturbed more than fifteen (15) days prior to the initiation of improvements.

2. Temporary and/or permanent soil stabilization shall be applied to denuded areas as soon as possible. As a minimum, soil stabilization shall be provided within fifteen (15) days after final grade is reached on any portion of the site, and within fifteen (15) days to denuded areas which may not be at final grade but will remain undisturbed for longer than sixty (60) days.

3. Sedimentation control measures shall be installed before any significant grading or filling is initiated on the site to prevent the movement of eroded sediments off site or into the channel. Potential sediment control devices include filter fences, straw bale fences, check dams, diversion ditches, and sediment basins.

4. A vegetated buffer strip of at least twenty-five feet (25') in width shall be preserved and/or reestablished, where possible, along existing channels (see subsection (B)(2)(p) of this section). Construction vehicle use of channels shall be minimized. Temporary stream crossings shall be constructed, where necessary, to minimize erosion. Necessary construction in or along channels shall be restabilized immediately.

5. Soil erosion and sedimentation control measures shall be designed and implemented consistent with "Procedures and Standards For Urban Soil Erosion and Sedimentation Control in Illinois" (1988) also known as the "Green Book" and "Standards And Specifications For Soil Erosion And Sediment Control" (IEPA, 1987).

(l) Public Flood Control Projects: For public flood control projects, the permitting requirements of this section will be considered met if the applicant can demonstrate to IDNR/OWR through hydraulic and hydrologic calculations that the proposed project will not singularly or cumulatively result in increased flood heights outside the project right-of-way or easements for all flood events up to and including the 100-year frequency event.

(m) General Criteria for Analysis of Flood Elevations:

1. The flood profiles, flows and floodway data in the designated floodway study, referenced in section 150.05 of this chapter, must be used for analysis of the base conditions. If the study data appears to be in error or conditions have changed, IDNR/OWR shall be contacted for approval and concurrence on the appropriate base conditions data to use.

2. If the 100-year designated floodway elevation at the site of the proposed construction is affected by backwater from a downstream receiving stream with a larger drainage area, the proposed construction shall be shown to meet the requirements of this section for the

100-year frequency flood elevations of the designated floodway conditions and conditions with the receiving stream at normal water elevations.

3. If the applicant learns from IDNR/OWR, local governments, or a private owner that a downstream restrictive bridge or culvert is scheduled to be removed, reconstructed, modified, or a regional flood control project is scheduled to be built, removed, constructed or modified within the next five (5) years, the proposed construction shall be analyzed and shown to meet the requirements of this section for both the existing conditions and the expected flood profile conditions when the bridge, culvert or flood control project is built.

(n) Conditional Letter of Map Revision: If the appropriate use would result in a change in the designated floodway location or the 100-year frequency flood elevation, the applicant shall submit to IDNR/OWR and to FEMA all the information, calculations and documents necessary to be issued a conditional designated floodway map revision and receive from IDNR/OWR a conditional approval of the designated floodway change before a permit is issued. However, the final designated floodway map will not be changed by IDNR/OWR until as built plans or record drawings are submitted and accepted by FEMA and IDNR/OWR. In the case of nongovernment projects, the municipality in incorporated areas and the county in unincorporated areas shall concur with the proposed conditional designated floodway map revision before IDNR/OWR approval can be given. No filling, grading, dredging or excavating shall take place until a conditional approval is issued. No further development activities shall take place until a final letter of map revision (LOMR) is issued by FEMA and IDNR/OWR. Within six (6) months, FEMA shall be notified of physical changes in the Base Flood Elevation (increases or decreases) by submitting technical or scientific data through the Letter of Map Change (LOMC) process, so that insurance rates and floodplain management requirements will be based on current data.

(o) Professional Engineer's Supervision: All engineering analyses shall be performed by or under the supervision of a registered professional engineer.

(p) Construction Near Channel: For all activities in the floodway involving construction within twenty-five feet (25') of the channel, the following criteria shall be met:

1. A natural vegetation buffer strip shall be preserved within at least twenty-five feet (25') of the ordinary high water mark of the channel.

2. Where it is impossible to protect this buffer strip during the construction of an appropriate use, a vegetated buffer strip shall be established upon completion of construction.

3. The use of native riparian vegetation is preferred in the buffer strip. Access through this buffer strip shall be provided, when necessary, for stream maintenance purposes.

(q) Designated Floodway Designation Change: After receipt of conditional approval of the designated floodway change and issuance of a permit and a conditional letter of map revision, construction as necessary to change the designated floodway designation may proceed but no buildings or structures or other construction that is not an appropriate use may be placed in that area until the designated floodway map is changed and a final letter of map revision is received. The designated floodway map will be revised upon acceptance and concurrence by IDNR/OWR and FEMA of the "as built" plans.

(3) State Review: For those projects listed below located in a designated floodway, the following criteria shall be submitted to IDNR/OWR for their review and concurrence prior to the issuance of a permit:

(a) IDNR/OWR will review an engineer's analysis of the flood profile due to a proposed bridge pursuant to subsection (B)(2)(d) of this section.

(b) IDNR/OWR will review an engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, pursuant to subsection (B)(2)(e) of this section.

(c) The IDNR/OWR will review alternative transition sections and hydraulically equivalent storage pursuant to subsections (B)(2)(a), (B)(2)(b) and (B)(2)(h) of this section.

(d) The IDNR/OWR will review and approve prior to the start of construction any department projects, dams (as defined in section 150.02 of this chapter) and all other state, federal or local units of government projects, including projects of the municipality or county.

(4) Other Permits: In addition to the other requirements of this chapter, a development permit for a site located in a floodway shall not be issued unless the applicant first obtains a permit or written documentation that a permit is not required from IDNR/OWR, issued pursuant to 615 ILCS 5/5 et seq. No permit from IDNR/OWR shall be required if the division has delegated this responsibility to the village, and has been accepted by the Village of Schaumburg.

(5) Dam Safety Permits: Any work involving the construction, modification or removal of a "dam" as defined in section 150.02 of this chapter per 92 Illinois Administrative Code 702 (rules for construction of dams) shall obtain an IDNR/OWR dam safety permit prior to the start of construction of a dam. If the director of engineering and public works finds a dam that does not have an IDNR/OWR permit, the director of engineering and public works shall immediately notify the dam safety section of the IDNR/OWR. If the director of engineering and public works finds a dam which is believed to be in unsafe condition, the director of engineering and public works shall immediately notify the owner of the dam, IDNR/OWR, dam safety section in Springfield and the Illinois Emergency Services and Disaster Agency (ESDA).

(6) Activities That Do Not Require a Registered Professional Engineer's Review: The following activities may be permitted without a registered professional engineer's review, unless otherwise required by Village of Schaumburg ordinance or other governmental laws. Such activities shall still meet the other requirements of this chapter, including the mitigation requirements.

(a) Underground and overhead utilities that:

1. Do not result in any increase in existing ground elevations; or

2. Do not require the placement of above ground structures in the floodway; or

3. In the case of underground stream crossings, the top of the pipe or encasement is buried a minimum of three feet (3') below the existing streambed; and

4. In the case of overhead utilities, no supporting towers are placed in the watercourse and are designed in such a fashion as not to catch debris.

(b) Storm and sanitary sewer outfalls that:

1. Do not extend riverward or lakeward of the existing adjacent natural bank slope; and

2. Do not result in an increase in ground elevation; and

3. Are designed so as not to cause stream erosion at the outfall location.

(c) Construction of sidewalks, athletic fields (excluding fences), properly anchored playground equipment and patios at grade.

(d) Construction of shoreline and stream bank protection that:

1. Does not exceed one thousand feet (1,000') in length;

2. Materials are not placed higher than the existing top of bank;

3. Materials are placed so as not to reduce the cross sectional area of the stream channel or bank of the lake;

4. Vegetative stabilization and gradual side slopes are the preferred mitigation methods for existing erosion problems. Where high channel velocities, sharp bends or wave action necessitate the use of alternative stabilization measures, natural rock or riprap are preferred materials. Artificial materials such as concrete, construction rubble, and gabions should be avoided unless there are no practicable alternatives.

(e) Temporary stream crossings in which:

1. The approach roads will be one-half foot or less above natural grade.

2. The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage tile or outfall invert.

3. The top of the roadway fill in the channel will be at least two feet (2') below the top of the lowest bank. Any fill in the channel shall be nonerosive material, such as riprap or gravel.

4. All disturbed stream banks will be seeded or otherwise stabilized as soon as possible upon installation and again upon removal of construction.

5. The access road and temporary crossings will be removed within one year after authorization.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000; Am. Ord. 07-198, passed 12-11-2007; Am. Ord. 19-061, passed 7-9-2019)

§ 150.08 OCCUPATION AND USE OF SFHA AREAS WHERE FLOODWAYS ARE NOT IDENTIFIED, DRAINING MORE THAN ONE SQUARE MILE.

(A) Development Not to Worsen Flooding: In SFHA or floodplains, where no floodways have been identified and no base flood or 100-year frequency flood elevations have been established by FEMA, and draining more than a square mile, no development shall be permitted unless the cumulative effect of the proposals, when combined with all other existing and anticipated uses and structures, shall not significantly impede or increase the flow and passage of the floodwaters nor significantly increase the base flood or 100-year frequency flood elevation.

(1) Land Development Permit: No person, firm, corporation, or governmental body, not exempted by state law, shall commence any development in a SFHA or floodplain without first obtaining a land development permit from the director of engineering and public works. Application for a land development permit shall be made on a form provided by the Village of Schaumburg. The application shall be accompanied by drawings of the site, drawn to scale showing property line dimensions; and existing grade elevations and all changes in grade resulting from excavation or filling, sealed by a licensed engineer, the location and dimensions of all buildings and additions to buildings; and the elevations of the lowest floor (including basement) of all proposed buildings subject to the requirements of section 150.09 of this chapter. The application for a land development permit shall also include the following information:

(a) A detailed description of the proposed activity, its purpose, and intended use;

(b) Site location (including legal description) of the property, drawn to scale, on the designated floodway maps;

(c) Anticipated dates of initiation and completion of activity;

(d) Plans of the proposed activity shall be provided which include as a minimum:

1. A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow,

2. A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the structure or work, elevations in mean sea level (1988 adjustment) datum or NAVD, adjacent property lines and ownership, drainage and flood control easements, floodplain limit, location and orientation of cross sections, north arrow, and a graphical or numerical scale,

3. Cross section views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in "plan view," existing and proposed elevations, normal water elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphical or numerical scales (horizontal and vertical), and

4. A soil erosion and sedimentation control plan for disturbed areas as required in section 151.09 of this title. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure post construction maintenance.

(e) Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the criteria of subsection (B) of this section;

(f) Any and all other local, state and federal permits or approvals that may be required for this type of development.

(2) Elevation: Based on the best available existing data according to the Illinois State Water Survey's Floodplain Information Repository, the director of engineering and public works shall compare the elevation of the site to the base flood or 100-year frequency flood elevation. Should no elevation information exist for the site, the developer's engineer shall calculate the elevation according to subsection 150.05(D) of this chapter. Any development located on land that can be shown to have been higher than the base flood elevation as of the site's first ~~flood insurance rate map~~Flood Insurance Rate Map identification is not in the SFHA and, therefore, not subject to the requirements of this section. The director of engineering and public works shall maintain documentation of the existing ground elevation at the development site and certification that this ground elevation existed prior to the date of the site's first ~~flood insurance rate map~~Flood Insurance Rate Map identification.

(3) Federal Permits: The director of engineering and public works shall ensure that copies of all other local, state, and federal permits, approvals or permit not required letters that may be required for this type of activity shall be obtained prior to issuance of the permit. The director of engineering and public works shall obtain copies of said permit, permit not required letters, or approvals. The director of engineering and public works shall not issue the development permit unless all required local, state and federal permits have been obtained.

(B) Preventing Increased Damages: No development in the SFHA, where a floodway has not been determined shall create a damaging or potentially damaging increase in flood heights or velocity or threat to public health, safety and welfare or impair the natural hydrologic and hydraulic functions of the floodway or channel, or impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this chapter.

(1) Floodway Not Determined: Within all riverine SFHAs where the floodway has not been determined, the following standards shall apply:

(a) The developer shall have a registered professional engineer state in writing and show through supporting plans, calculations, and data that the project meets the engineering requirements of subsections 150.07(B)(2)(a) through (B)(2)(l) of this chapter for the entire floodplain as calculated under the provisions of subsection 150.05(D) of this chapter. As an alternative, the developer should have an engineering study performed to determine a floodway and submit that engineering study to IDNR/OWR for acceptance as a designated floodway. Upon acceptance of the floodway by the department, the developer shall then demonstrate that the project meets the requirements of section 150.07 of this chapter for the designated floodway. The "floodway" shall be defined according to the definition in section 150.02 of this chapter.

(b) A land development permit shall not be issued unless the applicant first obtains a permit from IDNR/OWR or written documentation that a permit is not required from IDNR/OWR.

(c) No permit from IDNR/OWR shall be required if the division has delegated permit responsibility to the village per 92 Illinois Administrative Code, part 708 for designated floodways, per IDNR/OWR's state-wide permit entitled "Construction in Floodplains With No Designated Floodways in Northeastern Illinois".

(d) Any work involving the construction, modification or removal of a "dam" or an on stream "structure" to impound water as defined in section 150.02 of this chapter shall obtain an Illinois Division of Water Resources dam safety permit or letter indicating a permit is not required prior to the start of construction of a dam. If the director of engineering and public works finds a dam that does not have an IDNR/OWR permit, then he or she shall immediately notify the dam safety section of the IDNR/OWR. If the director of engineering and public works finds a dam which is believed to be in unsafe condition, then he or she shall immediately notify the owner of the dam and the Illinois Emergency Services and Disaster Agency (ESDA), IDNR/OWR, dam safety section in Springfield.

(e) The following activities may be permitted without a registered professional engineer's review or calculation of a base flood elevation and designated floodway. Such activities shall still meet the other requirements of this chapter, other village ordinances or other governmental laws:

1. Underground and overhead utilities that:

    A. Do not result in any increase in existing ground elevations, or

    B. Do not require the placement of above ground structures in the floodway, or

    C. In the case of underground stream crossings, the top of the pipe or encasement is buried a minimum of three feet (3') below the existing streambed, and

    D. In the case of overhead utilities, no supporting towers are placed in the watercourse and are designed in such a fashion as not to catch debris;

2. Storm and sanitary sewer outfalls that:

    A. Do not extend riverward or lakeward of the existing adjacent natural bank slope, and

    B. Do not result in an increase in ground elevation, and

    C. Are designed so as not to cause stream bank erosion at the outfall location;

3. Construction of shoreline and streambed protection that:

    A. Does not exceed one thousand feet (1,000') in length or two (2) cubic yards per linear foot of streambed;

    B. Materials are not placed higher than the existing top of bank;

C. Materials are placed so as not to reduce the cross sectional area of the stream channel by more than ten percent (10%);

D. Vegetative stabilization and gradual side slopes are the preferred mitigation methods for existing erosion problems. Where high channel velocities, sharp bends or wave action necessitate the use of alternative stabilization measures, natural rock or riprap are preferred materials. Artificial materials such as concrete, construction rubble, and gabions should be avoided unless there are no practicable alternatives.

4. Temporary stream crossings in which:

A. The approach roads will be one-half foot or less above natural grade,

B. The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage tile or outfall invert,

C. The top of the roadway fill in the channel will be at least two feet (2') below the top of the lowest bank. Any fill in the channel shall be nonerosive material, such as riprap or gravel,

D. All disturbed stream banks will be seeded or otherwise stabilized as soon as possible upon installation and again upon removal of construction,

E. The access road and temporary crossings will be removed within one (1) year after authorization;

5. The construction of light poles, signposts and similar structures;

6. The construction of sidewalks, driveways, athletic fields (excluding fences), patios and similar surfaces which are built at grade;

7. The construction of properly anchored, unwalled, open structures such as playground equipment, pavilions, and carports built at or below existing grade that would not obstruct the flow of floodwaters;

8. Minor maintenance dredging of a stream channel where:

A. The affected length of stream is less than one thousand feet (1,000'),

B. The work is confined to reestablishing flows in natural stream channels, or

C. The cross sectional area of the dredged channel conforms to that of the natural channel upstream and downstream of the site.

(f) The flood-carrying capacity within any altered or relocated watercourse shall be maintained.

(2) Compensatory Storage: Whenever any portion of a floodplain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation. The excavation volume shall be at least equal to 1.25 times the volume of storage lost due to the fill or structure. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All floodplain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All floodplain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000; Am. Ord. 07-198, passed 12-11-2007; Am. Ord. 19-061, passed 7-9-2019)

§ 150.09 PERMITTING REQUIREMENTS APPLICABLE TO ALL FLOODPLAIN AREAS.

In addition to the requirements found in sections 150.06, 150.07 and 150.08 of this chapter for development in flood fringes, designated floodways, and SFHA or floodplains where no floodways have been identified (zones A, AO, AH, AE, A99, VE, V, X or D), the following requirements shall be met:

(A) Public Health Standards:

(1) No developments in the SFHA shall include locating or storing chemicals, explosives, buoyant materials, animal wastes, fertilizers, flammable liquids, pollutants, or other hazardous or toxic materials below the floodplain elevation, and/or as otherwise provided in this code.

(2) New and replacement water supply systems, wells, sanitary sewer lines and on site waste disposal systems may be permitted providing all manholes or other above ground openings located below the FPE are watertight.

(B) Carrying Capacity And Notification: For all projects involving channel modification, fill, or stream maintenance (including levees), the flood-carrying capacity of the watercourse shall be maintained. In addition, the village shall notify adjacent communities in writing thirty (30) days prior to the issuance of a permit for the alteration or relocation of the watercourse.

(C) Protecting Buildings: All buildings located within a 100-year floodplain also known as an SFHA, shall be protected from flood damage below the flood protection elevation.

(1) However, existing buildings located within a designated floodway shall also meet the more restrictive appropriate use standards included in section 150.07 of this chapter. This building protection criteria applies to the following situations:

(a) Construction or placement of a new building.

(b) A structural alteration to an existing building that either increases the first floor area by more than twenty percent (20%) and/or the building's market value by more than fifty percent (50%).

(2) A residential, substantially improved, ~~or nonresidential~~non-residential building, when allowed, may be constructed on permanent land fill in accordance with the following:

(a) The lowest floor (including basement) shall be at or above the flood protection elevation. See definition of Flood Protection Elevation in section 150.02 of this chapter.

(b) The fill shall be placed in layers no greater than one foot (1') deep before compaction and should extend at least ten feet (10') beyond the foundation of the building before sloping below the flood protection elevation. The top of the fill shall be above the flood protection elevation. However, the ten foot (10') minimum may be waived if a structural engineer certifies an alternative method to protect the building from damages due to hydrostatic pressures. The fill shall be protected against erosion and scour. The fill shall not adversely effect the flow or surface drainage from or onto neighboring properties.

(3) A residential (including manufactured homes) or ~~nonresidential~~non-residential building may be elevated in accordance with the following:

(a) The building or improvements shall be elevated on crawl space, piles, walls, or other foundation that is permanently open to floodwaters and not subject to damage by hydrostatic pressures of the base flood or 100-year frequency flood. The permanent openings shall be no more than one foot (1') above grade, and consists of a minimum of two (2) openings. The openings must have a

total net area of not less than one (1) square inch for every one (1) square foot of enclosed area subject to flooding below the base flood elevation.

(b) The foundation and supporting members shall be anchored and aligned in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as current, waves, ice and floating debris.

(c) All areas below the flood protection elevation shall be constructed of materials resistant to flood damage. The lowest floor (including basement) and all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the flood protection elevation. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the flood protection elevation.

(d) No area below the flood protection elevation shall be used for storage of items or materials.

(4) Only a ~~nonresidential~~non-residential building may be structurally dry floodproofed (in lieu of elevation) provided that a registered professional engineer shall certify that the building has been structurally dry floodproofed below the flood protection elevation, the structure and attendant utility facilities are watertight and capable of resisting the effects of the base flood or 100-year frequency flood. The building design shall take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effects of buoyancy, and impacts from debris or ice. Floodproofing measures shall be operable without human intervention and without an outside source of electricity (levees, berms, floodwalls and similar works are not considered floodproofing for the purpose of this subsection).

(5) Nonconforming structures located in a designated floodway may remain in use, but may not be enlarged, replaced or structurally altered. A nonconforming structure damaged by flood, fire, wind or other natural or manmade disaster may be restored unless the damage exceeds fifty percent (50%) of its market value before it was damaged, in which case it shall conform to this chapter.

(6) All new construction and substantial improvements shall:

(a) Be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy,

(b) Be constructed with materials resistant to flood damage, and

(c) Be constructed by methods and practices that minimize flood damages.

(7) All manufactured homes are to be elevated and anchored to resist flotation, collapse, or lateral movement.

(8) Recreational vehicles are not permitted in the floodplain.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000)

§ 150.10 OTHER DEVELOPMENT REQUIREMENTS.

The board of trustees shall take into account flood hazards, to the extent that they are known in all official actions related to land management, use and development.

(A) New subdivisions, annexation agreements, and planned unit developments (PUDs) within the SFHA shall be reviewed to assure that the proposed developments are consistent with sections 150.06, 150.07, 150.08 and 150.09 of this chapter and ~~the need to minimize flood damage~~be reasonably safe from flooding and public utilities and facilities are constructed so as to minimize flood damage. Plats or plans for new subdivisions, and planned unit developments (PUDs) shall include a signed statement by a registered professional

engineer that the plat accounts for changes in the drainage of surface waters in accordance with the Plat Act, that the plat must contain a certificate from a registered land surveyor that the property is situated within five hundred feet (500') of a watercourse serving or not serving a tributary area of six hundred forty (640) acres or more. See chapter 151, "Subdivision and Land Development", of this title for detailed requirements.

State law reference(s)—765 ILCS 205/2.

(B) Proposals for new subdivisions, planned unit developments (PUDs) and additions to subdivisions shall include base flood or 100-year frequency flood elevation data and floodway delineations. Where this information is not available from an existing study filed with the Illinois state water survey, the applicant's engineer shall be responsible for calculating the base flood or 100-year frequency flood elevation per subsection 150.05(D) of this chapter and the floodway delineation per section 150.02 of this chapter and submitting it to the state water survey and IDNR/OWR for review and approval as best available designated data.

(C) Streets, blocks, lots, parks and other public grounds shall be located and laid out in such a manner as to preserve and utilize natural streams and channels. Wherever possible, the floodplains shall be included within parks or other public grounds.

(D) The board of trustees shall not approve any planned unit development (PUD) or plat of subdivision located outside the corporate limits unless such agreement or plat is in accordance with the provisions of this chapter.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000)

§ 150.11 VARIANCES.

No variances shall be granted to any development located in "designated floodway" as defined in section 150.02 of this chapter. However, when a development proposal is located outside of a designated floodway, and whenever the standards of this chapter place undue hardship on a specific development proposal, the applicant may apply to the director of engineering and public works for a variance. The director of engineering and public works shall review the applicant's request for a variance and shall submit its recommendation to the board of trustees.

(A) No variance shall be granted unless the applicant demonstrates that:

(1) The development activity cannot be located outside the SFHA;

(2) An exceptional hardship would result if the variance were not granted;

(3) The relief requested is the minimum necessary;

(4) There will be no additional threat to public health, safety, beneficial stream uses and functions, especially aquatic habitat, or creation of a nuisance;

(5) There will be no additional public expense for flood protection, lost environmental stream uses and functions, rescue or relief operations, policing, or repairs to streambeds and banks, roads, utilities, or other public facilities;

(6) The provisions of subsections 150.06(B) and 150.08(B) of this chapter shall still be met;

(7) The activity is not in a designated floodway;

(8) The applicant's circumstances are unique and do not represent a general problem; and

(9) The granting of the variance will not alter the essential character of the area involved including existing stream uses.

(B) The director of engineering and public works shall notify an applicant in writing that a variance from the requirements of section 150.09 of this chapter that would lessen the degree of protection to a building will:

(1) Result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars ($25.00) for one hundred dollars ($100.00) of insurance coverage;

(2) Increase the risks to life and property; and

(3) Require that the applicant proceed with knowledge of these risks and that he will acknowledge in writing that he assumes the risk and liability.

(C) Variances requested in connection with restoration of a site or building listed on the National Register of Historical Places or documented as worthy of preservation by the Illinois Historic Preservation Agency may be granted using criteria more permissive than the requirements of subsections (A) and (B) of this section.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000; Am. Ord. 07-198, passed 12-11-2007)

§ 150.12 DISCLAIMER OF LIABILITY.

The degree of flood protection required by this chapter is considered reasonable for designated purposes and is based on available information derived from engineering and scientific methods of study. Larger floods may occur or flood heights may be increased by manmade or natural causes. This chapter does not imply that development, either inside or outside of the SFHA, will be free from flooding or damage. This chapter does not create liability on the part of the village or any officer or employee thereof for any flood damage that results from reliance on this chapter or any administrative decision made lawfully thereunder.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000)

§ 150.13 PENALTY.

Failure to comply with the requirements of a permit or conditions of a variance resolution shall be deemed to be a violation of this chapter. Upon due investigation, the director of engineering and public works may determine that a violation of the minimum standards of this chapter exist. The director of engineering and public works shall notify the owner in writing of such violation.

(A) If such owner fails after ten (10) days' notice to correct the violation:

(1) The village may make application to the circuit court for an injunction requiring conformance with this chapter or make such other order as the court deems necessary to secure compliance with the chapter.

(2) Any person who violates this chapter shall, upon conviction thereof, be fined as required in an amount not less than one hundred dollars ($100.00) nor more than one thousand dollars ($1,000.00) per day for each violation of this chapter.

(B) The director of engineering and public works shall inform the owner that any such violation is considered a wilful act to increase flood damages and, therefore, may cause coverage by a standard flood insurance policy to be suspended.

(C) Nothing herein shall prevent the village from taking such other lawful action to prevent or remedy any violation. All costs connected therewith shall accrue to the person or persons responsible.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000; Am. Ord. 07-198, passed 12-11-2007)

§ 150.14 ABROGATION AND GREATER RESTRICTIONS.

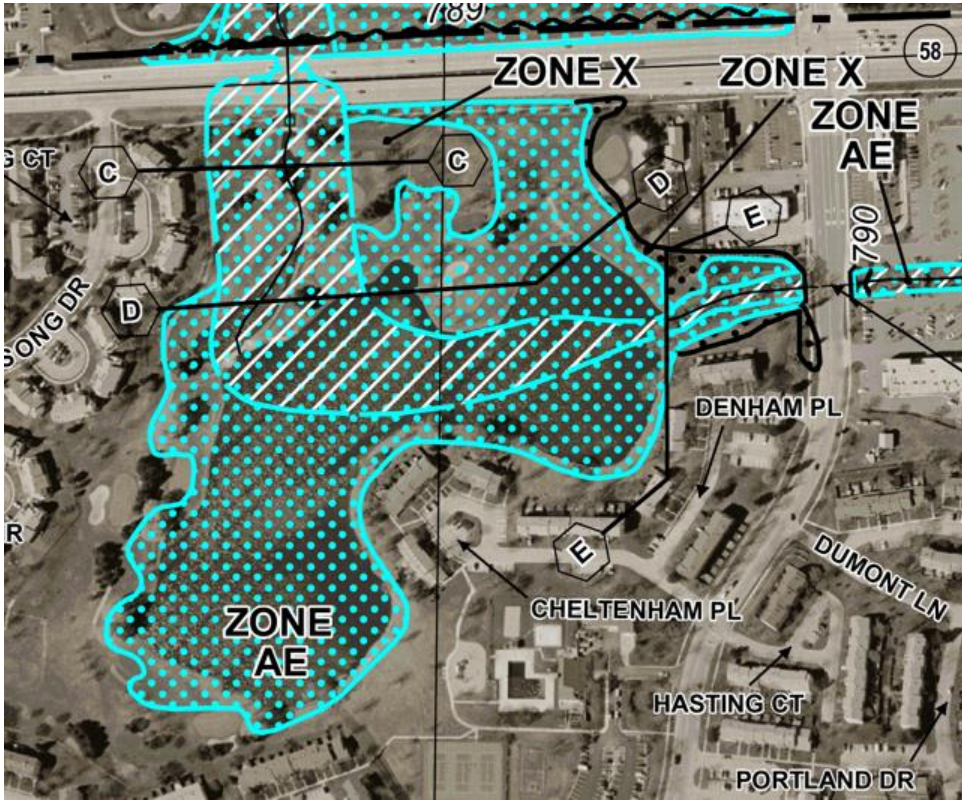
This chapter is not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. Where this chapter and other ordinance, easements, covenants, or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail. The ordinance codified in this chapter is intended to repeal the original ordinance or resolution which was adopted to meet the national flood insurance program regulations, but is not intended to repeal the resolution which the village passed in order to establish initial eligibility for the program.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000)

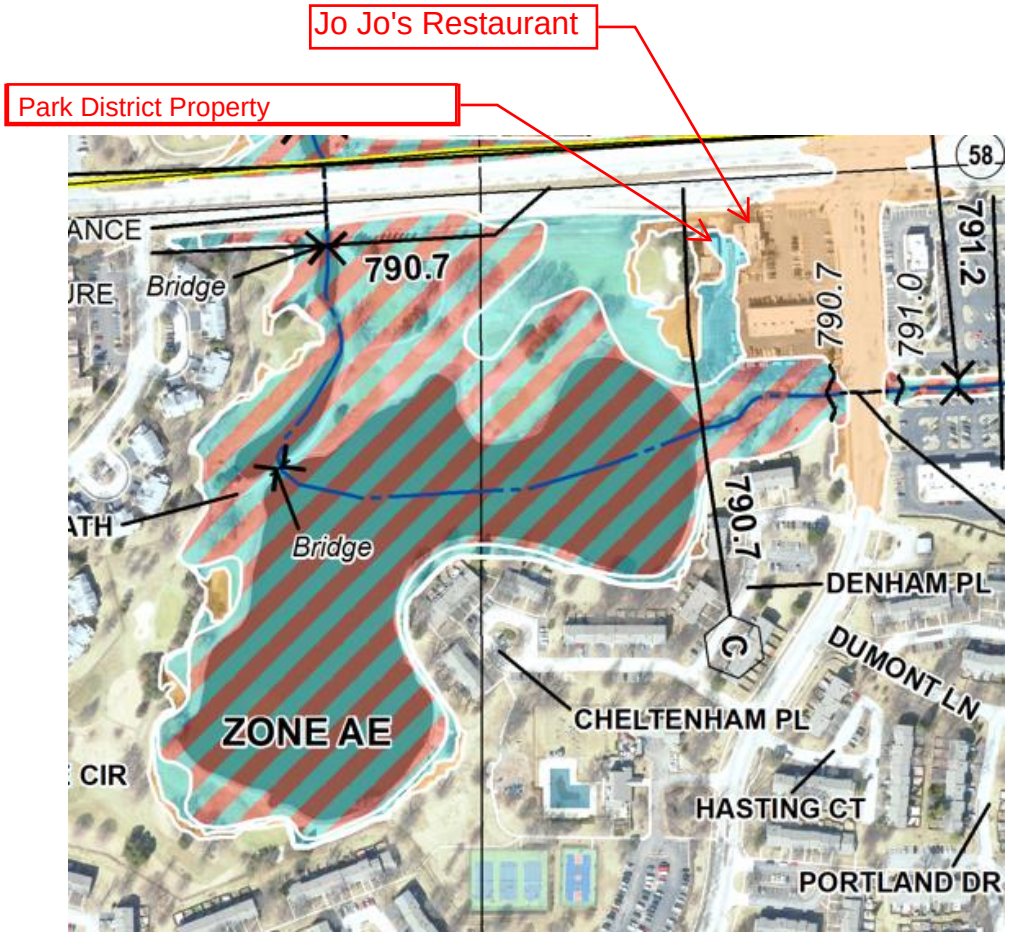
§ 150.15 SEPARABILITY.

The provisions and sections of this chapter shall be deemed separable and the invalidity of any portion of this chapter shall not affect the validity of the remainder.

(Ord. 91-32, passed 3-26-1991; Am. Ord. 00-168, passed 10-24-2000)

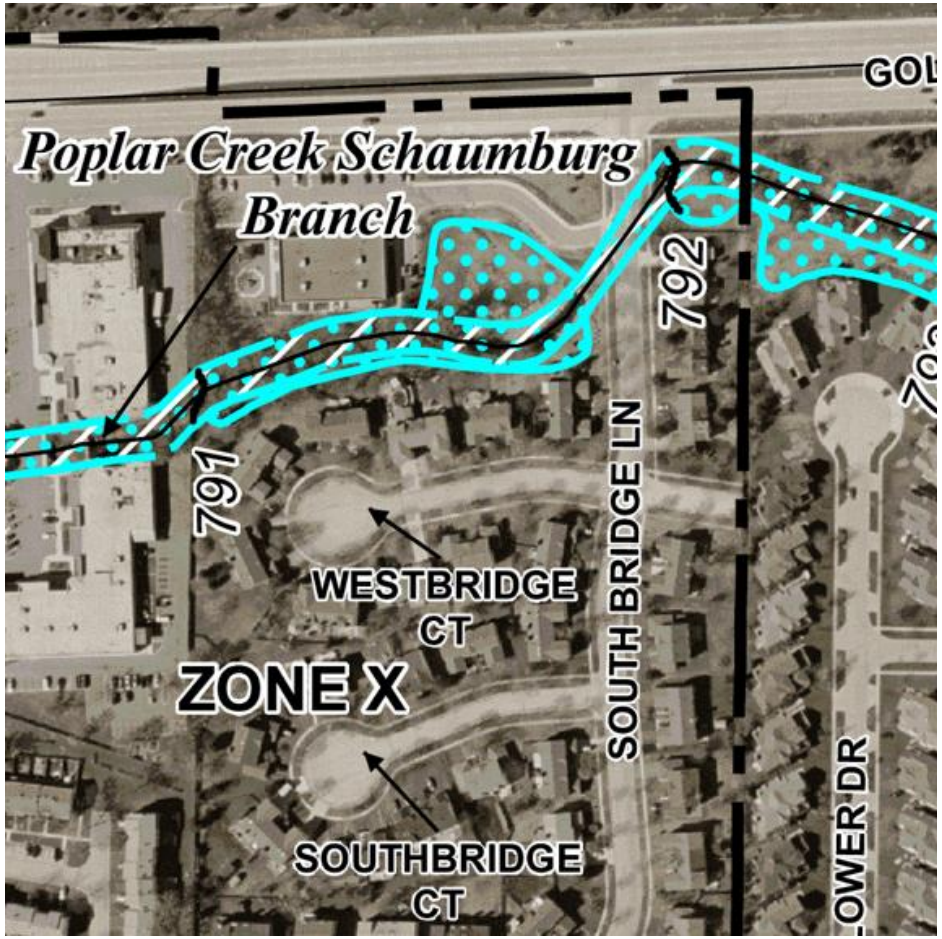


FIRM MAP NUMBER 17031C0167J
REVISED AUGUST 19, 2008

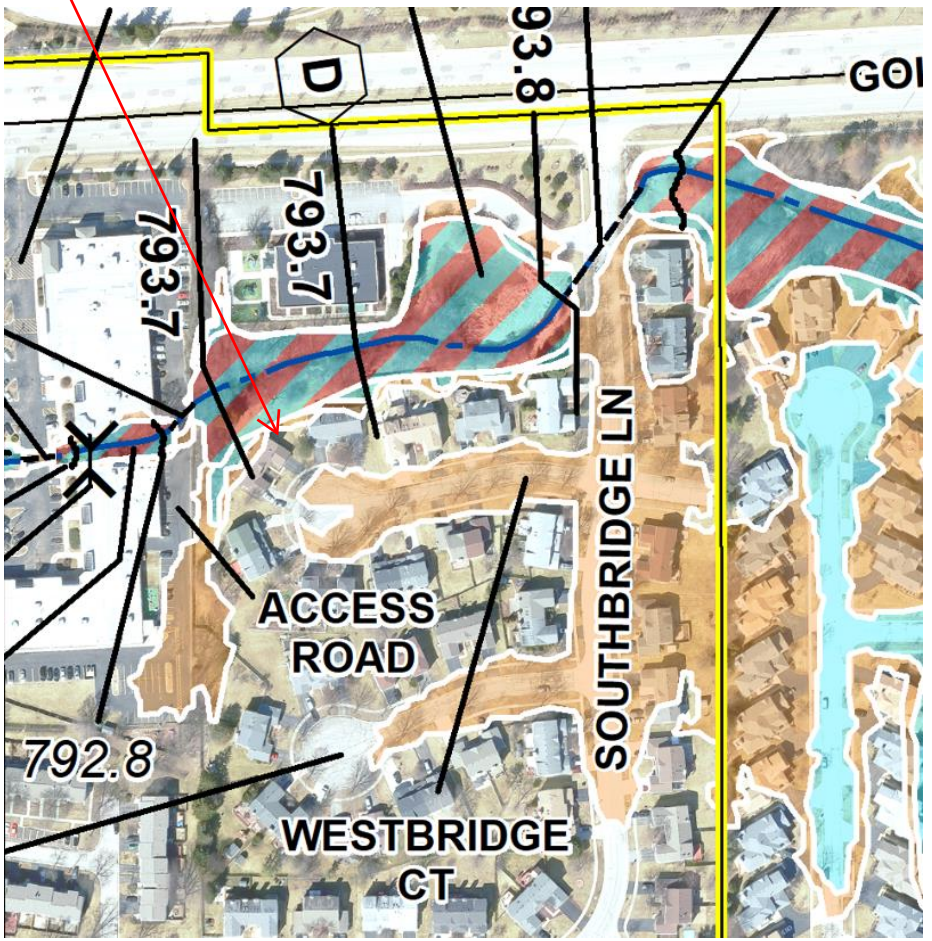


FIRM MAP NUMBER 17031C0167K
EFFECTIVE JANUARY 23, 2026

1724/1726 Westbridge Court



FIRM MAP NUMBER 17031C0187J
REVISED AUGUST 19, 2008



FIRM MAP NUMBER 17031C0187K
EFFECTIVE JANUARY 23, 2026

VILLAGE OF SCHAUMBURG

AGENDA ITEM SUMMARY

Recommendation to Authorize Participation in the Sourcewell Cooperative Purchasing Program and Award the Purchase of Fitness Equipment to Life Fitness, LLC
12/30/25
Engineering and Public Works Committee

Presenter: Mark Rysavy, Facilities Division Manager
Lead Department: Engineering and Public Works

Account(s):	Budget:	Expense Request:
6809010-7401 (25004-20-230)	$150,000.00	$109,181.82

The budget status for this request is: Under Budget

Amount Under Budget: $40,818.18

Executive Summary:

The new Village Hall project includes a fitness room for staff use. This is a new function for the Village Hall that will require all new fitness equipment. A survey was released to Village Hall employees asking what types of equipment they would use most in a new fitness room. The responses were numerous and included cardio-based items like treadmills, ellipticals, bikes, and stair climbing machines. From a weight standpoint, staff requested a mix of cable equipment with multiple positions, some free weights with a Smith Rack, and dumbbells. From a core fitness standpoint, other staff requested rubber band resistance systems, yoga mats, and kettle bells.

The fitness room plan includes equipment that will satisfy most of the survey requests from staff. The cardio equipment is located along the north wall to allow for a view of the pond. The muscle isolation machines for chest, arms, and legs take up the middle of the room. The core equipment is in the lower right, with the free weights in the lower left of the room.

Facilities staff reached out to the industry leader in fitness equipment, Life Fitness. Based on previous purchase experience, Life Fitness offers free space design, durable equipment with good warranties, deep discounts for public safety staff fitness areas, and is part of the Sourcewell government purchasing cooperative. The goal is to standardize all fitness equipment purchases moving forward with Life Fitness across all Village Facilities. Staff was able to leverage the upcoming police headquarters project and convince Life Fitness to extend those same discounts to the Village Hall. Overall, they provided a 36% discount on the equipment, saving over $53,000. Additionally, the final price includes three years of service for the cable-based and cardio equipment. The proposed cost from Life Fitness is $109,181.82. Staff had originally budgeted $150,000 for fitness equipment out of the overall $50,000,000 project budget.

With the history of Life Fitness as a supplier of high quality and durable fitness equipment, the use of the Sourcewell purchasing cooperative, and the inclusion of the public safety discount, staff recommends approval to purchase fitness equipment for the new Village Hall.

Recommended Action:

The Village Manager recommends the Engineering and Public Works Committee recommend the Village Board authorize participation in the Sourcewell Cooperative Purchasing Program #052324-LFF and Award the Purchase of Fitness Equipment to Life Fitness, LLC of Chicago, IL, in the amount of $109,181.82

ATTACHMENTS:

- Fitness Village Hall Equipment
- Village Hall Presentation
- Life Fitness Contract



POWERMILL



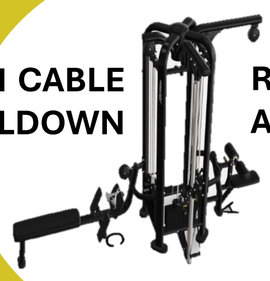
INTEGRITY+
TREADMILL



INTEGRITY+
CROSS-TRAINER



CHEST PRESS



2:1 CABLE
PULLDOWN

ROW
ASSIST CHIN DIP



MULTI-ADJUSTABLE
BENCH



2-TIER DUMBBELL
RACK



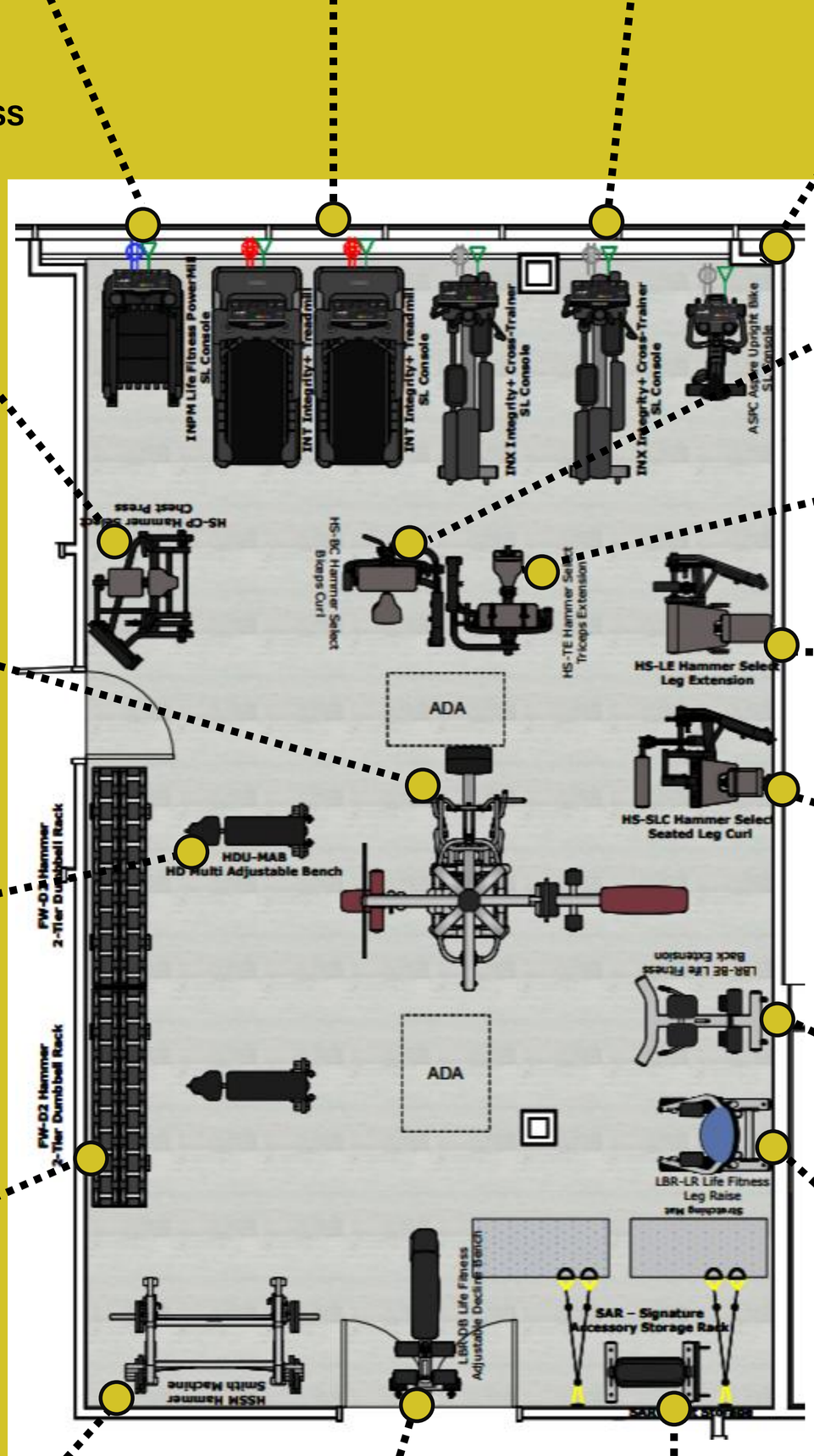
SMITH
MACHINE



ADJUSTABLE
DECLINE BENCH



ACCESSORY
STORAGE RACK





UPRIGHT BIKE



BICEP CURL



TRICEP
EXTENSION



LEG
EXTENSION



SEATED LEG
CURL



BACK
EXTENSION



LEG RAISE



VILLAGE HALL
FITNESS ROOM EQUIPMENT

VILLAGE OF SCHAUMBURG
PROGRESS THROUGH THOUGHTFUL PLANNING

QUOTE : CPQ-31144

DATE : 12-16-2025

BILL TO : VILLAGE OF SCHAUMBURG
101 SCHAUMBURG CT
SCHAUMBURG
IL 60193-1899
US

SHIP TO : VILLAGE OF SCHAUMBURG
101 SCHAUMBURG CT
SCHAUMBURG
IL 60193-1899
US

Thank you for the opportunity to present a comprehensive equipment recommendation. It is an honor to be considered and we hope you will select us to partner with you to create a premier fitness facility for your organization.

Choosing the right fitness equipment can be daunting. The products you select must be easy to use and inviting for a variety of exercisers. They must be durable and reliable -- capable of standing up to the rigors of continued daily use. That is why partnering with an industry-leading manufacturer uniquely qualified to guide you through the process is so important.

Life Fitness has over 30 years' experience helping facilities select their fitness equipment and create customized fitness environments that encourage exercisers to work out more often and lead healthier lives. We offer the largest breadth of cardio, strength and performance-training equipment, value-added services, and ongoing support to ensure that your facilities' needs will be met in the years to come.

If you have any questions or comments regarding our proposal, please contact us as indicated below. The Life Fitness team looks forward to supporting you in the future.

Sincerely,

LIFE FITNESS

#	DESCRIPTION		CONFIGURATION DETAILS	QTY	MSRP	UNIT PRICE	TOTAL PRICE
Cardio							
3	LIFE FITNESS POWERMILL w/SL INPM-SL-XF-13		PowerMill Base Handlebar Smooth Charcoal Kit SL English Imperial Power Cord DOM Low Volt Straight	1	$12,359.00	$7,415.40	$7,415.40
	Preventive Maintenance, 2PM Per Year- 3 Year, Powermill and Stair Climber EW-STAIRCLIMB-2PM-3YR			1	$415.00	$290.50	$290.50
1	INTEGRITY+ CROSS-TRAINER w/SL INX-SL-XF-13		Int Plus Cross Trainer SL Smooth Charcoal Base SL English Imperial	2	$8,239.00	$4,943.40	$9,886.80
	Preventive Maintenance, 2PM Per Year- 3 Year, Crosstrainer EW-CROSSTRAIN-2PM-3YR			2	$415.00	$290.50	$581.00
2	INTEGRITY+ TREADMILL w/SL INT-SL-XF-14		Int Plus Tread SL Smooth Charcoal Low Volt Base SL English Imperial Power Cord DOM Low Volt Straight 96 IN	2	$10,299.00	$6,179.40	$12,358.80
	Preventive Maintenance, 2PM Per Year- 3 Year, Treadmill EW-TREAD-2PM-3YR			2	$573.00	$401.10	$802.20
4	INTEGRITY+ UPRIGHT BIKE w/SL INC-SL-XF-13		Int Plus Upright SL Smooth Charcoal Base SL English Imperial	1	$5,149.00	$3,089.40	$3,089.40
	Preventive Maintenance, 2PM Per Year- 3 Year, Upright and Recumbent Bike EW-BIKE-2PM-3YR			1	$415.00	$290.50	$290.50
Strength							
1	HAMMER STRENGTH DUMBBELL RACK TWO TIER FW-D2		Platinum Frame Dumbbell Tray	2	$1,672.00	$1,086.80	$2,173.60
2	LF B&R ADJUSTABLE DECLINE BENCH LBR-DB		Platinum Frame Black Single Stitch Upholstery	1	$1,835.00	$1,192.75	$1,192.75
9	MULTI ADJUSTABLE BENCH HDU-MAB		Platinum Frame Black Upholstery	2	$1,224.00	$795.60	$1,591.20
11	LF B&R ACCESSORY STORAGE RACK SAR		Platinum Frame English Mat & Rollers Vertical BOSU	1	$2,479.00	$1,611.35	$1,611.35

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#	DESCRIPTION		CONFIGURATION DETAILS	QTY	MSRP	UNIT PRICE	TOTAL PRICE
Strength							
16	LIFE FITNESS BACK EXTENSION LBR-BE		Platinum Frame Black Single Stitch Upholstery	1	$1,845.00	$1,199.25	$1,199.25
17	LIFE FITNESS LEG RAISE LBR-LR		Platinum Frame Black Single Stitch Upholstery	1	$2,164.00	$1,406.60	$1,406.60
3	LF PWR PLAY CORE LPP-CORE		Platinum Frame English	1	$2,309.00	$1,500.85	$1,500.85
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30
4	LF PWR PLAY ADJUSTABLE 2:1 CABLE LPP-AC		Platinum Frame English LB Weight Stack No Shroud	1	$3,149.00	$2,046.85	$2,046.85
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30
5	LF PWR PLAY PULLDOWN LPP-PD		Platinum Frame Black Upholstery LB Weight Stack No Shroud	1	$3,464.00	$2,251.60	$2,251.60
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30
6	LF PWR PLAY ROW LPP-RW		Platinum Frame Black Upholstery LB Weight Stack No Shroud	1	$3,464.00	$2,251.60	$2,251.60
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30
7	LF PWR PLAY ASSIST DIP CHIN LPP-DC		Platinum Frame LB Weight Stack	1	$5,249.00	$3,411.85	$3,411.85
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30

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#	DESCRIPTION		CONFIGURATION DETAILS	QTY	MSRP	UNIT PRICE	TOTAL PRICE
Strength							
8	7 DEGREE SMITH MACHINE HSSM		Platinum Frame LANG.ENG	1	$7,088.00	$4,607.20	$4,607.20
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30
10	HAMMER STRENGTH SELECT LEG EXTENSION HS-LE		Platinum Frame Platinum Workarm Black Upholstery English LB SE Rear Shroud	1	$6,165.00	$4,007.25	$4,007.25
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30
12	HAMMER STRENGTH SELECT CHEST PRESS HS-CP		Platinum Frame Platinum Workarm Black Upholstery English LB SE Rear Shroud	1	$5,716.00	$3,715.40	$3,715.40
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30
13	HAMMER STRENGTH SELECT BICEPS CURL HS-BC		Platinum Frame Platinum Workarm Black Upholstery English LB SE Rear Shroud	1	$5,275.00	$3,428.75	$3,428.75
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30
14	HAMMER STRENGTH SELECT TRICEPS EXTENSION HS-TE		Platinum Frame Platinum Workarm Black Upholstery English LB SE Rear Shroud	1	$5,275.00	$3,428.75	$3,428.75
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR			1	$279.00	$195.30	$195.30
15	HAMMER STRENGTH SELECT SEATED LEG CURL HS-SLC		Platinum Frame Platinum Workarm Black Upholstery English	1	$6,449.00	$4,191.85	$4,191.85

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#	DESCRIPTION	CONFIGURATION DETAILS	QTY	MSRP	UNIT PRICE	TOTAL PRICE
Strength						
		LB SE Rear Shroud				
	Preventive Maintenance, 2PM Per Year- 3 Year, Strength Plate Loaded and Selectorized EW-STR-PLSELECT-2PM-3YR		1	$279.00	$195.30	$195.30
Accessories						
1	BOSU PRO BALANCE TRAINER, GRAY ACC-BSU-1000-01		1	$307.00	$214.90	$214.90
2	TRX SUSPENSION TRAINER ACC-TRX-1000-01		2	$425.00	$297.50	$595.00
3	HAMMER DUMBBELL SET 5-50LB,URETHANE,4sided HS-DB-2100-02		1	$5,006.00	$3,504.20	$3,504.20
4	LIFE FITNESS VINYL JUMP ROPE - 8FT - RED LF-JR8-72145		1	$20.00	$14.00	$14.00
5	LF JUMP ROPE, VINYL, BEARINGS, 3.05M/10FT, BLUE LF-JR10-72149		1	$23.00	$16.10	$16.10
6	LF KETTLEBELL, 10LB, RUBBER, STAINLESS HANDLE LF-KB-1120-01		1	$98.00	$68.60	$68.60
7	LF KETTLEBELL, 15LB, RUBBER, STAINLESS HANDLE LF-KB-1122-01		1	$110.00	$77.00	$77.00
8	LF KETTLEBELL, 20LB, RUBBER, STAINLESS HANDLE LF-KB-1124-01		1	$127.00	$88.90	$88.90
9	LF KETTLEBELL, 25LB, RUBBER, STAINLESS HANDLE LF-KB-1125-01		1	$141.00	$98.70	$98.70
10	LF KETTLEBELL, 30LB, RUBBER, STAINLESS HANDLE LF-KB-1126-01		1	$157.00	$109.90	$109.90
11	LF, CORE MAT,55Lx24Wx0.39in(139x61cm x 10mm),BLK		4	$63.00	$44.10	$176.40

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#	DESCRIPTION	CONFIGURATION DETAILS	QTY	MSRP	UNIT PRICE	TOTAL PRICE
Accessories						
	LF-CM-1000-01					
12	LIFE FITNESS MEDICINE BALL,4LB,YELLOW LF-MB-1130-01		1	$53.00	$37.10	$37.10
13	LIFE FITNESS MEDICINE BALL,8LB,ORANGE LF-MB-1132-01		1	$86.00	$60.20	$60.20
14	LIFE FITNESS MEDICINE BALL,10LB,RED LF-MB-1133-01		1	$100.00	$70.00	$70.00
15	Power Band,41x0.25in(104x0.6cm)x4.5MM Thick,Orange ACC-BD-1000-02		1	$16.00	$11.20	$11.20
16	Power Band,41x0.5in(104x1.3cm)x4.5MM Thick,Red ACC-BD-1001-02		1	$21.00	$14.70	$14.70
17	Power Band,41x0.75in(104x1.9cm)x4.5MM Thick,Blue ACC-BD-1002-02		1	$31.00	$21.70	$21.70
18	Power Band,41x1.25in(104x3.2cm)x4.5MM Thick,Green ACC-BD-1003-02		1	$39.00	$27.30	$27.30
19	LIFE FITNESS COVERED RESISTANCE TUBE, EXTRA LIGHT LF-RTB-1000-01		1	$23.00	$16.10	$16.10
20	LIFE FITNESS COVERED RESISTANCE TUBE, LIGHT LF-RTB-1001-01		1	$24.00	$16.80	$16.80
21	LIFE FITNESS COVERED RESISTANCE TUBE, MEDIUM LF-RTB-1002-01		1	$26.00	$18.20	$18.20
22	LIFE FITNESS COVERED RESISTANCE TUBE, HEAVY LF-RTB-1003-01		1	$27.00	$18.90	$18.90
23	Hammer Olympic Plate 45LB,Rubber,RndX HS-OP-3000-01		6	$166.00	$116.20	$697.20

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#	DESCRIPTION	CONFIGURATION DETAILS	QTY	MSRP	UNIT PRICE	TOTAL PRICE
Accessories						
24	Hammer Olympic Plate 25LB,Rubber,RndX HS-OP-3002-01		6	$93.00	$65.10	$390.60
25	Hammer Olympic Plate 10LB,Rubber,RndX HS-OP-3003-01		8	$38.00	$26.60	$212.80
26	Hammer Olympic Plate 5LB,Rubber,RndX HS-OP-3004-01		4	$19.00	$13.30	$53.20
27	Hammer Olympic Plate 2.5LB,Rubber,RndX HS-OP-3005-01		4	$12.00	$8.40	$33.60
28	HAMMER DUMBBELL SET 55-75LB,URETHANE,4sided HS-DB-2100-03		1	$4,899.00	$3,429.30	$3,429.30
29	HAMMER DUMBBELL SET 80-100LB,URETHANE,4sided HS-DB-2100-04		1	$5,964.00	$4,174.80	$4,174.80
30	LIFE FITNESS FOAM ROLLER, GRAY, SOFT, 36IN LF-FR-1000-01		1	$56.00	$39.20	$39.20
31	LF FOAM ROLLER, BLACK, MED FIRM, 18IN/46CM LF-FR-1002-01		1	$39.00	$27.30	$27.30
32	LF FOAM ROLLER, GRAY, SOFT, 18IN/46CM LF-FR-1001-01		1	$37.00	$25.90	$25.90

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QUOTE : CPQ-31144 **DATE :** 12-16-2025

BILL TO : VILLAGE OF SCHAUMBURG **SHIP TO :** VILLAGE OF SCHAUMBURG

SHIPMENT : STANDARD
FREIGHT TERMS : Prepaid
FOB : Shipping Point
PAYMENT TERM : NET 30

TOTAL MSRP	:	$148,691.00
CUSTOMER DISCOUNT	:	- $53,451.60
SELLING PRICE	:	$95,239.40
TARIFF SURCHARGE	:	$1,822.54
FREIGHT / FUEL/ INSTALLATION	:	$12,119.88
ESTIMATED SALES TAX	:	AS APPLICABLE
TOTAL (USD)	:	$109,181.82

REMITTANCE ADDRESS
2716 NETWORK PLACE
CHICAGO, IL 60673
USA

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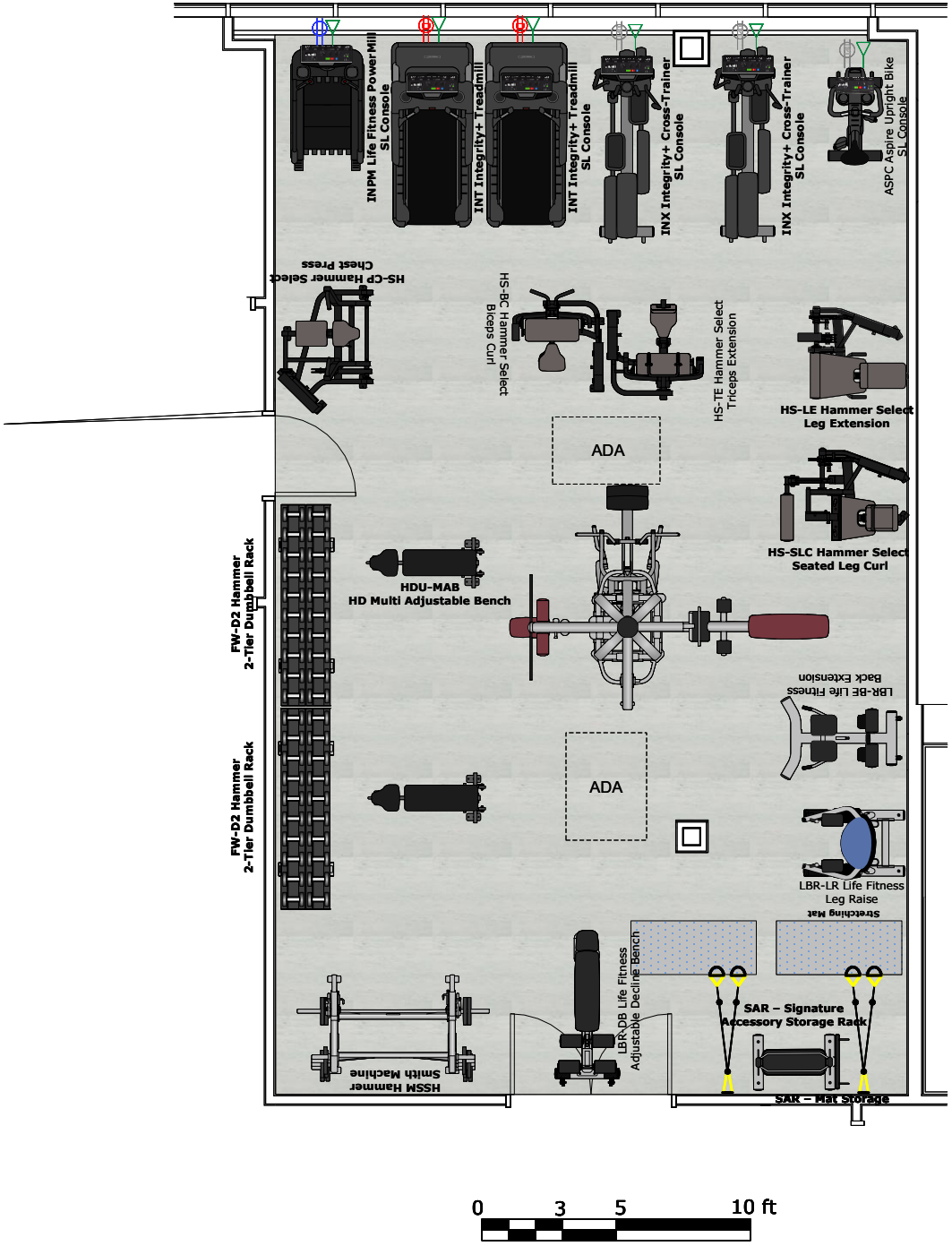
TERMS & CONDITIONS

This order quote is valid for 30 days. Buyer may accept by either (1) returning this quote with Buyer's signature or (2) by Buyer issuing a Purchase Order against this quote to Life Fitness. In all cases, this order quote and its acceptance are subject to the Life Fitness Commercial Terms & Conditions of Sale posted online at www.lifefitness.com/en-us/legal/terms-conditions which supersede any terms in Buyer's purchase orders, policies, vendor guidelines and any other documents that pre-date or post-date this purchase. Any inconsistent terms in Buyer's documents are deemed to have been rejected. Upon acceptance by Buyer and then Life Fitness, this Agreement shall become legally binding and constitutes the sole and complete agreement of the parties.

For avoidance of doubt, if Buyer and Life Fitness executed an active Master Agreement, the applicable Master Agreement will govern this Agreement and the Life Fitness Standard Terms and Conditions will supplement.

Village of Schaumburg

101 Schaumburg CT. Schuamburg, IL



Danielle Pitzulo
631-901-7403
Danielle.Pitzulo@lifefitness.com

Date: 05/30/25

Version: 1.01

Scale: 5/32"=1'-0"

Ceiling Ht.: XX'-X"

SQ.FT.: X,XXX

Refresh: ☐ **New Build**: ☐

DISCLAIMER:
THIS FLOORPLAN IS PROVIDED FOR GENERAL VISUAL REFERENCE ONLY. ANY DIMENSIONS USED TO CREATE THESE DRAWINGS SHOULD BE VERIFIED BY THE OWNERS OF THE FACILITY, CONTRACTORS AND/OR THEIR AGENTS. THESE DRAWINGS ARE NOT DESIGNED TO BUILD FROM AND SHALL NOT BE USED AS BUILDING DOCUMENTS BY ANY PARTIES. LIFE FITNESS MAKES NO REPRESENTATION OR WARRANTY THAT THE FLOORPLAN COMPLIES WITH ANY APPLICABLE LAW, CODES, RULE OR REGULATION OR ANY INDUSTRY OR SAFETY STANDARD OR REQUIREMENT, INCLUDING ASTM OR EUROPEAN STANDARD SPACING RECOMMENDATIONS FOR ACCESS, PASSAGE AROUND, OR EMERGENCY DISMOUNT. COMPLIANCE WITH INDUSTRY STANDARDS, APPLICABLE LAW, CODES, RULE OR REGULATION REGARDING PLACEMENT OF AND CLEARANCE OF EQUIPMENT AND ASSOCIATED ITEMS IS BY OWNER AND LIFE FITNESS DISCLAIMS ALL RESPONSIBILITY WITH RESPECT THERETO.

ADDITIONAL NOTES:
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Electrical Legend:

- DEDICATED RECEPTACLE
- STANDARD RECEPTACLE
- OPTIONAL RECEPTACLE
- WIFI / WIRED INTERNET
- TV CONNECTION

CONSULT A QUALIFIED ELECTRICAL PROFESSIONAL TO DETERMINE POWER REQUIREMENTS AND PLACEMENT.

POWER, DATA, AND TV REQUIREMENTS VARY BASED ON OPTIONS SELECTED.

LifeFitness / SL 101

Docusign Envelope ID: AED6BD47-EE5A-4CD4-BD17-60D50BE16EE0

Solicitation Number: RFP #052324

CONTRACT

This Contract is between Sourcewell, 202 12th Street Northeast, P.O. Box 219, Staples, MN 56479 (Sourcewell) and Life Fitness, LLC, 9525 Bryn Mawr Ave., Rosemount, IL 60018 (Supplier).

Sourcewell is a State of Minnesota local government unit and service cooperative created under the laws of the State of Minnesota (Minnesota Statutes Section 123A.21) that offers cooperative procurement solutions to government entities. Participation is open to eligible federal, state/province, and municipal governmental entities, higher education, K-12 education, nonprofit, tribal government, and other public entities located in the United States and Canada. Sourcewell issued a public solicitation for Fitness Equipment with Related Accessories and Services from which Supplier was awarded a contract.

Supplier desires to contract with Sourcewell to provide equipment, products, or services to Sourcewell and the entities that access Sourcewell's cooperative purchasing contracts (Participating Entities).

1. TERM OF CONTRACT

A. EFFECTIVE DATE. This Contract is effective upon the date of the final signature below.

EXPIRATION DATE AND EXTENSION. This Contract expires July 29, 2028, unless it is cancelled sooner pursuant to Article 22. This Contract allows up to three additional one-year extensions upon the request of Sourcewell and written agreement by Supplier. Sourcewell retains the right to consider additional extensions beyond seven years as required under exceptional circumstances.

B. SURVIVAL OF TERMS. Notwithstanding any expiration or termination of this Contract, all payment obligations incurred prior to expiration or termination will survive, as will the following: Articles 11 through 14 survive the expiration or cancellation of this Contract. All other rights will cease upon expiration or termination of this Contract.

2. EQUIPMENT, PRODUCTS, OR SERVICES

Docusign Envelope ID: AED6BD47-EE5A-4CD4-BD17-60D50BE16EE0

R. U.S. EXECUTIVE ORDER 13224. The Supplier, and its subcontractors, must comply with U.S. Executive Order 13224 and U.S. Laws that prohibit transactions with and provision of resources and support to individuals and organizations associated with terrorism.

S. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT. To the extent applicable, Supplier certifies that during the term of this Contract it will comply with applicable requirements of 2 C.F.R. § 200.216.

T. DOMESTIC PREFERENCES FOR PROCUREMENTS. To the extent applicable, Supplier certifies that during the term of this Contract will comply with applicable requirements of 2 C.F.R. § 200.322.

22. CANCELLATION

Sourcewell or Supplier may cancel this Contract at any time, with or without cause, upon 60 days' written notice to the other party. However, Sourcewell may cancel this Contract immediately upon discovery of a material defect in any certification made in Supplier's Proposal. Cancellation of this Contract does not relieve either party of financial, product, or service obligations incurred or accrued prior to cancellation.

Sourcewell	Life Fitness, LLC
DocuSigned by: Jeremy Schwartz C0FD2A139D06489...	DocuSigned by: Amber Roberson BF0DA2247AA94AC...
By: _____	By: _____
Jeremy Schwartz	Amber Roberson
Title: Chief Procurement Officer	Title: VP & MD North America
Date: 7/29/2024 | 2:54 PM CDT	Date: 7/29/2024 | 2:25 PM CDT

RFP 052324 - Fitness Equipment with Related Accessories and Services

Vendor Details

Company Name:	Life Fitness, LLC
Does your company conduct business under any other name? If yes, please state:	Lumos Holdings US Acquisition Co
Address:	9525 Bryn Mawr Ave. Rosemont, Illinois 60018
Contact:	Robyn Stewart
Email:	Robyn.stewart@lifefitness.com
Phone:	503-891-8034
Fax:	954-301-0932
HST#:	84-1741454

Submission Details

Created On:	Monday April 15, 2024 10:43:24
Submitted On:	Thursday May 23, 2024 11:41:12
Submitted By:	Robyn Stewart
Email:	Robyn.stewart@lifefitness.com
Transaction #:	a9f8803b-1303-4f30-adf4-59b51db3ad68
Submitter's IP Address:	136.226.57.6

VILLAGE OF SCHAUMBURG

AGENDA ITEM SUMMARY

Recommendation to Approve Participation in the ISAWWA Water Ambassador Program and Authorize Staff to Pursue Water Ambassador Community Certification for the Village of Schaumburg, including Implementation of Outreach Initiatives and Promotion of the Water 1-2-3 Guide for Elected Officials
12/30/25
Engineering and Public Works Committee

Presenter: Ryan Rivard, Superintendent of Utility Services
Lead Department: Engineering and Public Works

Executive Summary:

Last month, staff presented an overview of the Illinois Section American Water Works Association (ISAWWA) Water Ambassador Award program, which recognizes individuals and organizations demonstrating exemplary leadership, education, and advocacy in water stewardship. Staff also delivered a condensed presentation on Water 1-2-3: A Guide for Local Officials and Community Leaders, providing the Committee with essential water system fundamentals and further supporting the Village's commitment to informed and transparent decision-making.

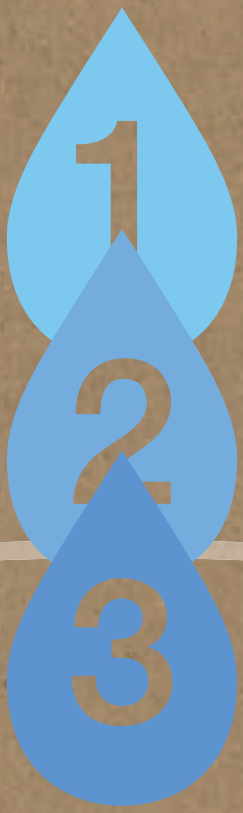
With the continued support and approval of the Engineering and Public Works Committee and the Village Board, the Village will have completed all required components to achieve the program's highest recognition, the Gold Level designation. This effort does not result in a direct financial impact to the Village, as it is supported through existing staff resources and standard communication channels.

Recommended Action:

The Village Manager recommends the Engineering and Public Works Committee recommend the Village Board approve participation in the ISAWWA Water Ambassador Program and authorize staff to pursue Water Ambassador Community certification for the Village of Schaumburg, including implementation of outreach initiatives and promotion of the Water 1-2-3 guide for elected officials.

ATTACHMENTS:
- Water 1-2-3 A Guide for Local Officials & Community Leaders

Drinking Water



A Guide for Local Officials
and Community Leaders

Drinking Water 1-2-3 is the fourth in a series of how-to guides developed by the Metropolitan Planning Council (MPC) and partners to assist elected and appointed officials and others in making important policy decisions. With assistance from national, regional and local experts from the public, private and non-profit sectors, this series creates a valuable toolkit that provides key questions, useful resources and case studies for communities grappling with economic development, housing, water resource management and public safety improvement.



Planning 1-2-3
metroplanning.org/planning123



Retail 1-2-3
metroplanning.org/retail123



Housing 1-2-3
metroplanning.org/housing123

Acknowledgements

The Metropolitan Planning Council is grateful to The Joyce Foundation for its generous support of our water programs. MPC would also like to thank the following sponsors for making Drinking Water 1-2-3 possible.

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Municipal Expertise. Community Commitment.

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Project Team and Advisors

Metropolitan Planning Council Staff

Danielle Gallet
Author, Manager

Danielle is a water resource strategist, urban planner and adjunct instructor. She oversees MPC's water resource programs.

Roya Alkafaji
Research Assistant

Emily Blum
Director of Marketing and Communications

Josh Ellis
Vice President

Nancy Firfer
Senior Advisor

Liz Granger
Content Strategist

Anya Nair
Research Assistant

Bob Newport
Fellow

Thomas Weisner
Senior Fellow

Advisors

Janet Agnoletti
Barrington Area Council of Governments

Nora Beck
Chicago Metropolitan Agency for Planning

Gary Bingenheimer
Illinois Environmental Protection Agency

Chris Burke
Christopher B. Burke Engineering, Ltd.

Ting Pong (Jack) Chan
Metropolitan Water Reclamation District of Greater Chicago

Laurie Dougherty
Illinois Section of the American Water Works Association

Patrick Gleason
Illinois Rural Community Assistance Program, Illinois Association of Community Action Agencies

Scott Goldstein
Teska Associates, Inc.

Carolyn Grieves
Baxter & Woodman

Todd Hoppenstedt
Village of Montgomery

Cari Ishida
Carollo Engineers, Inc.

Walt Kelly
Illinois State Water Survey

Chris King
Robinson Engineering, Ltd.

David Koch
Black & Veatch

Edith Makra
Metropolitan Mayors Caucus

Paul May
Northwest Suburban Municipal Joint Action Water Agency

Chris Meister
Illinois Finance Authority

Jason Navota
Chicago Metropolitan Agency for Planning

Sean O'Dell
Baxter & Woodman

Katie Parkhurst
Village of Algonquin

Mike Ramsey
Village of Westmont

Margaret Schneemann
University of Illinois Extension, Illinois-Indiana Sea Grant

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Partners

Since 1934, the Metropolitan Planning Council (MPC) has worked to make the Chicago region a better place to live and work by partnering with businesses, communities and governments to address the area's toughest planning and development challenges. MPC is dedicated to achieving a resilient, thriving, equitable and healthy region. Join us in implementing our 10-point action agenda to ensure our region's drinking water systems and supplies remain sustainable.

The **Chicago Metropolitan Agency for Planning (CMAP)** is our region's comprehensive planning organization. The agency and its partners are developing OnTo 2050, a new long-range plan to help the seven counties and 284 communities of Northeastern Illinois implement strategies that address transportation, housing, economic development, open space, the environment, and other quality-of-life issues.

The **Illinois Section of the American Water Works Association (ISAWWA)** is part of the national American Water Works Association. Its mission is to provide resources for the management and advocacy of safe and sustainable drinking water for Illinois.

The **Metropolitan Mayors Caucus** provides a forum through which elected officials of the region cooperatively develop consensus on common public policy issues and multi-jurisdictional challenges. With a foundation of collaboration and consensus-based decision making, it serves a number of functions for its partner organizations and local governments.

The **Northwest Water Planning Alliance (NWPA)**, formed by intergovernmental agreement, seeks to collaboratively plan for and steward its region's shared river and groundwater resources to ensure a sustainable water supply for the people, economy, environment, and future generations.

Welcome/About This Guide

Water. H2O. Most of us in Northeastern Illinois don't pay much attention to our drinking water. We turn on faucets dozens of times a day without pausing to consider the questions that millions of people around the world worry about on a regular basis: Do we have enough? Is it clean? Will it endure?

We are lucky: In Northeastern Illinois, our proximity to a Great Lake means we generally enjoy ample water. But that good fortune has lulled us into complacency, and our drinking water systems have been neglected. Our proverbial glass is half empty.

What's at stake? Public health and safety, including contamination and service disruptions due to crumbling infrastructure and aging water treatment systems. Our ability to attract jobs and drive regional economic growth—since every company needs water. Vital, yet fragile, ecosystems. Municipalities and their residents, who find themselves hard-pressed to pay the escalating costs of collecting, treating and delivering drinking water. And, yes, some groundwater sources may be unusable in less than 15-20 years.

While our water supply issues are significant, they are fixable.



Photo Credit Biswarp Ganguly

You can help

As a local leader, you set the tone for the rest of your community. What decisions will you make and actions will you take to ensure your community has safe and reliable drinking water now and into the future? What best practices will provide sustainable drinking water service for the communities you serve? Informing yourself about the systems and processes that convey safe drinking water to your municipality's residents, businesses and institutions is vital.

Elected officials often enter office without prior experience in water resource management or running a water utility. **This guide is designed to support you—our leaders—in understanding the key aspects of water management and critical questions to discuss with your water system managers and engineers, municipal planners, public works officials, finance directors, developers, residents and businesses.** What practices are important today? What do other communities often forget? How can you best serve your community and support sustainable water service? Find answers to these questions—and more—here.

Water Systems Are Connected
There are three components to water service infrastructure drinking water, wastewater and stormwater. While this guide is focused on drinking water, it is important to understand that these systems are ultimately interconnected.

Drinking Water 1-2-3 is a call to action and an educational tool for local officials and community leaders to better understand and proactively address their area's drinking water needs.

This guide is a manual that provides information about water resource management, service, infrastructure and planning. It helps you identify important strategies and actions for you and your community to take today.

It takes strong leadership from community officials to marshal political will, head off calamities and create a sustainable water future for our region.

1 2 3 GO

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Understanding Drinking Water in Northeastern Illinois

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- Sources
- Treatment
- Infrastructure

Your Water's Keeper: Utilities and Regulators
Understanding Drinking Water Management and Laws

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- Regulation

Murky Waters: The Challenges We Face
Understanding Drinking Water Issues In Our Region

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- Pollution
- Crumbling Infrastructure
- Fragmented Systems
- Climate Change

Taking Action: Your Guide to Important Practices
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- Ensure You Have Enough
- Maintain Your Infrastructure
- Finance Your System
- Plan and Coordinate With Your Neighbors
- Engage Your Community

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- References

1

Meet Your Water: An Introduction

Understanding Drinking Water in Northeastern Illinois

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Where does our water come from?

Northeastern Illinois' drinking water comes from surface water sources—like Lake Michigan and the Fox and Kankakee Rivers—as well as groundwater from aquifers. About 20 percent of Northeastern Illinois' population relies on a water source other than Lake Michigan, and about 78 percent of that population relies solely on groundwater.

Surface Water Sources

Lake Michigan

The Great Lakes system is the largest source (approximately 22%) of available fresh surface water in the world, and Lake Michigan is the second largest of the Great Lakes by volume. Northeastern Illinois borders the shores of this Great Lake, which is the largest public drinking water supply in the state, serving approximately 6.6 million residents.[1] However, Illinois' use of Lake Michigan water is limited. Since the reversal of the Calumet and Chicago Rivers away from Lake Michigan, most of Illinois is no longer in the Great Lakes watershed. The water we pump out of the lake now flows west and south and ultimately to the Gulf of Mexico.

Surface Water
Surface water includes lakes, ponds, rivers and reservoirs.

Due to this diversion of water out of the Great Lakes, the State of Illinois is under a U.S. Supreme Court Decree that limits the amount of water it can use. Communities in Illinois that seek to use Lake Michigan as a drinking water source must apply to the Illinois Department of Natural Resources (IDNR), which is the state agency that governs permits for Lake Michigan water and oversees the state's compliance with the decree. Recent Illinois usage of its water allocation from Lake Michigan has reached about 76 percent of the allowed total.[2] While we may think our region enjoys an unlimited amount of freshwater, that is not true.

Lake Michigan Water Diversion
Illinois' Lake Michigan diversion amount can change significantly based on the amount of rainfall our region has each year. If the amount of rain increases substantially in any given year, less drinking water is available since it is counted as part of our diversion.



One of Chicago's water cribs, where water is pumped from Lake Michigan to supply parts of our region with drinking water.
Photo Credit Eric Allix Rogers

Fox and Kankakee Rivers

In addition to Lake Michigan, Northeastern Illinois also has two rivers that communities use for drinking water: the Fox and the Kankakee Rivers.

The Fox River flows 70 miles, beginning near Menominee Falls, Wisconsin, and continues on until it reaches Illinois and flows for 115 miles through the Chicago metropolitan area, before it finally converges with the Illinois River in Ottawa, Illinois. In our region, the Fox River is a partial drinking water source for Aurora and Elgin, Illinois, which represent over 300,000 people in our region.

The Kankakee River is approximately 90 miles long, flowing westward from the rural outskirts of South Bend, Indiana to western Will County, where it joins the Des Plaines River and eventually flows into the Illinois River. In our region, the Kankakee River is a drinking water source for Wilmington and Kankakee, Illinois, which represents a population of more than 32,000.

Additional communities in our region are exploring the use of these two rivers as drinking water sources for the future.

The Fox River is another surface water source that provides drinking water for communities in Northeastern Illinois.

Groundwater Sources

Groundwater is underground, held in soil or in the pores and crevices of rock. Most communities around the world get their drinking water from beneath the earth's surface. Here in Illinois, there are two main types of aquifer: shallow and deep. Shallow aquifers lie within 500 feet of land surface, while deep aquifers are located at depths of at least 500 feet below the surface. Deep bedrock aquifers supply the majority of drinking water for groundwater-dependent communities in Northeastern Illinois.

Groundwater is the water beneath the surface of the earth, consisting largely of water that has seeped down into the ground over time. Groundwater feeds springs and wells.

Both shallow and deep aquifers have different challenges that need to be addressed. The more minerals—such as saline water, barium, radium or other elements—that need to be removed from a groundwater source, the higher the treatment costs.

Groundwater recharge is an important part of the hydrologic cycle. When there's precipitation, water moves through the surface of the earth to natural storage areas below the ground, which "recharge," or refill, these water sources. The more impervious the land cover—such as buildings, pavement and concrete—the less water reaches these water sources to recharge. A deep bedrock aquifer can take many decades to recharge through rain and snowmelt. While shallow limestone, or sand and gravel aquifers in Northeastern Illinois recharge faster than deep bedrock aquifers, they are more susceptible to contamination and can be depleted faster when used for drinking water. And shallow aquifers can impact surface water and wetlands since they are interconnected and often exist directly above or near these resources.

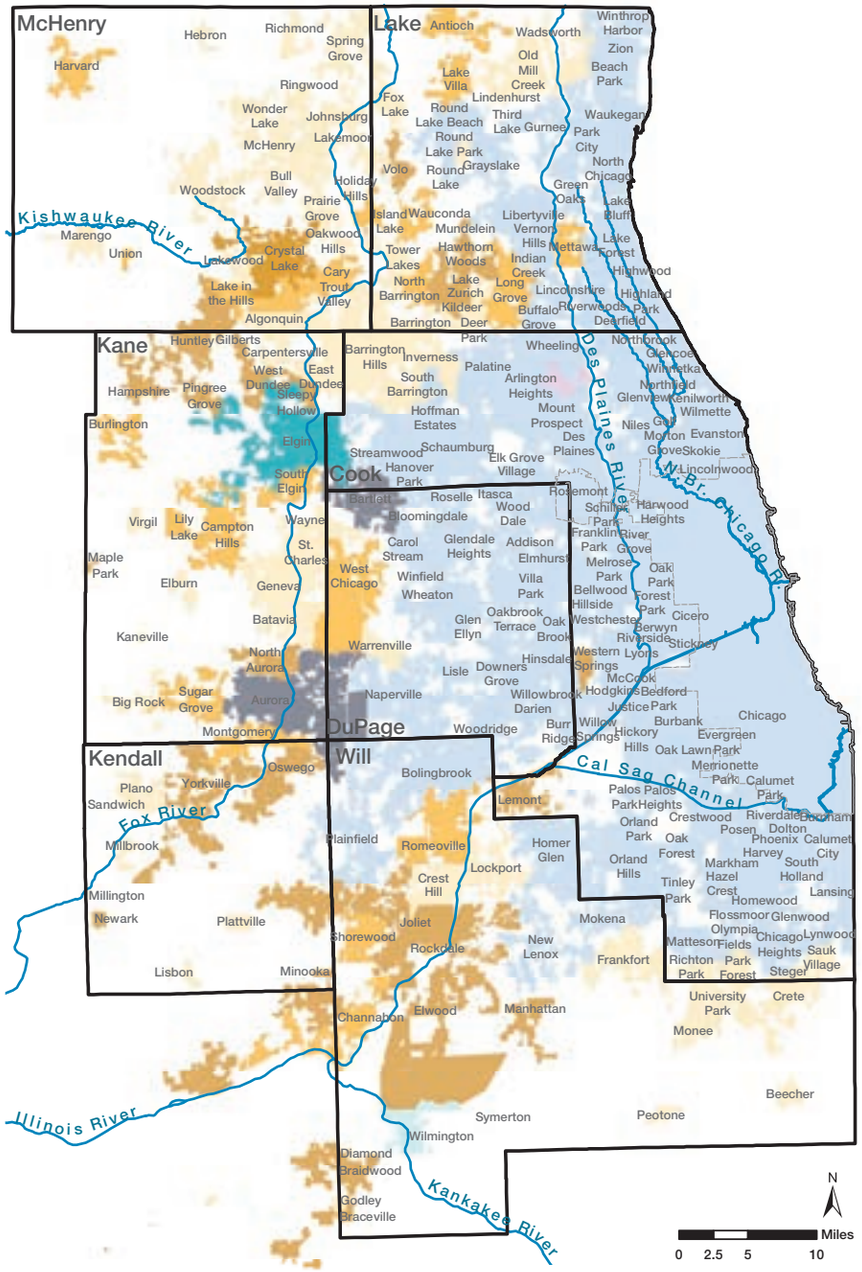
What is a watershed? A watershed is the specific land area that drains to a lake, river or stream. Watershed boundaries often overlap with multiple municipal, county and state lines, which means strong coordination between these governance boundaries is needed.

The depletion of aquifers reduces both water supply availability and quality. The consequences of over-pumping water include potential contamination and increased energy usage, both of which lead to increased treatment costs, before, eventually, wells become unusable.



The Hydrologic Cycle
Water is in constant flux and change. The hydrologic cycle is the continuous movement of water above, below and along the earth's surface. This cycle affects the availability of water supply, which is why planning for the impact of climate variations on drinking water is critical for local communities.

Northeastern Illinois drinking water sources



Sources of drinking water for Northeastern Illinois communities

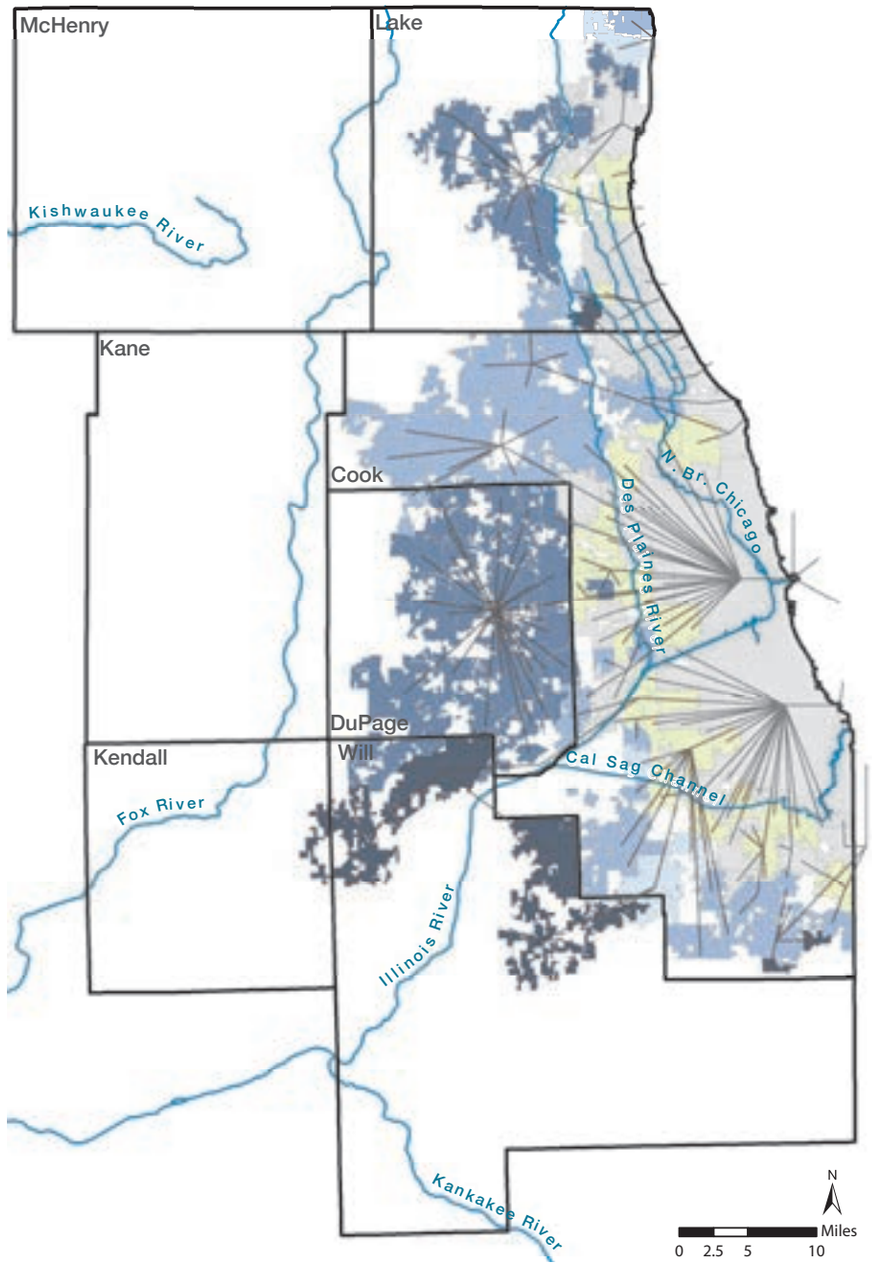
- Groundwater, Shallow Bedrock/Glacial
- Mixed Groundwater Sources, Shallow/Sandstone
- Groundwater, Sandstone
- Surface Water, Lake Michigan
- Surface Water, Kankakee River
- Surface Water, Fox River
- Mixed Sources, Fox River/Groundwater
- Mixed Sources, Lake Michigan/Groundwater

N

0 2.5 5 10 Miles

Source Illinois State Water Survey and Chicago Metropolitan Agency for Planning

Illinois' Lake Michigan drinking water permittees and suppliers



Year Switched to Lake Michigan

- Before 1970s
- 1970s
- 1980s
- 1990s
- 2000s
- Lake Michigan (no switch)
- Water Distribution Direction*

*Water distribution direction is illustrative. Source Illinois State Water Survey, 2014.

N

0 2.5 5 10 Miles

It's complicated
This image demonstrates how complex the system of Lake Michigan water use is. Most communities purchase their Lake Michigan drinking water from other communities, resulting in a complicated system of governance and infrastructure.

Source Illinois State Water Survey and Chicago Metropolitan Agency for Planning



There is a lot of effort and resources that go into providing safe, clean drinking water.

Making Water Drinkable

Potable water (or drinking water) is water that is safe to drink or to use for food preparation without risk of health problems. It is the product of taking raw water—from surface or groundwater sources—and treating it to regulatory standards.

Every time we turn on the faucet, we expect clean, safe water. Making water potable isn't easy: Technically trained operators and engineers carefully track and monitor the treatment process to ensure our communities enjoy safe drinking water.

One of the most important actions a community can take to protect its water supply is to keep its water source clean. At a municipal level, this means putting restrictions on industrial waste disposal, implementing pharmaceutical drop-off programs and reducing overuse of fertilizers, road salt, sanitary sewer overflows and septic tank malfunctions, which can pollute drinking water sources.

Once source water reaches a treatment plant, several processes make it potable. The primary reasons for treating water are:[3]

- Complying with state and federal regulations to ensure it is safe for consumption
- Removing taste and odor to reduce consumer dissatisfaction and complaints

The quality, characteristics and challenges of a water source define the best treatment option. Challenges can include noxious gases, dangerous chemicals, minerals, bacteria, microorganisms, viruses, suspended solids and sediments.



Did you know?
The largest water treatment plant in the world is right here in Illinois. It's the James W. Jardine Water Purification Plant in Chicago. Between this plant and the Eugene Sawyer Plant, Chicago can process almost one billion gallons of water a day for our region.[4]

Photo Credit Jaysin Trevino

Infrastructure: Delivering water to the tap

It is important to understand the extensive infrastructure that delivers drinking water to our homes, businesses and schools. Wells or intake pipes collect water, treatment plants acquire and purify water, water mains, pumps and pipes transport water and towers and reservoirs store and pressurize water.

Collect the water

First, water is collected from the source, either groundwater or surface water. Water from groundwater aquifers is pumped using wells. Surface water is obtained through an intake pipe. This source water is then piped into a water treatment facility.

Water utilities require high-capacity wells or intakes, powerful pumps, large pipes, as well as a power source (electricity) to drive the pumps and obtain source water. Groundwater sources generally require more electricity due to the increased need for pumping the water up from the wells to the treatment plant.

Filter and treat the water

Once source water is collected, treatment processes produce potable water. Treatment plant infrastructure—such as the facility itself, which includes a lab for testing—requires chemicals, screens, tanks and settling ponds, which are designed to meet the specific needs of the water source conditions and quality.

Store the water

After water leaves the treatment plant, it must be safely stored until it is needed. The water distribution system should have enough storage capacity to meet all expected needs. Storing treated water serves multiple purposes:

- Provides a reserve of treated water that will minimize interruptions in supply due to failures of mains, pumps or other plant equipment
- Helps maintain uniform pressure
- Ensures a reserve of water for firefighting and other emergencies
- Allows pumping at an average rate

We have all seen the municipal water towers throughout our communities. A water tower is an elevated structure supporting a water tank constructed at a height sufficient to pressurize a drinking water system in order to distribute drinking water, meet peak demands and provide emergency storage for fire protection.

Deliver the water

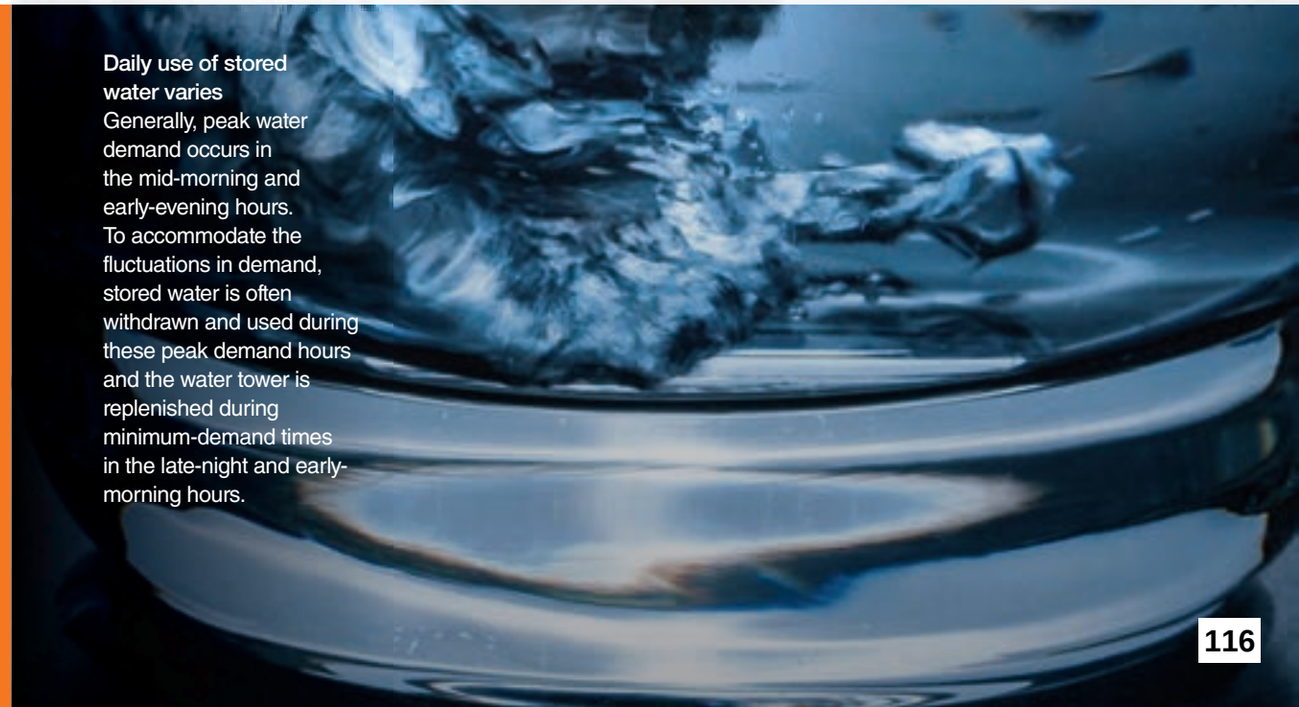
Once needed, potable water is pumped to users via a complex network of underground pipes. Pressurized pipes deliver water to schools, homes, commercial buildings and industry. The pipe networks also contain many valves throughout the system to control location, pressure and water flow. These materials deteriorate over time. Old pipes require replacement to avoid unnecessary leakage (waste of drinking water) or corrosion, which can release harmful or unwanted chemicals into the water.

Consume the water

Water is delivered to our homes, businesses, schools and organizations for us to use and enjoy through a complex web of pipes. The main line pipes are owned and maintained by our water utilities. However, often times the water pipes that run from under the street to individual buildings are the responsibility of the property owner. Maintaining this infrastructure is important for public health, so that we can continue to consume safe water, which is then sent down another set of pipes to be treated by our wastewater utilities.

Questions for your staff: Drinking water service

- What is our municipality's drinking water source(s)—where does our drinking water come from?
- Do we produce (treat) our drinking water, or do we purchase drinking water from another community?
  - If you produce: What treatment processes do we employ at our plant to ensure our water meets regulated potable (drinking water) standards?
  - If you purchase: Who do we purchase our drinking water from?
- How are we storing or otherwise ensuring we have enough drinking water supply for peak demand in our community?



Daily use of stored water varies
Generally, peak water demand occurs in the mid-morning and early-evening hours. To accommodate the fluctuations in demand, stored water is often withdrawn and used during these peak demand hours and the water tower is replenished during minimum-demand times in the late-night and early-morning hours.

2

Your Water's Keeper: Utilities and Regulators

Understanding Drinking Water Management and Laws

Utility Management
P 25

Regulation
P 27

How does operation and regulation work?

Water is an ordinary and everyday part of our lives, yet it requires much effort to deliver it to us. Understanding the systems, operations and regulations required to provide community's with safe, drinkable water is part of your responsibility as a community official.

Utilities: The managers behind your water[5]

In the United States, there are over 151,000 public water systems in operation.[6] The U.S. Environmental Protection Agency (EPA) classifies these systems according to the number of people they serve, the source of their water and whether they serve the same customers year-round or on an occasional basis.

Most public water systems are owned by the municipality they serve or a regional consortium of communities such as a Water Commission or Joint Action Water Authority (JAWA), but they can also be owned by private companies, nonprofit corporations or individuals.

Public water systems deliver a public service and charge a fee for this service in much the same way as energy or telecommunication utilities. They are responsible for operating the necessary treatment and distribution systems to reliably deliver safe drinking water.

A public water system is so named because water is delivered to the public, however, this utility may be publicly or privately owned. There are two forms of private sector participation in public water systems: If a water system is fully privatized, assets are owned and operated by a private company. The company charges fees to water consumers to recoup capital and operational expenses. If there is a public-private partnership, ownership of assets remains public and certain functions (e.g., operation of the drinking water treatment plant) are assigned to a private company for a specific period. In Illinois the majority of public water systems are publicly owned.

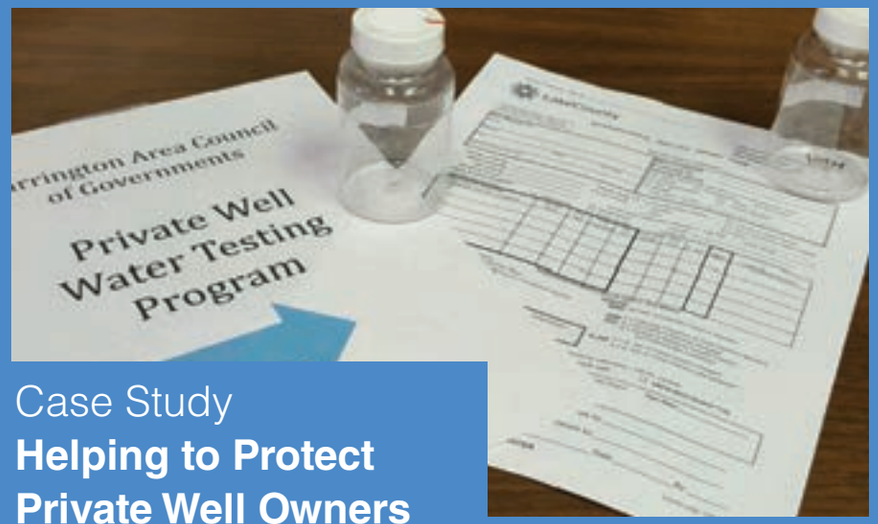
Public water systems consist of three elements:

1. The source water (surface water or groundwater)
2. The drinking water treatment plant (treatment facilities and labs)
3. The distribution system (mains, pumps and storage)

Public Water Systems
Local officials must account for everything from ensuring enough supply, to water-quality monitoring and treatment, to service operations and infrastructure maintenance, to ensuring regulatory compliance.



Photo Credit Goatling



Case Study

Helping to Protect Private Well Owners

The Barrington Area Council of Governments (BACOG) has approximately 7,800 private wells in an 80-square-mile area. In order to help its residents better manage their private wells, BACOG provides educational materials and facilitates regular testing. In partnership with Lake County Health Department, BACOG offers local purchase of bacteria/nitrate test kits at village and township offices plus central local collection and delivery of water samples—all at reduced rates for residents. Lake County's laboratory conducts the tests, and residents benefit from the education provided by this program. By proactively providing education and testing, BACOG is helping to ensure its residents have safe drinking water when using private wells.

Photo Credit BACOG

Private Wells

There are also many people in rural and unincorporated areas of Northeastern Illinois who supply their own drinking water via private wells on their property instead of being connected to a public water system. The sole party responsible for providing the drinking water, maintaining the infrastructure and testing for water quality is the private property owner. The U.S. Environmental Protection Agency and other federal and state agencies recommend annual testing of private well water for bacteria and nitrates. Bacteria can enter a well or household plumbing system through contaminated stormwater flowing over a weak well cap, seepage through a cracked well column or the opening of the indoor plumbing system for repair or replacement of equipment. Bacteria are mostly invisible and odorless but they can make people sick. Unfortunately, not every well owner knows that he/she is solely responsible, or how to keep water clean and safe for their family or business.

Drinking Water Regulation

Federal Regulation: The Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was enacted by Congress in 1974 to ensure water supply systems in the U.S. are providing good quality water to consumers.[7] The Act authorizes the U.S. Environmental Protection Agency (EPA) to establish minimum standards for drinking water and requires all owners or operators of public water systems to comply with these health-related standards.

Maximum Contaminant Levels (MCLs) are standards set by the United States Environmental Protection Agency (EPA) for drinking water quality. An MCL is the legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act.

The SDWA's program to regulate drinking water quality is called the Public Water System Supervision program. Utilities are responsible for regularly testing the quality of drinking water and comparing the test results to the health-based standards, known as Maximum Contaminant Levels or MCLs. There are MCLs for bacteria, metals such as chromium and lead, inorganic chemicals such as arsenic and nitrate, and organic chemicals including pesticides. All these contaminants can cause serious health concerns if they are present in excessive levels in drinking water. For example, high levels of bacteria in drinking water can cause gastrointestinal problems.

If a utility violates an MCL requirement, it can be fined up to $25,000 per day until the violation is resolved. In addition, the water system must provide public notification which explains the nature of the violation, the health implications and steps consumers should take. All violations by a utility are listed online at the EPA's Drinking Water Watch website where communities, consumers and interested parties can view them.

Reporting Back: Keeping Consumers Informed
The EPA requires every community water system to deliver a Consumer Confidence Report (CCR), also known as an annual drinking water quality report, to their customers each year. These reports provide information about local drinking water quality. CCRs dictate what a utility must report to its customers, including:

- their source of drinking water
- a brief summary of any contamination risks to local drinking water sources
- any regulated contaminant found in local drinking water
- the potential health effects of any contaminant detected in violation of an EPA health standard
- an accounting of the system's actions to restore safe drinking water
- educational information on nitrate, arsenic or lead in areas where these contaminants may be a concern
- phone numbers of additional sources of information, including the water system and the EPA's Safe Drinking Water Hotline



Providing an annual, comprehensive consumer confidence report is not only required, but it can greatly assist your community in keeping customers informed and confident that their utility is providing them with quality service. CCRs also provide a useful opportunity for utilities to communicate with their customers about water rates, billing information and infrastructure conditions. For more information on CCRs, please see the EPA's website: https://www.epa.gov/ccr.

State Regulation: Drinking Water Quality Requirements

The Safe Drinking Water Act provides State governments primary authority for implementation, as is the case in Illinois. While the EPA establishes health-based standards at a national level, the Illinois EPA is responsible for the day-to-day implementation of the drinking water program, among other things.

In addition to the federal requirements of the SDWA, there are State of Illinois requirements that apply to community public water systems. State requirements can be found in Subtitle F of **Title 35 of the Illinois Administrative Code** and are implemented by the Illinois EPA. The Maximum Contaminant Levels and monitoring requirements generally mirror the Federal requirements. However, Illinois established additional programs and requirements to strengthen public health protection.

Our state's drinking water program also includes requirements for permitting, including construction and operating permits for community water supply systems. Construction permits are issued for new or modified water supply systems—for example, when a community is planning to change its drinking water treatment facilities. Operating permits are issued after construction projects are completed and the new or modified system will be going into operation. The permits program ensures that system components are properly sized, designed and operated so that the system will reliably provide safe water. The State of Illinois can issue emergency permits whenever emergency conditions require immediate action.

Illinois also has requirements to ensure groundwater is of good quality when it's being used as a source of drinking water. The fundamental requirement is "No person shall cause, threaten or allow the release of any contaminant to groundwater so as to cause a groundwater quality standard set forth in this Subpart to be exceeded." (Section 620.405 of the Administrative Code)

There are Illinois-specific requirements for regulated recharge areas which protect water sources in areas where the groundwater is susceptible to contamination. For example, facilities or operations that could pose a risk to the groundwater (e.g., a municipal solid waste landfill) cannot be located within a delineated, regulated recharge area. Additionally, counties and municipalities utilizing a community water supply are authorized to establish maximum setback zones, up to 1,000 feet, around their well(s). Setback zones—as the name implies—are areas where certain operations are restricted, facilities and activities that could pose a risk to the groundwater being used as a source of drinking water.

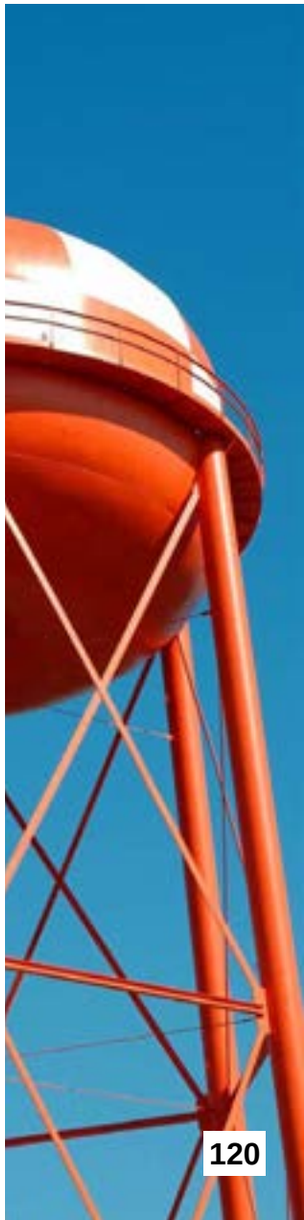
Illinois EPA also operates the State Revolving Fund low-interest loan program. More information on this program is provided in section GO of this guide.

Other State Regulators

As mentioned above, the US EPA is the ultimate regulator on safe drinking water for communities. And Illinois EPA is the state enforcement agency for these safe drinking water standards. However, there are a number of other governmental units that have roles related to safe drinking water. The following highlights these various agencies and their regulatory jurisdictions.

Illinois Department of Public Health (IDPH)

The IDPH creates and regulates standards for and provides oversight of non-community water systems. A community water system provides daily water to residents and businesses through a distribution system. A non-community system is a stand-alone business or institution that has its own well and provides drinking water to people at that location.



Schools, day care centers, factories and restaurants that have their own wells and supply water to people are examples of non-community water systems. IDPH also provides information to private well owners.

There are also requirements for entities that wish to drill their own drinking water wells. To ensure the safety of these water supplies, the IDPH and local health departments review well installation plans, issue permits for new construction and inspect wells. IDPH is also responsible for reviewing and approving plumbing code related standards that impact drinking water utilities.

Illinois Commerce Commission

As mentioned previously, a small percentage of communities are provided drinking water from a privately owned utility. These utilities have an additional layer of regulatory oversight, administered by the Illinois Commerce Commission (ICC), which oversees rate setting and utility organization, such as a merger of two or more utilities, both of which must go through due process and be approved by the ICC.

Illinois Department of Natural Resources

Illinois has a limit on how much water it can withdraw from Lake Michigan, a quantity which was set by a U.S. Supreme Court Decree. The State of Illinois' Lake Michigan Water Allocation is overseen by the Illinois Department of Natural Resources (IDNR). Illinois' Lake Michigan Diversion is made up of three components: domestic water supply, direct diversion and stormwater runoff. Domestic water supply is used to serve communities and industries within our region.

Any use of water from Lake Michigan within the State of Illinois is authorized by, and requires a permit from, the IDNR. All domestic water allocation permittees (drinking water utilities) are required to submit an annual water audit form. IDNR uses these forms to track individual users' compliance with the conditions of their allocation permits. Additionally, all utilities that produce drinking water from Lake Michigan must submit a monthly form which shows daily water usage numbers and the amount of water sold to other permitted drinking water utilities.

IDNR also regulates water withdrawals from other surface water such as the Fox and Kankakee River. These regulations enable IDNR to permit and limit water withdrawals based on required flow rates in order to protect these water sources from overuse and environment damage.

Illinois State Water Survey

Another state agency that plays a role related to drinking water systems is the Illinois State Water Survey (ISWS). ISWS is responsible for the Illinois Water Inventory Program. This program compiles and maintains records on annual water withdrawals and water use information, which helps the region and your community understand current water demand compared to available supply. Reporting to ISWS on water withdrawals and water use is mandatory for public water suppliers, industries that withdraw and use water as well as irrigation water users.

Questions for your staff: Regulation and operations

- Is our drinking water utility publically or privately owned?
- Do we have any private well owners in our municipal boundary? If so, do we know who they are and how much they are pumping? Do we provide any educational assistance to ensure they have safe drinking water?
- Do we have any current or recent drinking water violations or compliance issues we need to attend to?
- Is an annual Consumer Confidence Report (CCR) going out to our customers?
- Are we keeping up with the requirement to annually submit our water withdrawals and usage information to the Illinois State Water Survey?
- What is the process for quality control on the accuracy and recording of all our water reporting requirements?
- If your water comes from Lake Michigan: Are we submitting our LMO-2 Forms on time every year?

3

Murky Waters: The Challenges We Face

Understanding Drinking Water Issues in Our Region

Supply Constraints
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Pollution
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Crumbling Infrastructure
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Fragmented Systems
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Climate Change
P 42

What are the issues we face?

While our region generally enjoys an ample amount of freshwater, we are not without critical challenges—issues that need to be addressed today. These challenges include increasing pollution, old infrastructure, fragmented service and, yes, some communities face wells running dry.

Do we have enough?

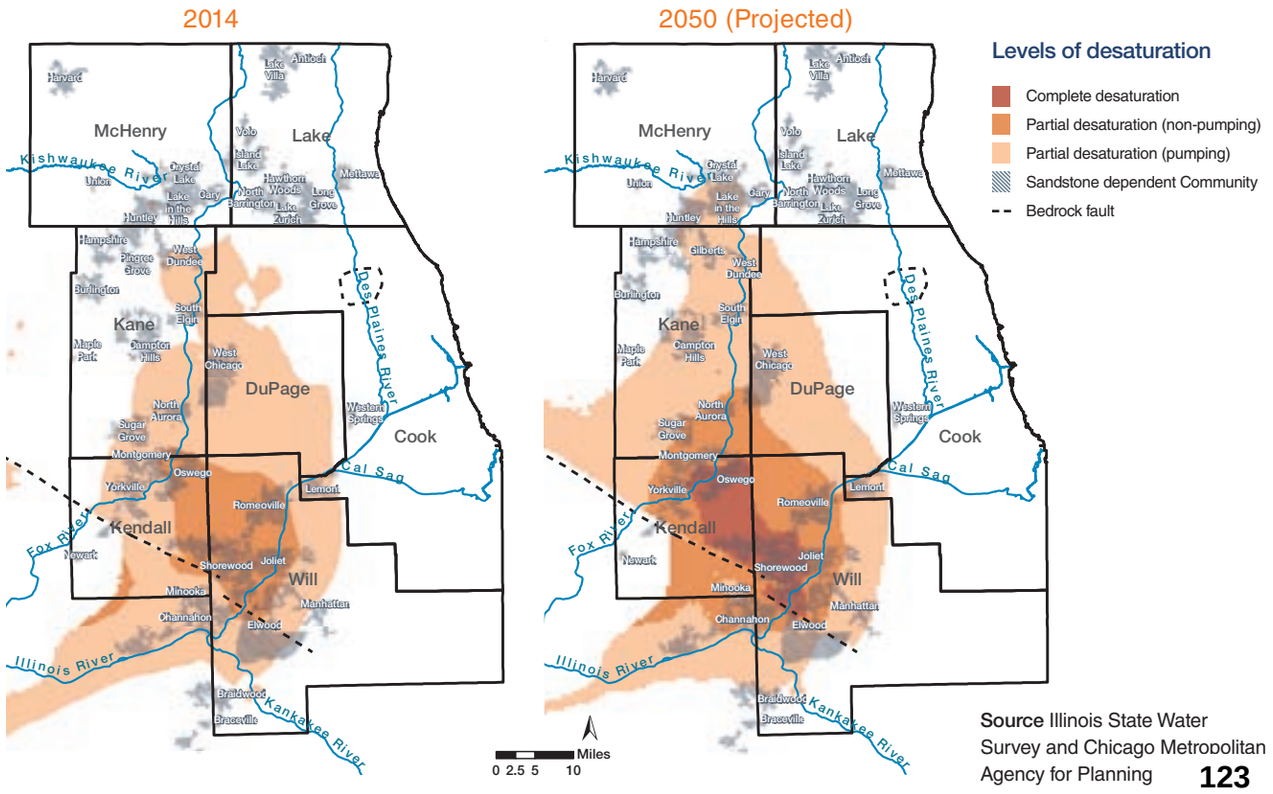
In 2015, the Illinois State Water Survey, which has been monitoring and modeling our water resources for more than a century, released a seminal report about the groundwater levels in wells. **The report sounded an alarm about how much groundwater we really have:**

- Our deep sandstone aquifers are being depleted unsustainably.
- High-capacity wells could be unusable in as little as 15 years.
- Many more wells could be dry by 2050.[8]

If current practices continue, some groundwater-dependent community and industrial wells could be unusable within 15 years, and even more will be at risk by 2050.

Why does this matter? About 20 percent of Northeastern Illinois' population—including people in the outer-ring suburbs of Chicago—rely on water sources other than Lake Michigan, and about 78 percent of that population relies solely on groundwater. To serve those communites, some 90 million gallons per day are being withdrawn from the deep sandstone aquifers—a withdrawal rate at least twice as high as what experts say is sustainable. Some areas are already experiencing significant depletion and some shallower, private wells are already going dry.

Progression of groundwater depletion over time with continued well pumping



Source Illinois State Water Survey and Chicago Metropolitan Agency for Planning

Some might think the easy answer to this issue is for more communities to tap into Lake Michigan as a source for drinking water. However, Illinois' allotted diversion of Lake Michigan water is limited by a U.S. Supreme Court decree. So while we may think our region enjoys an unlimited amount of fresh water, that's simply not the case. Lake Michigan is not a solution for all communities.

A dwindling water supply has the potential to harm our regional economy, costing local jobs if businesses relocate due to water-shortage concerns. The good news is that this is preventable if groundwater users—including municipalities, self-supplied commercial and industrial facilities and irrigators—plan and work together. Best practices in water reporting and demand management must be widely adopted by all communities to protect current and future populations.

Is it clean?

Northeastern Illinois' water supply faces increasing pollution from a variety of sources, including:

- Chlorides from salting our roads and sidewalks, as well as water softeners.
- Fertilizers from lawns and agriculture.
- Organic matter (such as human waste) and inorganic matter (such as pharmaceuticals) from sanitary sewer overflows and leaking septic systems.
- Toxins from industrial processes.

Clean water should be top of mind for community officials like you because it's critical to our health and well-being. Increases in water pollution in our local water sources—lakes, rivers and underground aquifers—ultimately raise the cost of drinking water. The more pollution we have in our drinking water sources, the more we'll spend in additional filtration and treatment processes, the more we'll ultimately have to charge the consumer to cover these costs.

Increasingly, water pollution is a costly issue in Northeastern Illinois.

In March 2016, the Illinois State Water Survey released a report on the shallow groundwater quality in Kane County.[9] The greatest concern identified is chloride: Two-thirds of water samples taken from eastern Kane County between 2003 and 2015 had chloride concentrations above safe levels. Road salt is one of the most likely sources of this contamination, and the unfortunate result can be increased water treatment costs.

A Note on Lead Pipes and Fixtures
Another known toxin is lead. Lead poisoning is a serious health condition, and eliminating exposure to lead in drinking water is important. Lead can enter drinking water when service pipes or fixtures that contain lead corrode. These pipes can be owned by a utility or a private property owner and should be updated to reduce public health risks.



Road salt (chloride) is polluting our drinking water sources. **Photo Credit** Stolborsky

Algae blooms are the result of an excess of nutrients, such as fertilizers, that enter water sources through stormwater runoff. **Photo Credit** NOAA Great Lakes Environmental Research Laboratory

Another type of pollutant that is negatively impacting our water quality are nutrients. This group of pollutants includes phosphorus and nitrogen, two ingredients typically included in fertilizers. When nutrient levels in surface waters are excessive, one result is algae blooms. Nutrients get into the water from a variety of sources including fertilizings crops and lawns.

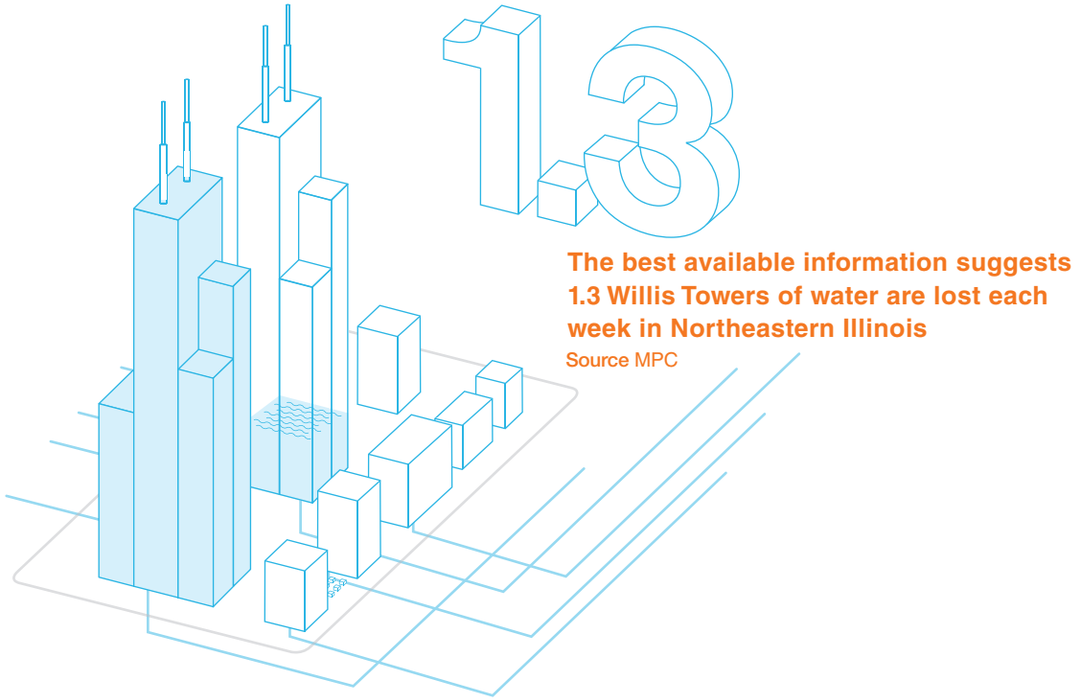
Past and current land uses can also pose contamination threats to drinking water supplies. For example, toxins leached from landfills and industrial complexes that discharge into local waterways can pollute our water sources as well. Implementing source water protection practices, such as reducing nutrients and practicing sensible salting, are necessary to ensure your community's water source remains clean.

Will the system endure?

Much of Northeastern Illinois' water infrastructure—treatment plants, pumps and pipes—built to collect, treat and deliver round-the-clock drinking water to our homes and businesses is coming to the end of its useful life. Plainly put, the infrastructure is old—anywhere from 50 to 100 years old—and in dire need of repair and replacement. It is fact, not hyperbole, to say that if we fail to act, we face catastrophes such as water main breaks, collapsing infrastructure and drinking water contamination. If we don't act, the question isn't whether disaster will strike, but when.



Leaking or broken water pipes and mains can cause significant damage in our communities if not properly maintained.
Photo Credit Thee Erin



The best available information suggests 1.3 Willis Towers of water are lost each week in Northeastern Illinois
Source MPC

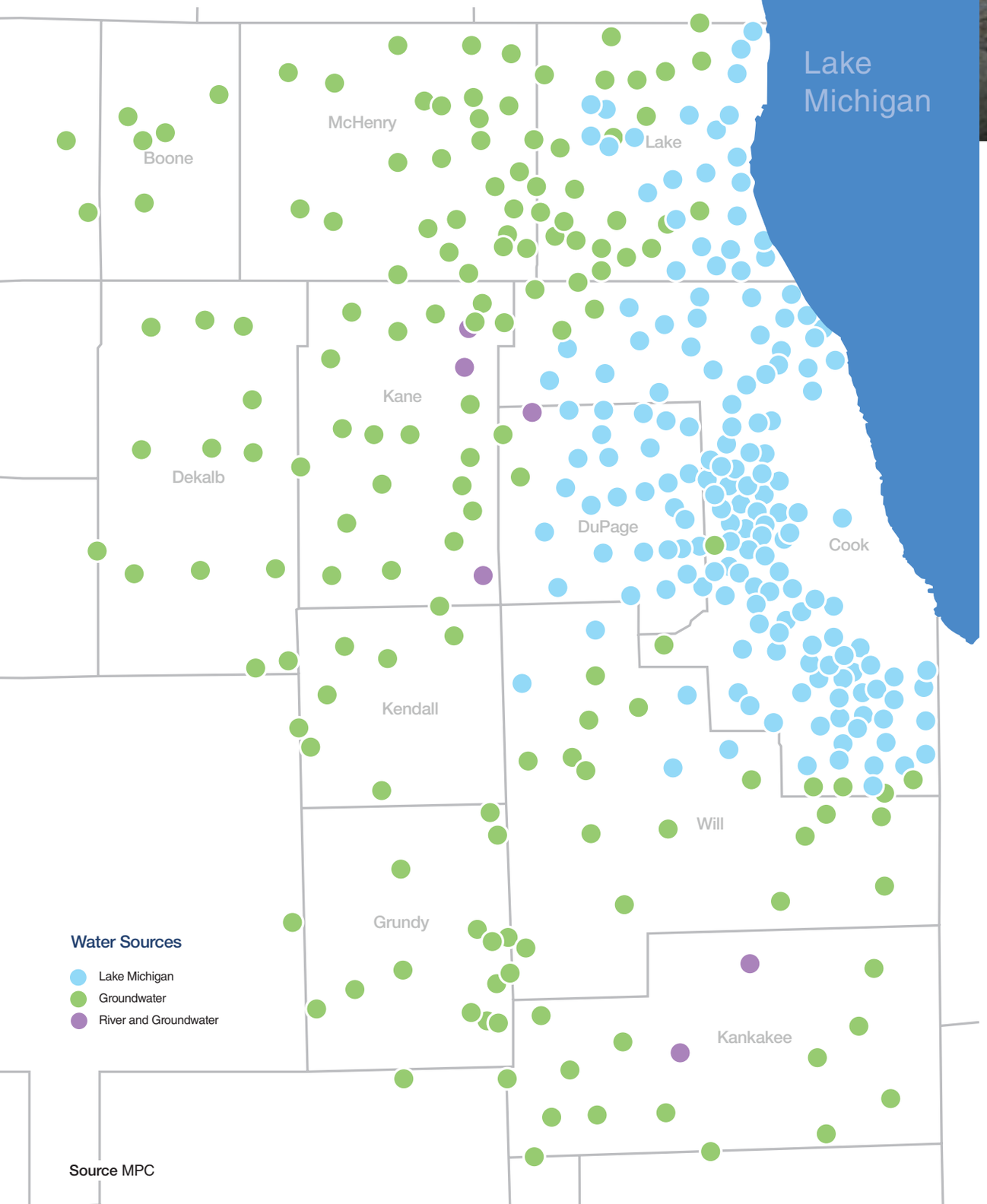
What's more, our pipe network is buried out-of-sight, so it is also out-of-mind. Practically speaking, it's challenging to know the condition of buried pipes—but we know there are areas of grave concern: Estimates suggest that we lose 26 billion gallons each year due to deteriorating infrastructure—enough water to fill more than one Willis Tower every week.[10] Without a clear understanding of our water infrastructure conditions, we'll continue to see utilities across Northeastern Illinois waste money on drinking water that never gets to consumers.

Addressing our aging water infrastructure in Illinois is estimated to cost around $21.5 billion through 2030.[11] Our local water utilities need viable funding and financing streams in order to make this huge investment. At the same time, equitable water rate practices need to be employed to ensure everyone in our communities has access to clean drinking water. Now more than ever, industry standards in auditing and reporting the condition of our systems, establishing asset management programs and identifying investment needs are imperative.



The Water Energy Nexus
Ensuring our systems are in good condition also reduces energy consumption. Water and energy are interdependent—water is required to generate energy—and energy is required to generate and deliver drinking water. In fact, as much as 40 percent of operating costs for drinking water systems can be for energy.[12] A survey done by the Illinois Section of the American Water Works Association found that energy costs on average ranged between 8-15 percent of a drinking water utility's operating budget, with the maximum reported at 38 percent.[13] Crumbling infrastructure not only wastes water, it wastes energy.

Our region shares water sources. Collaboration across communities is important.



Source MPC



Overwatering our lawns depletes water supply. **Photo Credit** Cary Bass-Deschenes

Fragmented system, disconnected users

Northeastern Illinois has more than 400 community water supply systems in operation. Most of these utilities are owned and managed by a municipality, which means decisions about water utility operations, infrastructure investment, future planning and service rates are made at the local level by elected officials, like you, who may or may not have prior expertise in managing a water utility.

Inefficiencies in water service delivery add unnecessary costs to our community members. Given the increasing challenges of supply constraints, water pollution and infrastructure reinvestment needs, our region needs to explore economies of scale and service sharing between utilities.

Northeastern Illinois also lacks a well-adopted system for tracking water usage from each utility. As a result, we don't have a clear understanding of current demand for drinking water. While communities that use Lake Michigan water must report usage and infrastructure conditions, the rest of the region—particularly those communities who are facing water shortages—are not held to the same standard. Because of these factors, **our region is extremely fragmented in our approach to managing a shared, vital resource**. The action of one community can impact another, which is why we need more coordinated, regional water supply planning.

Another fundamental challenge is that **we, as consumers, are very disconnected from the complex system that provides us with water** to drink, bathe and survive. Our region's collective lack of awareness about our drinking water may stem from historically ample supplies, the buried nature of water infrastructure and the subsidized costs we have enjoyed for water service. We haven't needed to give a second thought to the infrastructure and operations it takes to deliver water to our homes and businesses. However, as outlined above, conditions related to our drinking water have changed and communities need to be engaged and coordinate across municipal boundaries in order to address the above water resource challenges.



Drastic weather change patterns greatly impact water resources. Too little or too much water puts stress on our drinking water systems.

Climate change stresses our water systems

The latest climate models predict that Illinois' temperatures will increase an average of 2.1-3.0 degrees Fahrenheit by 2035 and precipitation will increase between 1-5% with much of that rainfall happening in spring months.[14] This will lead to drier, hotter summers and wetter, springs. This change will significantly impact our water supplies. If precipitation is more intense, increased flooding can overwhelm wastewater treatment facilities, sending large amounts of pollution—during a combined sewer overflow—into drinking water sources. On the other hand, having longer periods of drought will reduce the amount and availability of drinking water. So both weather patterns greatly impact the availability of clean and plentiful drinking water supplies.

Surface water impacts from drought

Decreased water levels and higher water temperatures produce algae blooms that reduce water quality and make it more expensive to treat drinking water. These conditions also affect local ecosystems including aquatic life, which impacts the health of a water source and the ability for recreation including fishing and swimming.

Groundwater impacts from drought

Given the current over-pumping of our groundwater, drought will further threaten supply. Likewise, during drought conditions, groundwater pumping can reduce the natural flow of water that would otherwise recharge lakes, streams and rivers.

Developing and continuously revising an adaptive and collaborative approach to water supply planning and management is imperative to dealing with the effects of a changing climate. Addressing and planning for these impacts is important to help mitigate future supply constraints and increasing costs for treatment.

Questions for your staff: Drinking water challenges

- If your community uses groundwater: Are we facing drinking water shortages?
- What current or emerging water pollution issues do we have in our drinking water source(s)?
- How are we keeping track of our drinking water infrastructure conditions to ensure our system remains safe and sustainable?
- Do we partner with our neighboring communities on drinking water issues? What opportunities do you suggest we look into for improved coordination between our municipalities?
- How are we adapting our drinking water system and infrastructure to remain viable with increasingly severe weather patterns?

GO

Taking Action: Your Guide to Important Practices

Understanding the Actions You Need to Take

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Ensure You Have Enough
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Maintain Your Infrastructure
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Finance Your System
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Plan and Coordinate With Your Neighbors
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Water practices for every community

Making decisions about your community's drinking water system is part of your job. You, along with other leaders, need to understand and oversee our drinking water systems from an overall operational and managerial perspective. This section outlines the specific practices you should take to ensure your community has safe and reliable drinking water.

Protect Your Source

1

Protecting and preventing your community's water source from pollution reduces risks to public health, utility treatment costs and service disruptions. So what can you do to reduce pollution?

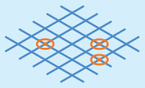
GO Conduct source water assessments

Regardless of where your drinking water comes from, and whether it is produced or purchased, source water assessments provide communities with information needed to protect drinking water sources. A source water assessment is extremely valuable to determine risks and possible protective measures. Following are some typical steps, as outlined by the Environmental Protection Agency,[15] in producing a source water assessment:

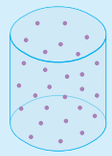
Step 1 Delineate the source water protection area. Create a boundary line based on where your water utility draws its drinking water supplies. For example, the delineated area may be a certain radius surrounding the location of your drinking water wells or intake pipes.



Step 2 Inventory sources of contamination. The contaminant source inventory identifies documented and potential contaminant sources or activities of concern.



Step 3 Determine the susceptibility of your water supply to contaminants within the source water protection area. Assess the nature, severity and likelihood of risks. For example, tanks storing harmful materials within your source water protection area would likely be considered a susceptibility.

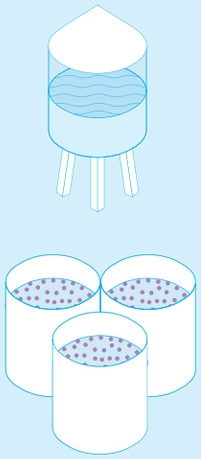


Step 4 Inform businesses and residents about the inventory and the susceptibility of your system. Notifying businesses and households they are in a source water protection area and identifying local support for voluntary source water protection is a great way to build trust and partnership with your community. You want an informed public to prevent contamination.



Step 5 Implement management or policy measures to prevent, reduce or eliminate risks to your drinking water supply. Management options might involve ordinance provisions prohibiting or restricting land uses that could release contaminants to critical source water areas—including sensitive groundwater recharge areas. Examples include, prohibiting gas stations in source water protection areas or restricting the application of pesticides.





Step 6 Develop contingency strategies that address water supply contamination or service interruption emergencies. This may involve an assessment of available water storage and/or an identification of alternative sources of water.

Step 7 Implement an industrial pretreatment program. Pollutants in industrial wastewater may compromise municipal treatment plant processes or contaminate drinking water. To protect municipal treatment plants and the environment, a pretreatment program—as part of the U.S. Clean Water Act's National Pollutant Discharge Elimination System (NPDES)—requires industrial dischargers to use treatment techniques and management practices to reduce or eliminate the discharge of harmful pollutants to sanitary sewers.

GO Support regulatory compliance + utility staff

You and your water system have a responsibility to the public to provide clean and safe drinking water to homes and businesses. Customers may take their water for granted… until they don't have it. If service is interrupted or if the water becomes unsafe, you can be assured you will hear about it from your constituents.

Water utility systems are subject to Federal and State regulations. These regulations require that water delivered to customers meets established safety standards and that water quality test results are reported to the State. Violations can result in fines of up to $25,000 per day. Another regulatory requirement is Consumer Confidence Reports about local water quality and any violations or identified contamination. These annual reports must be distributed annually to homes and businesses in your utility service area. As an elected official, you must ensure that budgets include sufficient funding for operating and maintaining the system, as well as for regularly testing water quality and meeting regulatory requirements.



Water Utility Staff
Water utility staff are on the frontlines of ensuring we all have safe, clean drinking water at our tap 24/7. Just like police and fire service workers, water utility staff provide a service critical for the life and health of people every day. Supporting utility workers' participation in trainings that bring the best practices in water resource management to your community should be a priority. Is your utility a member of the American Water Works Association? Encourage cross-industry learning and expertise building—your community will directly benefit.

Photo Credit Emily Cikanek

Water utility staff are trained managers, technicians and operators certified to operate water utility services. Ensuring your water utility has trained and qualified operators for the water system is paramount. Illinois maintains Operator Certification requirements for different classifications of water systems. For example, if you have a Class B system, it is required that you have a Class B certified operator. Operators must pass an exam, have the requisite operational experience and certifications must be renewed every three years, which requires continuing education training. You will want to ensure you have certified operators for your water utility system, as well as back-up operators.

Like many industries today, the water industry is seeing a significant number of water utility operators retire. It is recommended that water utilities consider an operator-in-training program, such an apprentice operator, to ensure a smooth transition of leadership as staff retire.

GO Practice sensible salting

Removal of snow and ice from pavement is essential for public safety. During winter storms, the use of deicing chemicals is a widely accepted and generally essential means of keeping pavements safe and passable. Sodium chloride—common salt—is by far the most popular roadway deicing chemical. However, salt is corrosive to vehicles, roadway surfaces, parking lots, driveways and bridges and has been found to have adverse effects on the environment including flora, fauna and water quality. Salt pollutes—when snow and ice melt, the salt goes with it—washing into our lakes, rivers, streams, wetlands and groundwater. It takes only one teaspoon of road salt to permanently pollute 5 gallons of water. If too high a concentration of chloride gets into a water source, that source can harm fish and plant life, and become unusable as drinking water.

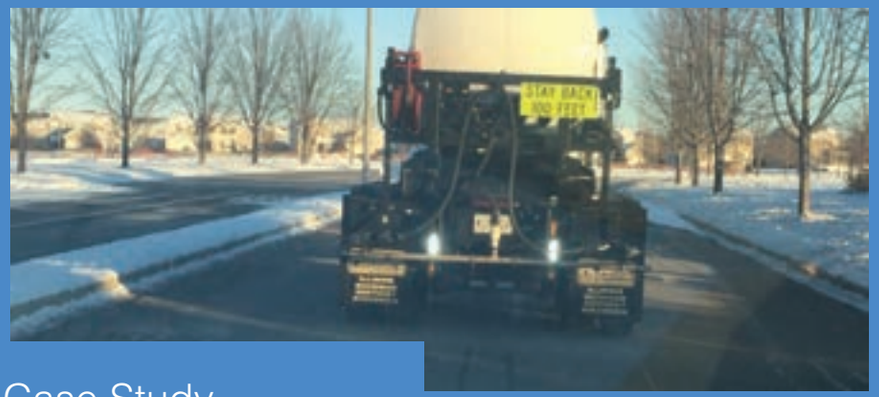
So what can you do to reduce the negative impacts of chlorides in our water? Practice sensible salting. The following actions reduce the negative effects of salt in our water sources:[16–19]

- Plow, shovel and blow the snow. Use mechanical means to remove snow, not salt or other deicing chemicals to "burn-off" snow and ice.
- Calibrate your equipment. Knowing that your equipment is calibrated and the application rate is accurate will save chemical costs and reduce environmental impacts. Make these calibrations annually, and keep a record in the vehicle for appropriate spreader settings.



Photo Credit SDOT Photos

Increasing Chlorine Levels In Water
In Northeastern Illinois, 2016 monitoring by the Illinois State Water Survey has shown chloride levels in surface water and groundwater are increasing, and that use of salt for pavement deicing is the primary source of these increases. Staying ahead of this issue is important to maintaining healthy water sources for drinking water.



Case Study
Benefits of Sensible Salting

The Villages of Montgomery and Oswego in Chicago's southwest suburbs have partnered together to implement a sensible salting program. In 2014, the Village of Oswego began investing in a sophisticated brine-making system capable of mixing different anti-icing agents that could be applied to the roadways both before and during a snow storm to reduce the department's dependency on calcium chloride (rock salt). In 2015, the Village of Montgomery built its own homemade brine maker and truck-mounted sprayer skid for applying product to roadways. The application's success propelled Montgomery's village board to invest in a new truck capable of applying product at a more efficient rate.

The two communities then began working together to maximize the strongest parts of both programs—Oswego's brine making system and Montgomery's application ability. During 2016-2017, Oswego produced product for both communities, which Montgomery picked up with its new truck, and applied to major roads in both communities. The communities have discovered that applying the liquids to the rock salt prior to salting the roads activates the rock salt for quicker results, and that pre-treatment of roadways can be accomplished up to 48 hours in advance of a storm, which has reduced overtime costs for staff.

These efforts combined with other changes in Montgomery's policies—such as only salting the center of the road on streets with lower traffic volumes and speeds and only salting cul-de-sacs after the storm is over—have earned the village savings of 30-50% of its historical annual salt consumption. This alone can save the village's road budget $75,000-$150,000 annually, depending on the current cost-per-ton for salt. Additionally, this new shared services program has reduced staff needs from 5-6 down to 2-3, which allows village leaders to reassign employees to other priority areas. The staff deploy the new tools in their arsenal, and many of them enjoy more rest and time with loved ones as well as fewer laps around the block.

Photo Credit Todd Hoppenstedt, Village of Montgomery

- Choose the right material and apply the correct amount. Know the limits of deicing chemicals. For example, rock salt is not effective at temperatures below 15°F no matter how much is applied. Align application rates with current weather conditions.
- Use ground speed controls on your spreader. Application rates should correspond with the vehicle's speed.
- Pre-wet the salt. Adding brine to salt before it is applied will jump start the melting process and help keep the salt in place by reducing bounce and scatter. Pre-wetting salt can reduce application rates by 20 percent.
- Use anti-icing. Be proactive by applying deicing chemicals prior to snow and ice accumulation. This practice can reduce the amount of chemical needed by 30 percent.
- Don't mix salt and sand. Salt is for melting and sand is for traction on top of the ice, they work against each other.
- Consider possible alternatives to salt. For example, beet juice is a deicer.
- Be familiar with sensitive areas, such as your source water protection areas. Consider designating reduced-salt areas or identifying safe alternatives to road salt in these areas.
- Have your Department of Public Works staff attend training workshops and stay up to date with new technologies and practices.

GO Encourage sensible fertilizing + landscaping

Another pollutant that affects water sources is nutrients—often phosphorus and nitrogen—two ingredients typically included in fertilizers. When nutrient levels in surface waters are excessive, one result is algae blooms. Nutrients enter the water from a variety of sources including fertilizing agriculture and turf grass. As a community leader, you are in a position to ensure that staff incorporate best practices in fertilizing at parks and other public spaces. Your community can also encourage or require homeowners and businesses to practice sensible fertilizing through educational efforts, or by ordinance. Some cities and even states have banned the use of fertilizers which contain phosphorus: Winnetka, Illinois now has a working ban on phosphorus-containing fertilizer, which its village council approved through a reworked ordinance in 2017.



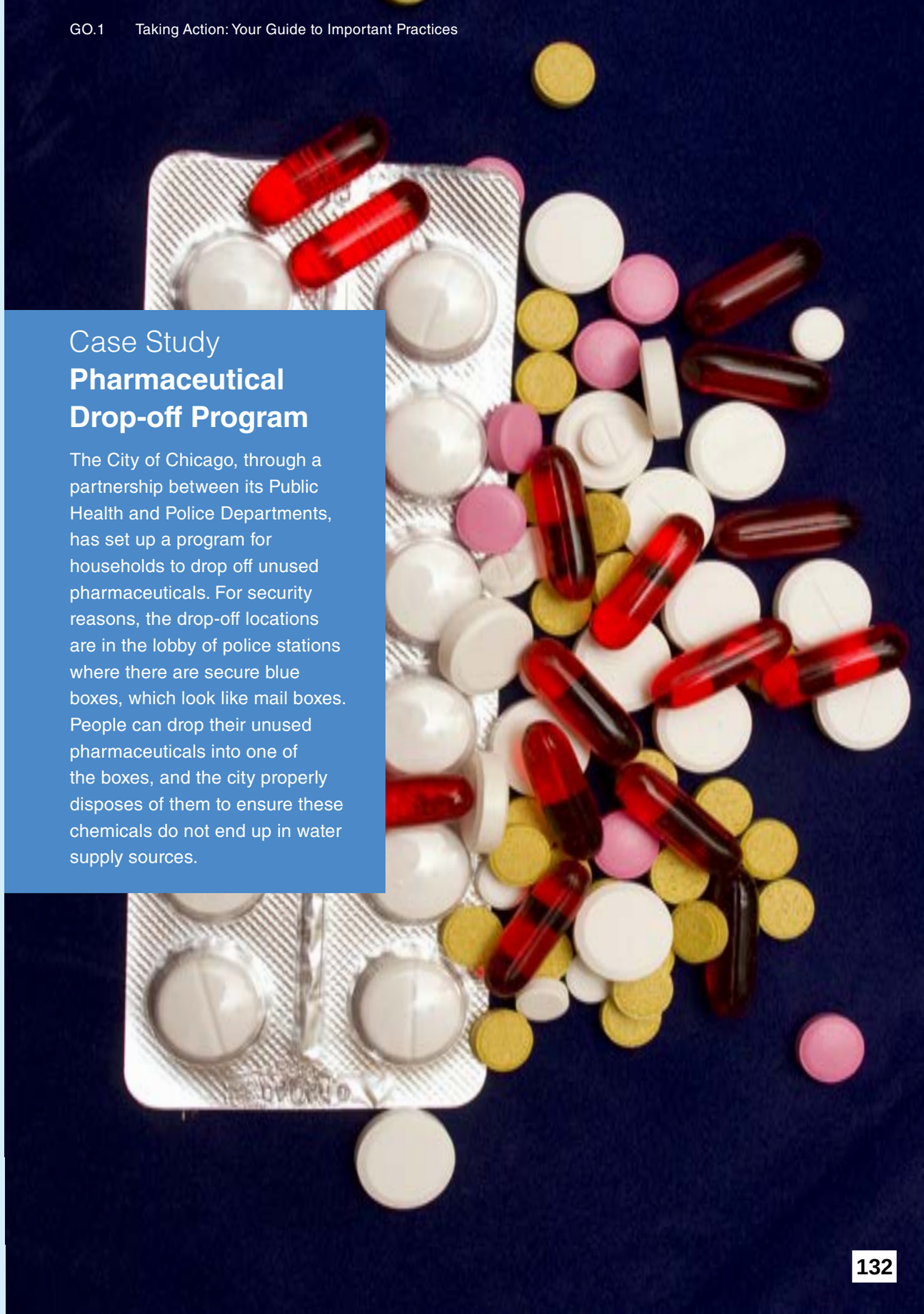
Algae Blooms Can Disrupt Water Service
Toledo, Ohio gets its water supply from Lake Erie. In 2014 the city's water service was disrupted after chemical tests confirmed the presence of unsafe levels of the algae toxin Microcystin in the drinking water plant's finished water. The ban on drinking and cooking using tap water for more than 400,000 residents (as well as 30,000 residents of southeast Michigan) lasted two days and caused emergency measures at the state level.

What actions can your community take to reduce the threat of algae blooms in drinking water? Reduce the amount of nutrients applied for lawn care. This can include enacting an ordinance to limit the use of phosphorus-containing fertilizers like Winnetka, Illinois did. Communities can also provide educational outreach and training programs such as those offered through the Illinois-Indiana Sea Grant, which promote switching to landscape practices that reduce pollution. Called Lawn to Lake, this collaborative program promotes healthy lawn and landscape practices such as building healthy soil, being water smart and taking an integrated approach to pest management. Host workshops and provide educational materials about these best practices in your community to reduce the negative impacts of nutrients in local water sources.

GO Improve hazardous waste + pharmaceutical disposal

Hazardous wastes such as paint, motor oil, gasoline, antifreeze, cleaning products, lawn care chemicals, solvents, mercury, batteries, medicines and pharmaceuticals are harmful to local water sources. Medicine should not be flushed down the toilet, as most municipal treatment systems are not designed to remove pharmaceuticals, so these waste products pass through a treatment plant and are released to a nearby lake or river—most likely a drinking water source. Monitoring of rivers and lakes near metropolitan areas has revealed trace amounts of pharmaceuticals in the water and in fish. Like pharmaceuticals, it is problematic for other hazardous wastes to be put into toilets or sewers, and they should not be poured out onto the ground. Proper disposal of these products is important to ensuring safe drinking water for our communities.

Fortunately, many state and local law enforcement agencies, communities and organizations have established different options for hazardous waste collection. In Illinois, the Environmental Protection Agency (IEPA) coordinates one-day household hazardous waste collections each year in the spring and fall. The IEPA encourages communities or organizations to co-sponsor household hazardous collection events, which you can do by filling out an application and contacting its Waste Reduction Unit. There are also take-back events, mail-back and other collection programs that communities can organize to collect old, expired or unwanted prescription and over-the-counter pharmaceuticals from households.



Case Study

Pharmaceutical Drop-off Program

The City of Chicago, through a partnership between its Public Health and Police Departments, has set up a program for households to drop off unused pharmaceuticals. For security reasons, the drop-off locations are in the lobby of police stations where there are secure blue boxes, which look like mail boxes. People can drop their unused pharmaceuticals into one of the boxes, and the city properly disposes of them to ensure these chemicals do not end up in water supply sources.

Questions for your staff: Protecting your water

- What are our community's risks for source water contamination?
- Have we developed a source water assessment and plan?
- Do we have any current or recent drinking water violations we need to attend to?
- If on deep aquifer water: What treatment practices do we use to eliminate any naturally occurring barium or radium? How are we communicating these practices to our customers to build public trust?
- What is the classification of our drinking water treatment facility?
- Are our operators appropriately certified?
- Are we involved in the American Water Works Association?
- What is our policy and practice regarding sensible salting?
- How are we making sure to not over-salt in order to protect our water supplies?
- Do we have any programs, policies or educational materials available for our community members on best practices in lawn care to reduce nutrients in water sources?
- Do we have a pharmaceutical drop-off program?
- Have we ever sponsored a household hazardous waste collection event in partnership with the IEPA?

Ensure You Have Enough

2

It is important to ensure your community not only has enough drinking water, but that it is also conserving precious resources like water, energy and municipal funds. So what can you do to be a steward in your community? There are a number of practices communities can implement to balance supply with demand and avoid water waste.

GO Track water usage

Measuring community water use and collecting data on a regular basis is critical to making informed decisions about managing your utility, infrastructure and general drinking water service. The State of Illinois requires water suppliers to report annual water withdrawals and water use information. The Illinois State Water Survey (ISWS) is the agency responsible for managing the Illinois Water Inventory Program. The purpose of this program is to compile and maintain records on these withdrawals and usage data in order to glean an accurate understanding of water demand. Reporting to ISWS on water withdrawals and water use is mandatory for public water suppliers, industries that withdraw and use water as well as irrigation water users. This data is useful for you and for your water supply system operations to gauge per-capita water consumption and determine how much water is needed to supply your community. This is the first step in ensuring your utility can meet the needs of its customers.



Lake Michigan Water Users

The amount of water Illinois can withdraw from Lake Michigan every year is limited by a U.S. Supreme Court decree. Any use of water from Lake Michigan within the State of Illinois is authorized by, and requires a permit from, the Illinois Department of Natural Resources (IDNR). Drinking water utilities are required to submit an annual water audit form called LMO-2 to IDNR and must also submit a monthly form which shows daily water usage numbers and the amount of water sold to other permitted drinking water utilities. These practices are important for every water utility that uses Lake Michigan as its drinking water source to ensure Illinois is complying with federal regulations.

GO Conduct annual water loss audits

Wasting water wastes money, which is why controlling water loss in your drinking water distribution system is important. Water loss reduces your utility's revenues, distorts data on customer usage, inflates production costs and stresses resources.



Case Study
Reducing Leaks Saves Money

The City of Evanston invested in leak-detection equipment to proactively address water loss in its distribution system. Between 2013-2015 the City surveyed 314 miles of pipe and located five main breaks and eight service leaks. The savings from eliminating these leaks was estimated at 143 million gallons of water per year. All of these leaks were found to be discharging directly into sewer laterals or mains, or into the ground. Without a leak-detection program, these leaks may never have been found. Additional benefits of reducing non-revenue water for the City of Evanston include cost savings from more accurate leak locating, avoidance of emergency repairs, the ability of city staff to survey all 160 miles of water mains annually without any increase to operating costs and a proactive approach to coming into compliance with the Illinois Department of Natural Resources (IDNR) rules on allowable water loss for communities that use Lake Michigan water.

Annual water loss audits are an invaluable practice in controlling water waste and reducing lost revenue. In basic terms: Knowing the amount of water produced and sent out into your distribution system, minus the amount of water used by your customers (known through metering), equals the amount of water not billed for. This water was somehow used or leaked within the distribution system—non-revenue water. The American Water Works Association (AWWA) has established a standard method as well as free software for utilities to use in conducting robust, annual water loss audits.

Conducting annual water loss audits, validating the findings, implementing plans to ensure accurate meter readings and locating and repairing leaks are important to maintaining a viable, responsible and healthy water system. To keep track of infrastructure conditions and ensure your community is not paying for wasted water due to a leaky system, make sure your utility is using the latest practices and free resources to conduct annual water loss audits and reduce your system's non-revenue water waste today.

GO Analyze supply + demand

Knowing how much water your community uses, and understanding where improvements in your system should be made to reduce water waste, are both important steps. It is also necessary to analyze and understand how much water is available for future demand.



Understanding demands of water will help ensure thoughtful planning for future availability.



Case Study

Monitoring Groundwater Levels

The Barrington Area Council of Governments (BACOG) operates a groundwater monitoring program that measures, maps and analyzes water levels and conditions in the region's shallow aquifer system on a long-term basis. With regular data collection and analysis every five years, the program identifies trends in groundwater levels and describes where and how much water levels are changing.

To achieve ongoing monitoring, BACOG collaborates with the Illinois State Geological Survey (ISGS), U.S. Geological Survey (USGS), the Flint Creek Watershed Partnership and 13 municipalities to obtain data from their respective wells and gauges on an ongoing basis. The BACOG office also relies on both the Illinois State Water Survey (ISWS) and ISGS for guidance and technical support.

While dire conditions are not predicted, water levels in the BACOG area are expected to decline over the next few decades. This monitoring program will determine changes and produce data and reports to inform local government officials, providing the rationale and facts to enable action. The monitoring program and other groundwater efforts at BACOG are also expected to generate community awareness and support for groundwater protection. This proactive initiative for a small region of highly cooperative governments recognizes the critical value of data for addressing any future water supply challenges.

Photo Credit BACOG

While communities in Northeastern Illinois that have permits to use Lake Michigan water already have a set amount of supply, it is still important to analyze future demand to ensure your water allotment is sufficient for future population projections. If your community's water source is not Lake Michigan, understanding how much groundwater or river water is available for your usage (and for the use of communities that share the same source) is imperative to ensuring ample supply now and into the future. As a leader, making sure your utility is conducting regular analysis on the supply and demand for drinking water in your community is important. Bringing new or alternative water sources online takes many years to design, permit and build. Don't wait until it is too late to safeguard the community you serve.

GO Designate groundwater recharge areas

The primary reason for groundwater aquifer depletion is unsustainable withdrawal by communities, private well users and agriculture. Depending on the type of aquifer your community uses for drinking water, you may be able to identify and designate groundwater recharge areas. These are land areas where rainfall is able to seep into the ground and help refill the aquifer. The Illinois State Water Survey or the U.S. Geological Survey are two agencies that can help communities identify groundwater recharge areas. If a particularly useful recharge area is identified, your municipality should take steps via a policy or ordinance to protect that area—for example, by not paving over it or approving uses that pollute the land—in order for clean rainwater to infiltrate those aquifers for future drinking water use.

Groundwater Communities Need to Be on Alert
The Illinois State Water Survey has been monitoring and modeling Illinois' water resources for more than a century. Its current projections for certain groundwater supplies in Northeastern Illinois is quite worrisome, stating that some high-capacity wells could be unusable in as little as 15 years.

GO Reduce Drinking Water Demand

The least expensive guarantee of future drinking water is conservation and efficiency today. Managing demand helps ensure enough drinking water for your community. Following are strategies that help preserve precious water supplies for the future.

Capture and reuse water Rainwater is a great source of water for outdoor irrigation and other purposes. Rainwater catchment systems, which can include cisterns and rain barrels, can be designed and installed on both small- and large-scales. On average, outdoor water use accounts for more than 30 percent of total household water use[20] —that is a lot of drinking water! By promoting the capture and use of rainwater for outdoor irrigation, your community can reduce unnecessary demand on drinking water supplies. Reusing rainwater has the added benefit of reducing the amount of water entering your sewer system, which can help prevent sewer overflows and urban flooding in your region.

Include information about cisterns and rain barrels in your community outreach and education programs, and collaborate with local organizations—such as the Metropolitan Water Reclamation District of Greater Chicago or the Conservation Foundation—to help homeowners purchase and use rain barrels. Consider how the municipality can reduce demand on drinking water for irrigation, perhaps by installing cisterns at public buildings and locations. Or you might install underground cisterns at schools or parks to provide flood relief and water for irrigating turf and other plants in the summer.

Adopt WaterSense and other ways to conserve water Implementing water-conservation programs not only preserves water, but helps your community members save money.

The Environmental Protection Agency's WaterSense program provides tools and products for municipalities, businesses and consumers so they can be smarter about water use and saving money. One component of the EPA's WaterSense program is the certification of WaterSense-labeled products, such as showerheads, toilets and bathroom faucets. These products use at least 20 percent less water than conventionals. By implementing WaterSense products in all municipal buildings, you can save water and money, and set an example to residents in your community.

The Alliance for Water Efficiency (AWE) is a national stakeholder-based nonprofit organization dedicated to the efficient and sustainable use of water. Headquartered in Chicago, AWE advocates for water-efficient products and programs, and provides information and assistance on water conservation efforts. AWE offers resources including a Water Conservation Tracking Tool. This tool uses your community's usage data and system costs to evaluate the potential water savings, expenses and benefits of various conservation programs for your water system.

In addition to the steps outlined above, there are useful guides and handbooks that outline the basics and best practices for tracking water usage, conducting water-loss audits, analyzing available supply and utilizing demand management to help ensure your community has sustainable water service. References and links to these helpful resources can be found in the resource section of this guide at **metroplanning.org/DrinkingWater123**.



Case Study

Protecting Drinking Water While Reducing Urban Flooding

The Village of Northbrook, Illinois recently constructed a new storm sewer and stormwater chamber underneath the northern half of the Village's Wescott Park, a project undertaken in cooperation with the Metropolitan Water Reclamation District of Greater Chicago (MWRD), Northbrook Park District and Northbrook/Glenview School District 30. This 7.5-million-gallon chamber includes a rainwater harvesting system, which enables the Village and the Park District to reuse water captured during rainstorms, thus reducing the amount of drinking water used for irrigation purposes—a win-win.

Photo Credit Metropolitan Water Reclamation District of Greater Chicago

Questions for your staff: Ensuring quantity and reducing waste

- How are we keeping track of water usage? How are we recording that data on a regular basis for our community in order to ensure ample supply?
- Are we keeping up with the requirement to annually submit our water withdrawals and usage information to the Illinois State Water Survey?
- If your water comes from Lake Michigan: Are we submitting our LMO-2 Forms on time every year?
- Do we conduct annual water loss audits? Are we using the approved methodology and free software from the American Water Works Association (AWWA) to conduct those audits? What steps are we taking after an audit to validate the findings?
- How are results from the audit being considered within our water utility budget in order to fix and repair leaks, or invest in updated metering technology?
- Are we coordinating with our neighboring water supply utilities that use the same water sources we do? How?
- What kinds of demand-management programs is our community engaged in? Do we have a program that supports rainwater reuse in our community?
- Where can we implement rainwater reuse on our municipal properties to reduce demand for drinking water for outdoor irrigation purposes?
- Are we a member of the EPA WaterSense Program?
- Are we a member of the Alliance for Water Efficiency (AWE)? How can we utilize the tools provided by AWE to reduce drinking water demand?

Maintain Your Infrastructure

3

Maintaining your drinking water system ensures public health and quality of life for your community members. So what can you do to protect your community? There are a number of practices utilities can implement to responsibly plan and maintain our drinking water systems.

GO Practice asset management

Your water utility is responsible for making sure its infrastructure system stays in good working order to ensure public health and cost efficiency. Asset management is a planning process water utilities use to ensure that infrastructure assets (plants, pumps, pipes, etc.) are being repaired, replaced or upgraded with adequate funding at the right time. **Following are some of the benefits asset management provides a utility**:[21]

- Extended life of infrastructure
- Rate setting based on sound operational and financial planning
- Appropriate budgeting for sustained performance
- Satisfied customers and regulatory compliance
- Improved emergency response, security and safety of assets
- Reduced overall costs for both operations and capital expenditure



Photo Credit Doran

Making sure your utility is implementing best practices for operating an asset management program is key to ensuring your drinking water system remains in good working order. **Following are fundamental steps for operating an asset management program:**

Step 1 Prepare an asset inventory and system map

Step 2 Develop a condition assessment and rating system

Step 3 Assess the remaining useful life of existing infrastructure

GO Be smart about planning for capital improvement projects

Part of a robust asset management program is regular capital improvement planning; these two practices should be interlinked. A Capital Improvement Plan (CIP) provides a mechanism for decision making, a link to long-range plans, a financial management tool and a reporting document.



Case Study
Managing Assets Responsibly

Incorporated in 1921, the Village of Westmont, Illinois' original water mains were constructed of sand cast iron. By the 1970s Westmont, located in DuPage County, Illinois was seeing a large increase in water main breaks, averaging 150 per year by 1990. In 1991, knowing it was going to switch to Lake Michigan for water supply, the Village decided to start an aggressive water main replacement program. This was a good idea: Within the first five minutes of receiving its new water source, the Village had eight water main breaks throughout town, 40 within the first week and 120 after the first month. By the end of the year Westmont had 246 water main breaks—which further confirmed its new water main replacement program was necessary.

From 1991 to 2016, the Village replaced over 18 miles of water main, 300 fire hydrants and 250 valves. This $15 million program was funded through the Water Enterprise Fund, federal grant money during the American Recovery and Reinvestment Act (ARRA) in 2009 and a low-interest loan from the State Revolving Fund (SRF). Westmont has seen a drop in annual water main breaks from a high of 246 in 1992 to just 18 in 2016. The savings to the community since starting the program is just over $11 million, based on avoided overtime, materials, equipment and lost revenue. When this program is completed in 2021, Westmont will have no sand cast iron water mains in its system, and no fire hydrants or valves older than 1975. Through this long-term water main replacement program, Westmont learned that an expensive investment will pay for itself over time and reduce unnecessary drinking water waste in the process.

Photo Credit Mike Ramsey, Village of Westmont

A CIP is not a static document. It should be reviewed every year to reflect the changing priorities, unexpected events and opportunities your community identifies for its drinking water system. **There are multiple benefits to maintaining an up-to-date CIP including**:[22]

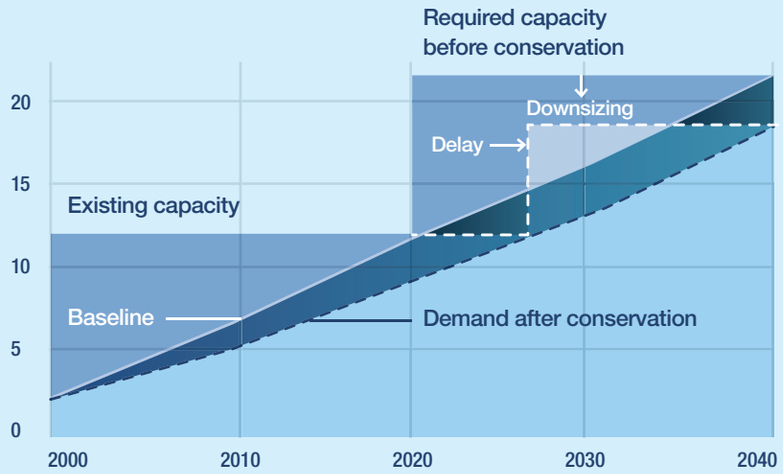
- Focuses attention on community goals, needs and financial capabilities
- Helps build public consensus for, and awareness of, projects
- Allows for improved intergovernmental/departmental cooperation and communication
- Helps ensure efficient use of resources
- Promotes financial stability through infrastructure maintenance, long-term planning of resources and needs, and detailed impacts of capital funding on operating budgets and debt servicing

Capital Improvement Plans
A capital improvement plan (CIP) is a multi-year plan identifying capital projects to be funded during that time. These plans identify each proposed project, its start year, expected expenditures and the means of funding those expenditures.

Important Note: Nearly everything about drinking water production and infrastructure sizing is based upon "Peak Day Demand," which is the capacity required for producing and distributing water during the highest collective demand—often during the hottest, driest days of the year.

When considering what capital improvement projects are necessary for your community, it is also important to evaluate how managing demand can delay or even avoid the expensive buildout of new infrastructure for supplying drinking water to your community.

Managing Demand = Saving Money
Peak demand/capacity in million gallons per day



Source American Water Works Association, 2006. AWWA Manual M52, First Edition, page 75 and Chicago Metropolitan Agency for Planning



Case Study

Managing Demand to Avoid Expensive Capital Projects

In order to save on long-term infrastructure costs for drinking water, the City of Aurora, Illinois approved a water conservation ordinance in 2006. This has resulted in a water demand reduction of 20 gallons per person, per day, and has allowed the City to maintain a much lower than anticipated "Peak Day Demand", even as its population has continued to grow.

This reduced demand has reaped huge overall savings for the municipality's taxpayers by eliminating expensive capital improvement needs. These previously planned infrastructure projects included drilling new deep sandstone wells, the building of required well houses and the construction of collector pipelines to the treatment plant. These capital improvement projects—deferred as a direct result of the City's water conservation ordinance—saved Aurora taxpayers an estimated $7,500,000 over the past 10 years. As Aurora has demonstrated, saving finite water resources for our grandchildren and saving precious dollars for current taxpayers can both be accomplished through a strong water conservation ordinance.

GO Support replacement of old, crumbling infrastructure

Much of our drinking water pipes in the United States were laid in the early to mid-20th Century with a lifespan of 75-100 years. Some of our older urban areas have water infrastructure that's been in the ground for a century or longer. While much of this infrastructure is beneath the ground—out of sight, out of mind—we can't ignore it, not when public health is at stake. Water infrastructure does not exist by itself. It involves people: the people who build it, operate it, maintain it, finance it and ultimately use it. The extensive nature of this infrastructure is important, and supporting the reinvestment in this critical utility service is paramount to ensuring your community is safe, and our infrastructure systems are sound.

A Note on Lead Pipes and Fixtures: As community officials, public health and safety is a number one priority. Lead is a known toxin and lead poisoning is a serious health condition. Communities have taken action to eliminate lead paint in homes and businesses—the same should be done for lead pipes and fixtures.

Water itself does not naturally contain lead. Lead can enter drinking water when old service pipes or fixtures (either owned by the utility or the private property owner) corrode[23]—particularly where the water has high acidity or low mineral content. Conducting an assessment of old lead pipes and fixtures within your community's water system is a first step—and is required by Illinois state law. Likewise, all municipalities should support private property owners in understanding whether they have lead pipes or fixtures and how to test for lead in water. The American Water Works Association (AWWA) has a guide for communicating about lead service lines with your community. Taking a proactive approach in assisting your community's residents, schools and businesses in testing and taking a proactive approach to replacing lead pipes and fixtures is of utmost importance today.

In addition to the steps above, there are a number of useful guides and handbooks available that outline the basics and best practices for implementing asset management programs, creating capital improvement plans and reinvesting in our drinking water infrastructure to ensure community health and well-being. References and links to these helpful resources can be found in the resource section of this guide at metroplanning.org/DrinkingWater123.

Did you know
North America has more than **1 million miles of pipes** beneath our streets designed to bring drinking water to our homes and businesses. What does 1 million miles even look like? Well, the circumference of Earth at the equator is about 24,902 miles, so one million miles of pipe would wrap around our planet 40 times. Chicago alone has over 4,400 miles of water mains. That's a lot of pipe to maintain!





Case Study

Investing in Your Infrastructure Saves Money

The Village of Lansing is located in southeast Cook County, Illinois. The Village purchases its Lake Michigan drinking water from the City of Hammond, Indiana, and has almost 9,400 billed customers—the majority of which are residential, with approximately 650 commercial customers as well. Annual auditing demonstrated increasing water loss in its distribution system, which was due to water meters that were anywhere between 20-23 years old—long past their typical life span. The meters were no longer accurately measuring water usage, which was resulting in non-revenue water for Lansing.

In 2014, the Village identified the need for a community wide water meter replacement initiative to reduce its non-revenue water issue. The upfront capital for this infrastructure improvement project is funded through a State Revolving Fund (SRF) loan, and is estimated to cost about 4.9 million dollars, which includes engineering and construction. Lansing is also installing a fixed network radio frequency automatic meter reading system that will allow them to more efficiently collect meter readings and automatically print water bills—both of which will lead to cost savings. The return on investment is calculated to be less than nine years, with annual savings from more accurate meter readings and reduced operational costs covering the current debt. Construction began in 2017, with the new meter system scheduled to be fully operational in 2018. By investing in necessary capital improvement projects, the Village of Lansing is demonstrating that being a good steward of water can go hand-in-hand with saving money on your utility operations.

Questions for your staff: Maintaining your infrastructure

- What is our asset management program, and what kind of tools do we use?
- How often are our system conditions and future needs updated?
- How are we practicing operational and cost efficiency in our drinking water system?
- What can we implement or do better to ensure our systems assets remain in good working order?
- Do we have a capital improvement plan (CIP) for our drinking water system?
- How often is this CIP updated?
- How are projects outlined in the CIP incorporated into annual budgets and financing plans?
- As required by Illinois state law, have we completed a system-wide assessment of the lead pipes or fixtures within our system?
- What are we doing to replace any identified lead service lines or fixtures owned by our municipality?
- How are we assisting our community members in testing for and replacing lead pipes and fixtures on private property?

4 Finance Your System

Local governments are the primary investors in water infrastructure. Operating water utilities as financially independent enterprises ensures this extensive and critical system has the appropriate resources available to repair and replace infrastructure in a timely and cost-effective manner. The following section outlines best practices in setting fair and viable water rates, and options for utilities to finance capital improvement projects to ensure your community's drinking water system remains safe and sustainable.

GO Set appropriate water rates based on cost of service

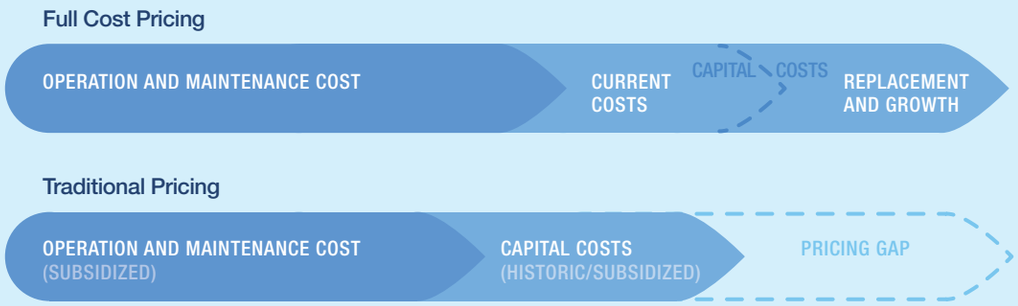
Unlike water pulled right from a lake or river, treated drinking water provided on demand is a utility service—just like energy and telecommunication. Utilities add value to drinking water through treatment, storage and daily distribution directly to customers in their homes, schools and businesses. Treating and delivering water requires both capital and operating expenditures. As such, pricing this service to ensure the long-term viability of the system and sustainability of the water resource is critically important.

Revenues generated by water rates are, and will continue to be, the primary source of funding for drinking water utilities. Water rates must recover the full cost of operations as well as maintenance and capital costs. Rates should also consider resource depletion (scarcity) and environmental costs. Setting water rates at an appropriate price, and creating an enterprise fund so that water utility revenues are used only for utility operation and maintenance, helps ensure sustainable water service and availability for your community now and into the future.

The Illinois-Indiana Sea Grant Program in partnership with the Chicago Metropolitan Agency for Planning and the University of Illinois Extension, developed a Full-Cost Water Pricing Guidebook specifically for community water systems in Northeastern Illinois. The guide is intended to assist local decision makers in setting appropriate water rates to ensure sustainable water service now and into the future.

The Need for Full Cost Pricing

Adjusting water rates to match costs



Source Illinois Indiana Sea Grant and Chicago Metropolitan Agency for Planning

Rate setting is the process through which a water system ensures revenue adequacy. Water suppliers face several decisions about what rate to charge for drinking water service. **Rate setting involves conducting a cost-of-service rate study, and should include the following steps:**

Step 1 Determine cost of service
(including operation, maintenance and capital investment)

Step 2 Project revenue based on future demand

Step 3 Design rate structure

But how do I know what to charge?

Following are key considerations each utility/community should consider throughout the rate-setting process:[24]

- Rates must be set at a level that covers all of the costs to finance, produce, treat, store and distribute water to customers as well as provide capital for investment in the water utility system
- Rates must be fair and equitable
- A water system's revenues should not be used to pay for other municipal services or needs
- Customers should easily understand their water rate
- The rate structure should be easy to administer and be reviewed once a year
- Good rate structures are based on accurate financial information and customer records
- Affordability programs for economically disadvantaged customers need to be established

No elected official wants to raise rates. However, the long-term viability of a community's drinking water system is essential to its sustainability. If rates are reviewed annually as part of the budgeting process, they can be adjusted in small, annual increments instead of infrequent, but large, increases. This is much more palatable for customers over time. A hallmark of sound ratemaking includes basic principles of transparency[25]—customers should easily understand the intent and purpose of a good rate. Given the extent of infrastructure requiring repair and replacement today and in the near future, putting off setting appropriate water rates puts a community in jeopardy.

The Alliance for Water Efficiency (AWE) is a stakeholder-based nonprofit organization dedicated to the efficient and sustainable use of water. AWE operates Financing Sustainable Water, a website which includes guidance, tools and other resources to assist water utilities in ensuring responsible, viable and sustainable water rates and services, now and into the future.



Case Study
Water Rates that Work

The Village of Algonquin, Illinois has been a leader in water conservation. However, reduced consumption has also reduced revenue. The decrease in revenue, plus the fact the Village had not raised rates in a few years, led the Village to conduct a water/sewer rate study. In January 2016, Algonquin approved an increase in water and sewer utility rates, effective November 2016.

A comprehensive water and sewer rate study evaluated capital infrastructure needs (supply, treatment, storage, distribution and control), decreases in usage and funding and increased regulations. The new rate includes a fixed fee of $10 per billing cycle and an increase in consumption charges each year. The new fee structure also retained a water conservation measure, which triples the rate if consumption is over 20,000 gallons. The decision was to charge a flat fee to ensure enough revenue to help cover general maintenance and operations costs of the system while also maintaining water conservation efforts to ensure that water is available for many years to come.

Photo Credit Village of Algonquin

A Note on Water Rates and Affordability: Water rates are on the rise; many customers are seeing increases in their water rates. The reasons are many—water system infrastructure reinvestment needs, the increased costs of treatment and pumping, demand outstripping supply, regulation, etc. What we pay for drinking water is significantly less than what the average consumer pays monthly for cable television, cell phones or even coffee. However, it is important to address emerging affordability issues for vulnerable populations in your community.

Low-income households may face affordability problems if prices continue to rise. In order to avoid and alleviate these hardships, communities can offer equitable pricing structures that mitigate impacts on low-income households such as tiered rates and affordability programs for those demonstrating need. Your utility should be implementing best practices to ensure everyone in your community is appropriately provided for.

GO Finance your capital improvement needs

Without reliable drinking water infrastructure, communities cannot maintain quality of life, economic vitality or a healthy ecosystem. Feasible funding streams to replace and upgrade outdated public water systems are critically needed. Good asset management, regularly updated capital improvement plans and appropriate water rates are critical to understanding what investments your drinking water infrastructure may require in any given year.

But where will the money come from to finance the upfront costs of infrastructure investments? To be sure, there is no one-stop shop for financing our water infrastructure needs. However, there are a variety of options for municipalities to finance drinking water infrastructure upgrades or replacement. The following options are viable ways to finance drinking water infrastructure investments; it is important to note that revenue will still need to be generated from local water rates in order to leverage and eventually pay off these financing options.



Municipal Bonds A municipal bond is a bond issued by a local unit of government to pay for public projects such as roads, schools, and water, wastewater and stormwater infrastructure. Bonds are not a revenue source; they are a means of borrowing money. Bonds allow expenditures—such as capital improvement projects for drinking water systems—that exceed a local government's annual resources.

If a community is considering issuing bonds to pay for drinking water infrastructure projects, it must evaluate how much money is needed over what time period, and identify how the bond holders will be paid. Municipal bonds may be set up as general obligations of the issuer or secured by specified revenues. Either way, the community must have a reliable stream of future incoming funds to demonstrate its ability to pay back its investors.

In Illinois, additional state tax advantages may be available by issuing municipal bonds through the Illinois Finance Authority's "Local Government Revenue Bond Program." The Illinois Finance Authority also offers a municipal program for non-home rule units seeking to borrow up to $1.5 million for essential purpose public projects through its "Local Government Direct Bond Purchase Program."

State Revolving Fund The State Revolving Fund (SRF) is a federal, low-interest loan program designed to support water service infrastructure repair and replacement. Each year, Congress appropriates funds to the SRF, and the U.S. Environmental Protection Agency (USEPA) proportionally distributes these funds to each state based on a regular Needs Assessment. Illinois combines these federal dollars with required state matching funds, program repayments, bond proceeds (generated via the Clean Water Initiative bond sales administered by the Illinois Finance Authority and the Illinois Environmental Protection Agency) and interest on loans to generate a perpetual source of loan money for water infrastructure, which the Illinois Environmental Protection Agency (IEPA) administers.

With these SRF funds, the IEPA provides loans for drinking water mains, water meters, pump stations, storage facilities, treatment plants and just about any infrastructure related to a public water supply system through its Public Water Supply Loan Program (PWSLP). During fiscal year 2016-2017, the PWSLP provided just under $500 million in loans to municipal drinking water systems.



Photo Credit Abby Crisostomo



Reduce Costs by Partnering with Your Neighbors
Given the rising costs of infrastructure and drinking water service, communities can benefit from partnering through service sharing, joint procurement of goods or services and even consolidation of services. While not a new concept, exploring ways to save your community dollars on drinking water service costs by partnering with your municipal neighbors demonstrates effective governance in a time of scarce resources.

If a community in Illinois wishes to apply for a SRF loan, the Illinois Environmental Protection Agency requires the submission and approval of a complete financial package, including a dedicated revenue stream that is adequate to assure loan repayment. Thus, similar to municipal bonds, having a dedicated, established revenue stream is necessary for a community considering an SRF loan to raise capital for crucial infrastructure projects. For more information on how to apply for a State Revolving Fund loan, please see the program webpage on the IEPA's website.

Public-private partnerships In addition to bonds and loans, communities can also establish public-private partnerships (P3s) to finance needed drinking water infrastructure improvements. This approach engages the private sector in funding infrastructure projects to meet public service needs. P3s involve the private sector in financing, planning, design, construction, operation, maintenance and/or rehabilitation and replacement of publicly owned infrastructure.

With P3s, a community typically maintains ownership and ultimate responsibility of any infrastructure. The private sector helps finance projects and/or improve cost efficiencies for construction and/or operation and maintenance. P3s may allow for increasing the ability to leverage public funds while minimizing impacts to a municipality's debt capacity. Like the other financing tools described, P3s require a dedicated revenue stream for repayment.

While there are a number of different ways a municipality can finance its drinking water system, the best approach will vary from community to community. Sound asset management, water rate setting and regularly updated capital improvement plans will allow your community to identify what investments are needed when, and what financing options are the most appropriate.

A number of guides and handbooks outline the basics and best practices for implementing good and equitable water rates as well as guidance on appropriate and advantageous financing for drinking water investment needs. References and links to these helpful resources can be found in the resource section of this guide at **metroplanning.org/DrinkingWater123**.

Questions for your staff: Appropriately financing your water system

- When was our last rate study conducted? Was the community involved in the process?
- Are we considering the full costs of service (operations, maintenance, infrastructure renewal, etc.) in our water rates today?
- Are the revenues from our water services put into a separate enterprise fund reserved for water services and maintenance only?
- Do we have an affordability program for low-income households?
- How are we ensuring sustainable use and equity for customers within our water rate structure?
- What is our current municipal debt load/capacity?
- Do we have any outstanding bonds for drinking water infrastructure repairs?
- Have we ever utilized the State Revolving Fund to finance our drinking water investment needs?
- What drinking water investment needs might a P3 financing option be possible?
- Have we ever tried coordinating joint procurement or purchasing with our neighboring communities? What drinking water investment needs might lend themselves to that type of coordinated approach that could save us money?

5 Plan and Coordinate With Your Neighbors

Drinking water is an integral aspect of planning for municipalities. Without ample water, communities are unable to thrive, let alone exist. Integrating water resources and utility service considerations into your community's current and future plans, policies and ordinances is essential. Following are actions your municipality can take to integrate water more holistically into community planning.

GO Include water in your community comprehensive plans

Land use decisions and future planned development directly impact local water quality, quantity and future usage. They also influence long-term infrastructure maintenance costs. Which is why incorporating water resource and service considerations within community comprehensive plans or land use plans is important. For example, large parking lots next to surface water will impact water quality as stormwater runoff that contains salt, oil, gas and litter can flow directly into drinking water sources. Likewise, different types of housing and landscaping have different impacts on drinking water usage in a community.

The scale at which community planning evaluates the approval of a development proposal must be larger than the development itself. Development generates development—once a new housing development is approved, it attracts other developments such as retail, gas stations, schools, etc. All of these will require more drinking water and more water infrastructure that needs to be maintained over time by the municipality. Incorporating these considerations and calculating the water demand impact is important to ensuring sustainable service and supplies today and in the future.



Many communities now include details about drinking water service and source water protection within comprehensive plans. Whole chapters that address water are showing up in these plans. **Following are beneficial topics to address within your community's comprehensive plans:**

- Overview of the water supply system
  - History of water service in the community
  - Water source
  - Water infrastructure
- Information on water consumption and future forecasting
  - Data on current drinking water usage (total and per capita)
  - Future projected water usage needs
- Water supply challenges and plans to address those challenges (current or future)
  - Supply constraints based on data usage
  - Water pollution challenges
  - Infrastructure condition issues
- Water-wise programs and initiatives
  - Public education initiatives, and customer rebate or incentive programs
  - Outdoor watering restrictions
  - Landscape ordinances
- Drinking water goals for the community
  - Demand management goals
  - Land use and density goals based on average water consumption
  - Emergency management and back-up plans

Is Your Community Water-Wise?
The International Water Association has developed Principles for Water-Wise Cities in order to assist leaders in developing and implementing resilient urban water planning and design. These principles encourage collaboration between local government and the communities they represent. Cities around the world are embracing a new way of incorporating water into future planning—will your community join in being a water-wise city too?



Holistic Water Management—the One Water Approach:
Many leading water management agencies, communities and organizations nationwide are embracing a holistic approach to managing water resources. As defined by the U.S. Water Alliance, One Water is the concept by which all water resources are managed in a sustainable, inclusive and integrated way. One Water encourages coordination across previously siloed industries—drinking water, wastewater, stormwater, planning, architecture, transportation, energy, etc. All of these fields must work together to address how we improve our approach to managing water resources more sustainably.



Photo Credit MPC

Ensure your community planners and water utility managers are coordinating and incorporating important drinking water considerations within the larger planning picture for your community. Here in Northeastern Illinois the Chicago Metropolitan Agency for Planning (CMAP) produced a regional water supply/demand plan in 2010 called Water 2050. The plan includes population forecasting, water demand scenario modeling, impacts on available supply as well as demand management strategies for addressing potential shortages.

GO Plan for droughts

What is a drought?
Drought occurs when there is a prolonged period of little to no rainfall, which can occur at different durations, timing and intensity. The National Drought Mitigation Center (NDMC) has defined drought as "a period of excessive dryness long or intense enough to affect agriculture, habitats or people… (and) are difficult to define because it often develops slowly over months or years…"[26]

Variability in climate can cause drought, which can lead to water shortages. Drought diminishes precipitation, which reduces water levels in surface and groundwater sources. Drought also causes water-quality concerns as contaminants and algae blooms make it harder to treat this water to drinking standards. Given drought's implications for public health, communities and utilities must prepare for these conditions through contingency plans that mitigate water quantity and quality concerns.

Drought doesn't only affect arid regions of the U.S. In the summer of 2012, Illinois experienced a significant drought (as did the rest of the country), which raised concerns of having enough water supply to meet demand. The Illinois State Water Survey (ISWS) monitors drought conditions for groundwater and surface water, and there were noticeable impacts on water levels, mainly in shallow groundwater wells, which caused several water supply systems to be "at risk."

Preparing for drought requires both planning and action. Make sure your community is protected by establishing a drought plan based on sound scientific analysis. In Illinois, the State Water Plan Task Force published "State of Illinois: Drought Preparedness and Response Plan." **This plan includes recommendations on how communities can prepare for drought and guidance for government officials on how to protect their community water systems from drought**:[27]

- Quantify existing water supply resources
- Assess drought vulnerability
- Identify expected changes in future water needs
- Adopt drought preparation plans to address vulnerabilities and potential damages
- Act on those plans when needed



Additional drought risks
include damages or threats to agriculture, the environment, navigation, energy production and recreation. Drought also has economic impacts:

- Increased food prices
- Increased water costs
- Reduced income and spending
- Potential loss of manufacturing and jobs
- Delayed transit of goods (barges that cannot operate due to reduced flow in waterways

Make sure your community is continuously monitoring its drought conditions by tracking Illinois' precipitation levels and drought alerts by the U.S. Drought Monitor, updated weekly by the National Drought Mitigation Center.

The most effective drought plans involve coordination and communication between municipalities, water suppliers and land use planners. Combining the skills, knowledge and responsibilities of these sectors helps ensure drought preparedness and successful mitigation of impacts. Additionally, transparent communication with the public about the effects drought can have on their water supply helps catalyze needed water conservation at the right time. Providing information on local municipal websites, flyers defining outdoor watering restrictions and legal notices can help get the word out and change behavior patterns when it matters most.

GO Be prepared for emergencies

Emergencies are, by definition, unpredictable. Source water contamination and service disruption are the most common emergencies that impact drinking water service in addition to drought. Unplanned drinking water service disruptions can include main or service line breaks, contamination and security breaches. Being prepared is the best approach for dealing with these unplanned emergencies.

An Emergency-Response Plan (ERP) is a written document that details a drinking water system's plan of action for responding to emergencies, disasters and other unforeseen events. The ERP may include detailed steps the public water system will take to respond to potential or actual emergencies including, but not limited to, the following: loss of water supply from a source, loss of water supply due to a major infrastructure failure, damage to power supply equipment or loss of power, or contamination of water in the distribution system from backflow or other causes.



Bioterrorism

Although water utilities might be the last place one would think of as a target for terrorism, contamination of drinking water through intentional means could have catastrophic consequences. The Bioterrorism Act of 2002 requires that drinking water utilities serving more than 3,300 people conduct vulnerability assessments and develop emergency response plans.

Working with your utility managers and developing plans for storage, demand management and alternate sources of drinking water reduces the risk of being unprepared for when an emergency happens. The U.S. Environmental Protection Agency has a guidance manual for communities and their utilities to develop emergency drinking water plans, and details the important questions and information needed to ensure continuous, safe and reliable drinking water service.

The Illinois Environmental Protection Agency regulates pollutant releases to surface waters. However, your community should be proactive in preventing accidents. For example, if there are major facilities that discharge waste into a water source, or have the potential for a spill of a harmful material upstream of your water supply intake, the facilities should have contingency plans for an accidental release. Similarly, groundwater can become contaminated by activities or incidents in the area. For example, if material from a tanker truck spill infiltrates the ground, the groundwater could become unusable. Due to the importance of groundwater quality, many communities implement programs designed specifically to protect groundwater. Procedures should be put in place for your water system to be notified immediately if there is an accidental release, and your water utility should have a response plan if there is an emergency.

The American Water Works Association has an Emergency Preparedness Resource Community to help support utilities in responding to emergencies, as well as a guidance manual, titled Emergency Planning for Water Utilities, that outlines what steps to take to help ensure your community has access to clean and safe water, even in times of emergency. Additionally, developing a communications plan that includes communication with employees, critical facilities in your community, consumers and media is an important part of being prepared for emergencies.

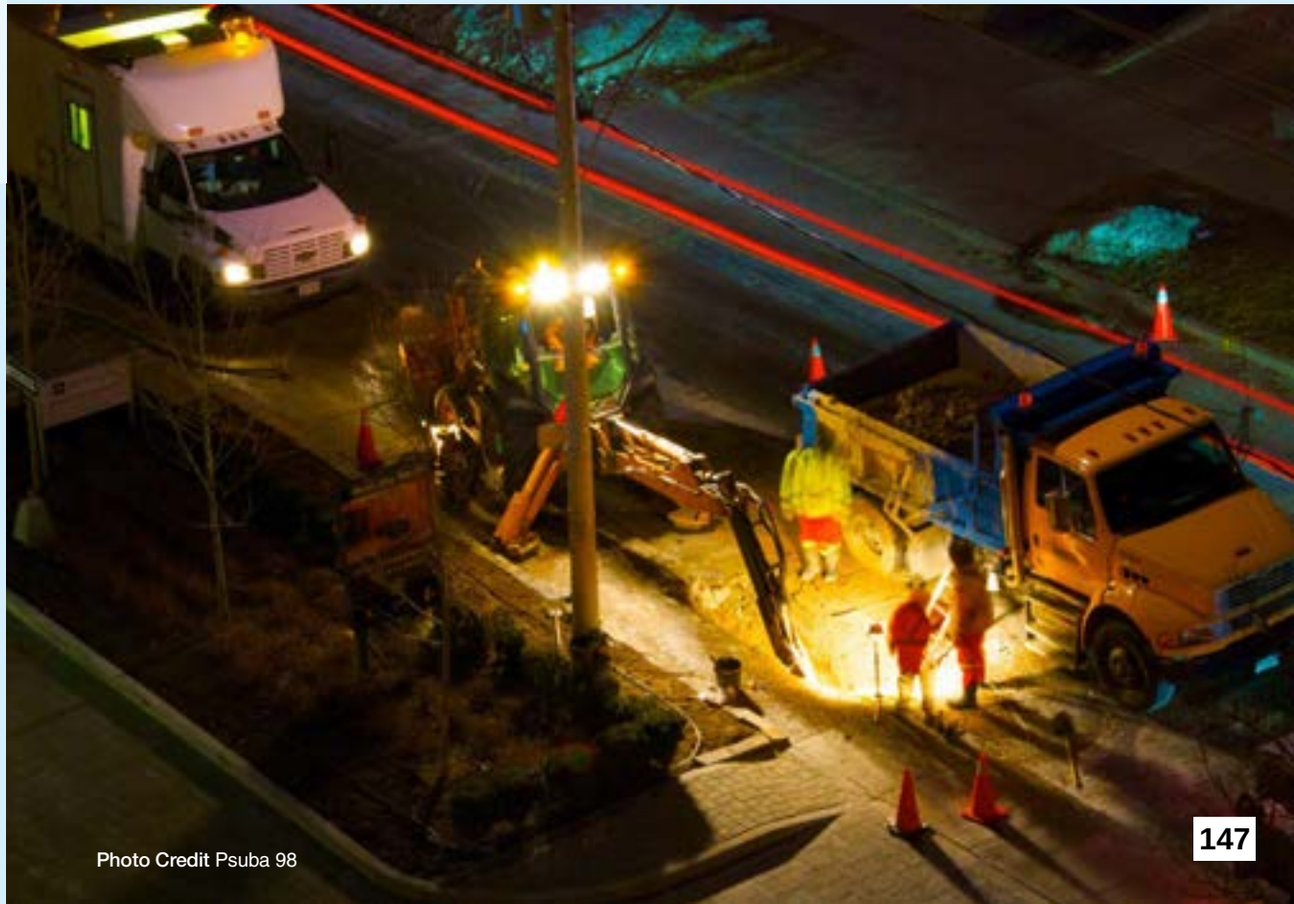


Photo Credit Psuba 98

GO Embrace regional water supply coordination + service sharing

There are more than 400 community water supply systems operating in Northeastern Illinois. Yet our water sources are shared. Our collective impact on water resources is significant and coordinating and communicating across municipal and utility boundaries is imperative.

Transform Illinois
Government effectiveness is imperative. Transform Illinois was created to improve the delivery of public services and infrastructure in Northeastern Illinois. This coalition of local elected officials, civic organizations and research institutions is dedicated to promoting and supporting local government efficiency efforts.

Each utility collects and treats, or purchases, drinking water, and distributes it through a system of pipes and pumps that it maintains. Most of these utilities are owned and managed by a municipality, which means that costs associated with operating and maintaining the system over time are borne by one community. By forming partnerships across municipal and utility boundaries, there are many opportunities to reduce costs for providing water service. Given the rising costs of operating and maintaining sustainable drinking water service, by embracing collaboration, shared services and, in some cases, regionalization, there is potential to save your community significant costs.

The Northwest Planning Alliance (NWPA) is a good example of coordinated communication on regional water supply right here in Northeastern Illinois. The NWPA was formed as a voluntary partnership to address the issues of water supply planning and management within the non-Lake Michigan service area of our region. NWPA seeks to collaboratively plan for and steward its shared river and groundwater resources to ensure a sustainable water supply for the people, economy, environment and future generations. Formed by intergovernmental agreement, NWPA brings together five councils of government (COGs) representing approximately 80 municipalities and five counties: DeKalb, Kane, Kendall, Lake and McHenry. This Alliance has developed numerous free and helpful resources for the region.

Regional coordination and service sharing is imperative to protecting communities and water resources into the future. Some communities have partnered together to supply water service—often through legal structures such as Water Commissions and Joint Action Water Authority's (JAWAs)—in order to save costs and improve system efficiencies. Exploring ways to partner with neighboring municipalities to save water and reduce costs for your community is important.

In addition to the steps outlined above, a number of guides and handbooks outline best practices for incorporating water resources into community planning and regional coordination. References and links to these helpful resources can be found in the resource section of this guide at **metroplanning.org/DrinkingWater123**.





Case Study
Collaboration + Service Sharing In Action

The Carpentersville and West Dundee Water Interconnect demonstrates two communities working together for the benefit of both. The water system interconnection between the Villages of Carpentersville and West Dundee was the result of an intergovernmental agreement to assist in sharing water during emergencies and for planned water system needs. While the Interconnect provides emergency use service, it was primarily designed to allow the high pressure zone of one community to maintain adequate pressure and fire suppression flow rates while the other community's elevated tank was removed from service for maintenance.

The removal of an elevated water tank for maintenance can require up to six months. During this time, a community may have sufficient capacity to meet average and maximum daily demand but then lose the capability to meet instantaneous peak demands and fire suppression. So by interconnecting the two systems, one elevated tank can maintain pressure and provide fire protection for both communities, thereby continuing to protect the health and safety of residents.

Both Carpentersville and West Dundee have recognized the mutual benefit of an emergency water supply and improved operational flexibility during elevated tank maintenance, and the interconnect has been used successfully on multiple occasions to help both communities.

Photo Credit Baxter & Woodman

Questions for your staff: Water planning and regional coordination

- How are we coordinating land-use decisions with drinking water management needs?
- Have we integrated water resource management within our community comprehensive plans?
- Are we incorporating the Chicago Metropolitan Agency for Planning's regional data, information and recommendations on water resources into our community plans?
- Are we monitoring drought conditions on a regular basis?
- Do we have a drought preparedness and response plan? Are we coordinated across departments on these plans?
- How are we prepared to take action to conserve water resources in the event of a drought?
- Does our community have an emergency-response plan (ERP) for drinking water service?
- What contingency plans do we have set up to handle a drinking water emergency?
- Have we done an assessment of possible pollution or contamination risks for our drinking water source(s)?
- Have we coordinated with our neighboring communities to plan collaboratively about drinking water management and service?
- What actions could we take to improve our collaboration with neighboring communities?
- How might we consider service sharing or joint procurement to save our community and citizens money?

Engage Your Community

6

As community leaders, it is important to engage your public in how they can participate and make a difference in protecting water resources and reducing costs. Consumers are often willing to do their part and participate in sound water management practices if given accurate and helpful information. The following section provides guidance on how you can best develop an effective water ethic in your community based on transparency and demonstrated stewardship.

GO Implement water conservation + demand management

Living in a water-rich region like ours, it is easy to question water conservation. Beyond reducing unnecessary water waste to avoid supply constraints, other benefits include extending the life of existing infrastructure, slowing down or avoiding the need for expensive, additional water sources, saving on energy and chemical costs for pumping and treating drinking water and providing the opportunity for economic development by having enough supply for additional industry and population growth.

Water conservation should not be something we think about only during times of drought. Water efficiency is a way of life and a method to ensure water is available at a reasonable cost for future generations. **Water conservation is any action, program or technology that**:

- reduces the amount of water withdrawn from a water supply source
- reduces consumer water use (indoor and outdoor)
- reduces water loss or waste
- improves the efficiency of water use
- increases water recycling and reuse
- prevents water pollution

The adoption of water-efficient practices such as conservation is seen as an important step to reducing peak demand for drinking water, getting more service out of existing systems and delaying the construction of new, expensive sources.



Case Study

Population Growth + Water Conservation Go Together

The Village of Algonquin, Illinois implemented a Water Conservation Plan in 2003 to address concerns about the quality and pressure of its water sources, which are shallow aquifers and one deep well. Under the constant threat of shortages, the Village established a Water Conservation Committee to annually implement and revise the goals of the local Water Conservation Plan—a document which includes both water conservation and increased resident awareness goals. While Algonquin has taken several measures to meet its goals, one of the most successful is water system status alerts—which address restrictions on landscape irrigation. Color-coded alerts are placed around the village to inform residents and businesses of outside water restrictions. If residents or businesses are found to have violated these restrictions, they are fined $100.

From 2003-2009, the Village has added 800 households and 300,000 sq. ft. of commercial space. Despite this growth, Algonquin's summer pumping volumes have decreased from 6 million gallons per day to 3 or 4 million gallons per day. Further progress has also been made in continuing to reduce pumping volumes: From 2007-2016 the average pumping rate has decreased approximately 500,000 gallons per day. And the summer average pumping rates have decreased approximately 700,000 gallons per day. During this time, the Village added approximately 300 residential units and approximately 250,000 square feet of commercial space. Algonquin has proved that communities can grow and thrive without putting unnecessary demand on precious drinking water supplies.

Photo Credit Village of Algonquin

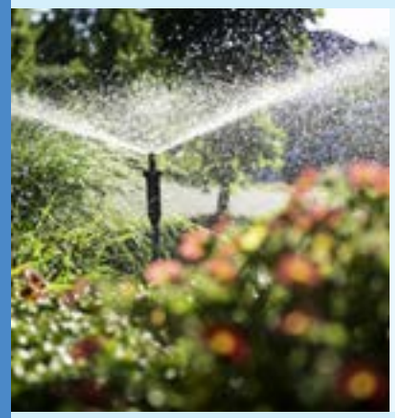
Water demand management involves the adoption of practices, policies or investments by a water utility to achieve efficient water use by all members of the community. **These practices help support water conservation, and include a wide range of measures to help consumers become better stewards of their drinking water**:

- Rebate programs for customers who install water efficient appliances and fixtures
- Outdoor watering restrictions
- The promotion of rainwater for outdoor watering purposes

These measures can be short- or long-term depending on the needs of the community. Strategic planning is a key aspect of a successful conservation program. This means analyzing how much water is used, when, by whom, for what purpose and at what level of efficiency. Based on this detailed data, a community can determine what the potential reduction in water use could be through conservation approaches to achieve improved water use efficiency.

GO Provide community education + engagement programs

Long-term solutions for conserving, protecting and managing our water resources will require that everyone understands the importance of drinking water, and are provided the programs and tools to help. Citizen education campaigns help highlight the importance of water issues and empower individuals to take action. Media, educational materials, schools and incentive programs help to ensure your community is appropriately informed.



Saving finite water resources
for our grandchildren and saving precious dollars for current taxpayers can both be accomplished through a strong water conservation ordinance. Peak demand management is especially important during the summer months when outdoor irrigation use of drinking water spikes and puts extreme pressure on water systems. In our region, the Northwest Water Planning Alliance (NWPA) developed an Outdoor Water Conservation Manual and Model Lawn Watering Ordinance, which has been used by a number of municipalities, and which can easily be adapted for your community to help reduce outdoor watering that puts pressure on drinking water operations.

Education may be the key to getting public support for a utility's water conservation efforts. Outreach should include the costs involved in supplying drinking water and detail how water conservation practices will provide long-term savings. **Opportunities to provide this information can include**:

- An understandable and informative, monthly water bill. Customers should be able to read and understand their water bills, which should include:
  - How much water they used
  - What their water rate is
  - How much they are being charged for their current bill
  - A usage comparison to their previous bill
  - Any information or tips on how they can conserve water
- Educational materials, bill inserts, informational pamphlets and brochures can be made available for customers by mail and at their local stores, libraries, schools, etc. This information can help consumers make informed choices about water use, and helps build trust in their community's local water utility operations.

There are a number of guides and handbooks that outline best practices for engaging your community in water efficiency practices. References and links to these helpful resources can be found in the resource section of this guide at **metroplanning.org/DrinkingWater123**.



The Environmental Protection Agency's WaterSense-labeled products such as showerheads, toilets and bathroom faucets all conserve water, provide savings on water bills and use at least 20 percent less water than conventional products. In 2008, WaterSense products saved consumers 9.3 billion gallons of water and $55 billion on utility bills. Nationwide, dozens of cities, counties and utilities use rebates to spur residents and businesses to purchase these water-efficient products. The WaterSense program also provides free brochures for distribution to customers about landscaping tips and other water conservation practices and facts. It's free to be a community partner and be a part of a brand that symbolizes water efficiency.

Photo Credit EPA WaterSense Program

Questions for your staff: Engaging your community in water efficiency

- What conservation practices have we enacted to reduce unnecessary water consumption?
- Do we have an outdoor watering restriction ordinance?
- How can we improve our water utility bills to provide clear information about usage and rates as well as tips about conservation practices for our customers?
- What community education materials do we have available for residents and businesses? Where?
- What programs have we implemented to help reduce peak demand on drinking water with our customers?

As a local leader, you hold the key to making sure your community has a safe and sustainable drinking water system now and into the future. The decisions you make, the actions you take (or do not take) regarding drinking water will impact the people, businesses and ecosystems in your region for decades.

As this guide has outlined, we have significant challenges to overcome, but they are fixable. The actions in *Drinking Water 1-2-3* will help, but it takes strong leadership from you.

MPC has created an interactive, online version of *Drinking Water 1-2-3* which contains a **Resource Guide** that provides additional handbooks, reports and websites categorized for your use. We encourage you and your staff to use these helpful resources to employ the practices outlined in this guide. Access the website at: metroplanning.org/DrinkingWater123.

Appendices

Glossary of Terms

Aquifer An underground layer of rock, can be shallow or deep, that can hold or transfer water.

Aquifer desaturation The over pumping or depletion of a groundwater source.

Cistern or Rain barrel A waterproof repository used to collect and store rain water runoff to prevent flooding and water quality issues.

Consumer Confidence Report (CCR) A required, annual drinking water quality report produced and distributed by a community water system to all its customers.

Contaminant A substance that may be found in drinking water which would produce nuisance or negative health consequences.

Drought A period of excessive dryness long enough to affect agriculture, habitats or people.

Groundwater The water beneath the surface of the ground, consisting largely of surface water that has seeped down. It is the source of water in springs and wells.

Groundwater recharge area Identified land where rainfall is able to seep into the ground and help refill an aquifer.

Hydrologic cycle The continuous movement of water from oceans, lakes, rivers and other water sources to air and land, and then back into these water bodies through rain and snow. It is a cyclical cycle.

Impervious surface A hard material such as concrete and asphalt that prevents water from seeping into the ground.

Maximum Contaminant Level (MCL) The maximum concentration of a contaminant that may be present in drinking water. Utilities are required to test their drinking water regularly and the concentration of a contaminant must not exceed the applicable MCL.

Non-revenue water The water loss in a drinking water distribution system due to leaking infrastructure, faulty meters or theft. These losses result in lost revenue and wasted water.

Potable water or drinking water Water that is safe to drink or use for food preparation without risk of health problems.

Private well An access point to groundwater in underground aquifers on private property.

Public water system A utility that delivers water to the public and charges a fee for this service—these systems can be publicly or privately owned.

Recharge An increase in the amount of water in a given water source from precipitation, infiltration or human activity.

Safe Drinking Water Act (SDWA) A law by Congress in 1974 which authorizes the establishment of minimum standards for drinking water and requires all owners or operators of public water systems to comply with these standards.

Stormwater runoff The rain or snow melt that is not absorbed into the ground, but, instead, flows over various surfaces, picking up pollutants, before draining into a local surface water source.

Surface water A water source on the surface, which includes lakes, ponds, rivers and reservoirs.

Water conservation Practices that promote the efficient use of water, such as minimizing losses, reducing wasteful use and protecting availability for future use.

Water demand An amount of water desired for use by a public water system's customers.

Watershed The specific land area that drains to a lake, river or stream.

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Drinking Water 1-2-3

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140 S. Dearborn St.
Suite 1400
Chicago
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VILLAGE OF SCHAUMBURG

AGENDA ITEM SUMMARY

Recommendation to Approve Completion of the Plans and Specifications for Bidding of the FY 26/27 Street Improvement Program
12/30/25
Engineering and Public Works Committee

Presenter: Joe Velna, Engineering Inspector
Lead Department: Engineering and Public Works

Executive Summary:

Staff annually proposes a list of streets which are recommended for improvements for the upcoming construction year to the Engineering and Public Works Committee. After receiving Village Board approval, the team will proceed with the development of plans and specifications for bidding. The approval allows the Village to secure bids early in the construction season.

The proposed FY 26/27 Street Improvement Program is comprised of the following:

- 18.45 miles of Preventative Maintenance
- 3.52 miles of Corrective Resurfacing
- 3.18 miles of Modified Reconstruction
- 1.03 Miles of Reconstruction

The estimated costs depicted in the included memorandum are based on historical square foot costs tracked by our PAVER software program. Actual costs will be dependent upon bids.

The FY 26/27 Street Improvement Program includes improvements to the Wingate area, Cedarcrest area, Aimtree area, and others. The selection of streets for improvement has been coordinated with the upcoming Watermain Replacement with the Street Program for 2026 and includes streets for the CDBG Resurfacing project.

The program includes the reconstruction of approximately 2.51 miles of bike paths. The planned bike path improvements include improvements to bike paths along Wise Road, Bode Road, at Basswood Road, and Commerce Drive, among others.

The final scope of the FY 26/27 Street Improvement Program, including professional engineering services for construction and design, will be based on the approved funding. The scope includes:

- FY 26/27 Reconstruction, Modified Reconstruction, and Corrective Resurfacing
- FY 26/27 Preventative Maintenance Improvements
- FY 26/27 Parking Lot Rehabilitation
- FY 26/27 Bike Path Improvements
- FY 26/27 Pedestrian Enhancement Maintenance and Replacement

- FY 26/27 Concrete Repair Program, including:
    - FY 26/27 Curb Replacement Program
    - FY 26/27 Sidewalk Replacement Program
    - FY 26/27 Utility Dig Up Program
    - FY 26/27 Town Square Sidewalk Repair Program

Recommended Action:

The Village Manager recommends that the Engineering & Public Works Committee recommend the Village Board approve completion of bidding plans and specifications for the FY 26/27 Street Improvement Program.

ATTACHMENTS:

- Memo
- Street Program List
- Streets Program Map
- Bike Path List
- Bike Path Map

VILLAGE OF SCHAUMBURG
--- PROGRESSTHROUGHTHOUGHTFULPLANNING ---

Date: December 30, 2025

To: Brian Townsend, Village Manager

From: Joseph Velna, Engineering Inspector

Subject: Recommendation to Approve Completion of Plans and Specifications for Bidding of the FY 26/27 Street Improvement Program (SIP)

For: Engineering & Public Works Committee

Introduction:
The Village of Schaumburg owns and maintains approximately 211.1 centerline miles of streets. These streets are categorized into two networks:

- **Local Street Network:** consisting of residential streets, residential collectors, business, industrial and frontage roads.
- **Vital Street Network:** consisting of FAU eligible routes that allow for funding assistance.

The streets, in total, comprise the Village Street Network and are summarized in Table 1 below.

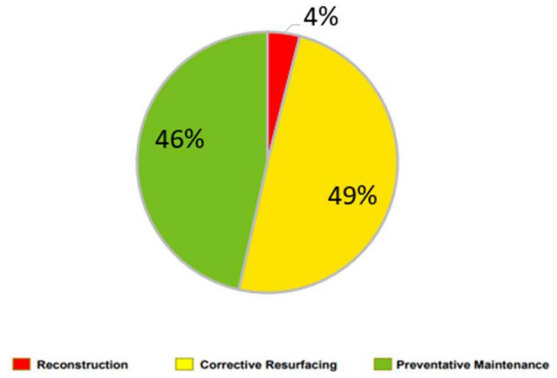
Village of Schaumburg Street Network

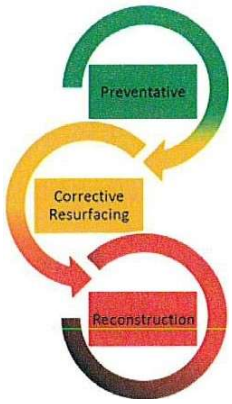
Local Street Network		
Classification	Centerline Miles	Percentage of Total Miles
Residential	136.7	65%
Residential Collectors	14.8	7%
Business, Industrial, and Frontage Roads	18.4	9%
Sub-Total	169.9	81%
Vital Street Network		
Classification	Centerline Miles	Percentage of Total Miles
FAU / TIF	41.2	19%
Total Centerline Miles		
211.1		

The network consists of three material types: flexible, rigid, and composite pavements. Flexible pavements are constructed with an asphalt surface on a gravel, asphalt or pozzolanic material base. Rigid pavements are constructed of concrete placed on a gravel or asphalt base. Composite pavements consist of asphalt surface material placed over a concrete base. The Village of Schaumburg Street Network consists of 203.5 centerline miles of streets that are the flexible type, 6.5 centerline miles are rigid pavements, and 1.1 miles being composite pavements.

Discussion:
Upon completion of the FY 26/27 Street Improvements, the following pie chart illustrates the percentage breakdown of the Local Network based upon our Pavement Management Plan (PMP) that categorizes our network into three categories (Preventative Maintenance, Corrective Resurfacing, and Reconstruction). The PCI thresholds for the three categories are 70 and above for preventative maintenance, 69 to 30 for corrective resurfacing, and 29 to 0 for reconstruction.

Pavement Condition following FY 26/27 Street Program





The scope of the FY 26/27 SIP reflects the Village's PMP utilizing data from the last comprehensive street network evaluation gathered in 2024. Collective pavement patching efforts completed both contractually and by the Street Division will continue in FY 26/27. Staff has seen significant increases in the streets Pavement Condition Index (PCI) where these patching efforts have been completed.

The FY 26/27 SIP of $8 million consists of the following amounts based upon historical square foot costs tracked by our PAVER software program. Actual amounts will be dependent upon bids.

Street Repair Program:

Improvement Category	Amount
Preventative Maintenance (Crack Sealing/Reclamite)	$240,000
Corrective Resurfacing	$2,299,949
Modified Reconstruction	$3,710,253
Reconstruction	$1,287,544
Total Construction Dollars	**$7,537,746**

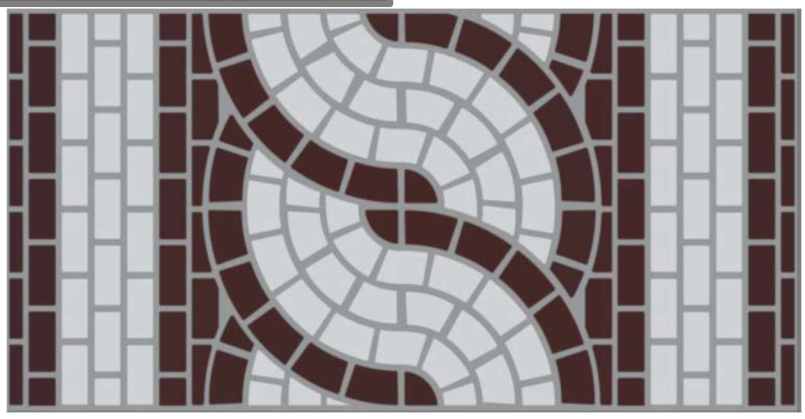
The recommended FY 26/27 Street Improvement Program includes 18.45 miles of preventative maintenance, 3.52 miles of corrective resurfacing, 3.18 miles of modified reconstruction, and 1.03 miles of reconstruction. Pavement cores and bores are typically completed while the plans and specifications are being completed for these improvements. Based upon data received from the pavement cores and borings treatment changes may be recommended to the presented repair strategies.

The improvements for FY 26/27 are estimated to be consistent with the allotted budget. Should the bid results be less than the allotted budget, staff would make a recommendation to add streets to these improvements as funding and timing allows. However, if the bids exceed the allotted budget, staff will make a recommendation to omit streets within the improvements when awarded.

Pedestrian Enhancements:
Staff is also recommending continuing Enhanced Pedestrian Crossing Maintenance and Replacement. This program replaces decorative crosswalks that have exceeded their useful life around the Village. The CIP program currently includes $75,000 for FY 26/27. All four legs of the Woodfield Road and Mall Drive intersection are scheduled for replacement in FY 26/27.

Pedestrian Enhancement illustration and pattern utilized in Residential areas:





Bike Path Reconstruction and Resurfacing Program:
The FY 26/27 Bike Path program will restore about 2.51 miles of off-street bike paths. The total cost is estimated at around $460,000. The list of the locations planned for work is attached.

Parking Lot Rehabilitation and Resurfacing:
The FY 26/27 Parking Lot Rehabilitation will include the parking lots listed below with their recommended maintenance activity.

FY 26/27 Parking Lot Rehabilitation

Location	Pavement Maintenance Activity
Parking Lot Condition Survey	Study
Fire 51,52,53,54	Seal Coat
Public Safety Front and Rear lot	Seal Coat
Trickster Lot	Seal Coat
Public Work Employee Lot	Seal Coat

Concrete Repair Program:
The 26/27 Concrete Repair Program will include the following work.

- **Curb Replacement Program:** This is an annual program consisting of replacing deteriorated curbs and gutter on village streets. Recommended locations are based upon Customer Service Request's (CSR) called in and evaluated by Engineering and Public Works staff to determine if replacement is warranted.
- **Sidewalk Replacement Program:** This is an annual program consisting of replacing deteriorated sidewalks on Village streets. Recommended replacement locations are based upon Customer Service Request's (CSR) called in and evaluated by Engineering and Public Works staff to determine if replacement is warranted.
- **Utility Dig Up Program:** This is an annual program that restores concrete and any adjacent asphalt restoration as a result of dig up repairs.
- **Town Square Sidewalk Repair Program:** This annual program completes minor sidewalk repairs in Town Square such as broken vertically displaced sidewalk.

Funding Summary:
The funding indicated in this report will be proposed in the FY 26/27 budget CIP and subject to Village Board approval. The proposed funding summary chart is illustrated below:

Proposed FY 26/27 Funding for the 2026 Street Improvement Program and 2026 Concrete Repair Program		
Account	**Program**	**Amount**
4409010-7454	Street Repair and Reconstruction	$7,255,760
4409010-7454	Street Repair and Reconstruction - Phase II Design Services	$177,200
4409010-7454	Street Repair and Reconstruction - Phase III Construction Services	$567,040
Street Improvement Program FY 26/27 Total		**$8,000,000**
5729020-7455	Parking Lot Rehabilitation – Old Schaumburg Center	$2,000
6809010-7453	Parking Lot Rehabilitation – Building Replacement	$48,000
4409010-7453	Parking Lot Rehabilitation – Capital Improvements - Study	$53,000
Parking Lot Maintenance Funding FY 26/27 Total		**$103,000**
4409010-7451	Bike Path Rehabilitation	$450,000
4409010-7451	Bike Path Rehabilitation - Phase II Design Services	$25,000
4409010-7451	Bike Path Rehabilitation - Phase III Construction Services	$25,000
Bike Path Rehabilitation Funding FY 26/27 Total		**$500,000**
4409010-7454	Curb Replacement Program	$577,500
4409010-7456	Sidewalk Repair Program	$550,000
5724060-7260	Utility Dig Up Repairs	$265,000
5724060-7247	Utility Dig Up Landscaping	$60,000
5729020-7457	Utility Dig Up Repairs - Phase III Construction Services	$32,500
2389010-7453	Town Square Sidewalk Repairs	$55,000
2026 Concrete Program Funding FY 26/27 Total		**$1,540,000**
Proposed Funding Total for FY 26/27		**$10,143,000**

Proposed FY26/27 Street Program List

Street Name	From	To	SectionID	Surface Type	Predicted PCI	Length (ft)	Area (sf)	Treatment	Cost / sf	Estimated Budget
CORRECTIVE RESURFACING										
BEECH DR FRONTAGE	BEECH DR	BEECH DR	2324	AC	60.68	595	*17,250*	CR1	$4.17	$71,933
BRISTOL LANE	PARKER DR	SOUTH END	1044	APZ	63.97	745	*21,609*	CR1	$4.17	$90,108
CHILMARK LN	STARFIRE DRIVE	MENDON LANE	2452	AC	71.4	836	24265	CR1	$4.17	$101,185
COLWYN DRIVE	IVERSON LN	BRAINTREE DR	489	AAC	63.51	1196	*34,689*	CR1	$4.17	$144,652
COVEHILL COURT	NORTH END	SAGAMORE DR	379	AAC	65.35	385	*9,241*	CR1	$4.17	$38,534
IVERSON LANE	ALLISON LN	ELMHURST LN	491	AC	66.50	244	*7,073*	CR1	$4.17	$29,494
MENDON LANE	CHILMARK LN	SHERBORN LN	2451	AC	63.06	372	*10,777*	CR1	$4.17	$44,940
QUANSET COURT	SAGAMORE DR	EAST END	1283	AAC	65.07	318	*9,212*	CR1	$4.17	$38,415
SHERBORN LANE	MENDON LN	CARYVILLE LN	1522	AAC	65.99	294	*8,527*	CR1	$4.17	$35,558
SHERBORN LANE	STAFFIRE DR	MILLIS LN	2454	AAC	67.92	323	*9,362*	CR1	$4.17	$39,041
SHERBORN LANE	HAVERHILL LN	STAFFIRE DR	284	AAC	66.54	292	*8,472*	CR1	$4.17	$35,328
SHERBORN LANE	MILLIS LN	GLENRIDGE LN	285	AAC	67.82	327	*9,475*	CR1	$4.17	$39,511
SHERBORN LANE	GLENRIDGE LN	KNOLLWOOD DR	286	AAC	69.94	318	*9,216*	CR1	$4.17	$38,429
SHERBORN LANE	WALNUT LN	LYNNFIELD LN	428	AAC	69.11	328	*9,519*	CR1	$4.17	$39,693
SHERBORN LANE	LYNNFIELD LN	MENDON LN	429	AAC	65.07	321	*9,320*	CR1	$4.17	$38,863
STAFFIRE DRIVE	CHILMARK LN	SHERBORN LN	282	AC	72.90	308	*8,949*	CR1	$4.17	$37,317
STAFFIRE DRIVE	SCHAUMBURG RD	CHILMARK LN	2453	AC	78.50	206	*5,979*	CR1	$4.17	$24,932
STAFFIRE DRIVE	TIFFANY DR	SCHAUMBURG RD	1365	AC	65.16	325	*9,421*	CR1	$4.17	$39,287
AIMTREE PLACE	SAGAMORE DR	WIANNO LN	132	AAC	55.57	571	*16,572*	CR2	$4.50	$74,573
AIMTREE PLACE	TRURO CT	RUGBY PL	140	AAC	55.12	272	*7,902*	CR2	$4.50	$35,557
AIMTREE PLACE	SALEM DR	MASHPEE LN	142	AAC	51.14	643	*18,652*	CR2	$4.50	$83,935
AIMTREE PLACE	RUGBY PL	SAGAMORE DR	150	AAC	54.03	150	*4,341*	CR2	$4.50	$19,535
ALLISON LANE	SELKIRK DR	ELMHURST LN	2273	AC	51.68	836	*24,235*	CR2	$4.50	$109,060
COLWYN DRIVE	SPRINGINSGUTH R	IVERSON LN	488	AAC	54.58	831	*24,105*	CR2	$4.50	$108,474
ELMHURST LANE	IVERSON LN	ALLISON LN	2272	AC	54.39	1062	*30,801*	CR2	$4.50	$138,605
IVERSON LANE	CHALFONT DR	ALLISON LN	490	AC	56.03	289	*8,394*	CR2	$4.50	$37,773
IVY COURT	LINSEY AVE	EAST END	27	AAC	54.03	388	*9,310*	CR2	$4.50	$41,895
LINSEY AVENUE	MELODY CT	IVY CT	2534	AAC	51.23	1291	*37,439*	CR2	$4.50	$168,476
MELODY COURT	LINSEY AVE	EAST END	2063	APZ	55.76	122	*3,529*	CR2	$4.50	$15,881
PATUXET COURT	NORTH END	PERTH DR	1444	AAC	55.03	297	*7,122*	CR2	$4.50	$32,047
ROSE COURT	LESLIE LN	EAST END	2525	APZ	57.30	256	*6,146*	CR2	$4.50	$27,655
SELKIRK DRIVE	CHALFONT DR	ELMHURST LN	1960	AC	55.30	136	*3,937*	CR2	$4.50	$17,717

Street Name	From	To	SectionID	Surface Type	Predicted PCI	Length (ft)	Area (sf)	Treatment	Cost / sf	Estimated Budget
SHATTUCK COURT	NORTH END	SHATTUCK LN	1447	AAC	55.85	208	*4,991*	CR2	$4.50	$22,458
SHERBORN LANE	CARYVILLE LN	HAVERHILL LN	283	AAC	69.94	303	*8,781*	CR2	$4.50	$39,517
SKYVUE LANE	HITCHING POST L	WALNUT LN	399	AC	55.21	433	*12,565*	CR2	$4.50	$56,543
STAFFIRE DRIVE	WALNUT LN	TIFFANY DR	395	AC	52.95	642	*18,609*	CR2	$4.50	$83,742
STOUGHTON COURT	WEST END	SAGAMORE DR	1285	AAC	51.86	430	*10,313*	CR2	$4.50	$46,407
TIFFANY DRIVE	WALNUT LN	YARDLEY LN	397	AAC	55.30	845	*24,498*	CR2	$4.50	$110,240
TOBEY COURT	WEST END	SAGAMORE DR	380	AAC	52.04	468	*13,566*	CR2	$4.50	$61,046
WHIDAH COURT	NORTH END	SAGAMORE DR	326	AAC	54.21	385	*9,243*	CR2	$4.50	$41,595
					Totals	**18,590**		**3.52**	**miles**	**$2,299,949**

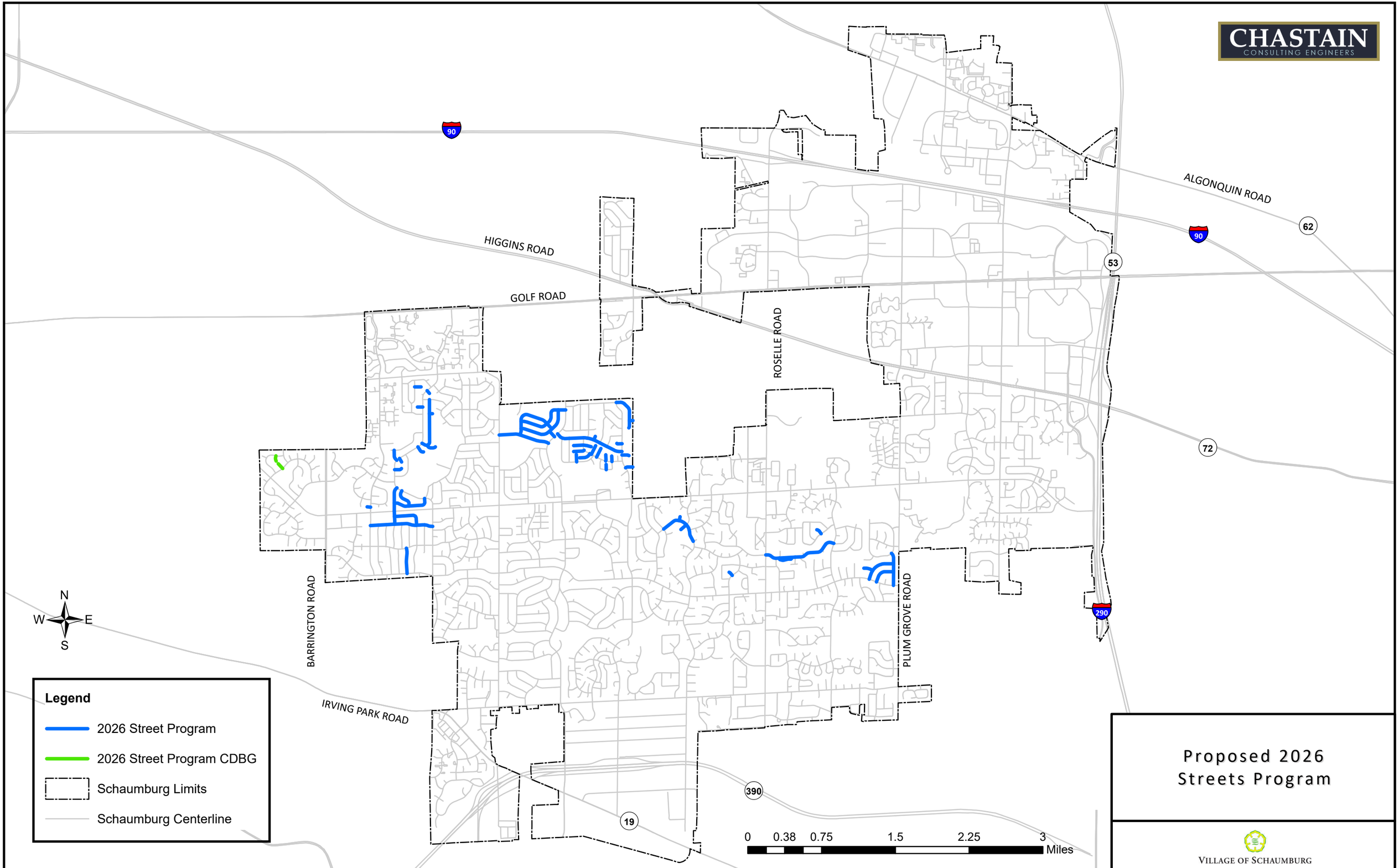
Street Name	From	To	SectionID	Surface Type	Predicted PCI	Length (ft)	Area (sf)	Treatment	Cost / sf	Estimated Budget
MODIFIED RECONSTRUCTION - HEAVY PATCHING										
AIMTREE PLACE	MASHPEE LN	ALDEN LN	129	AAC	50.87	319	*9,241*	MR1	$7.20	$66,535
AIMTREE PLACE	WICKHAM DR	BRAINTREE DR	151	AAC	47.74	264	*7,647*	MR1	$7.20	$55,061
AIMTREE PLACE	WIANNO LN	WICKHAM DR	1638	AAC	41.51	272	*7,899*	MR1	$7.20	$56,876
ALLISON LANE	BRAINTREE DR	SELKIRK DR	1455	AC	48.99	296	*8,581*	MR1	$7.20	$61,787
ALLISON LANE	ELMHURST LN	IVERSON LN	1716	AC	42.74	1103	*31,994*	MR1	$7.20	$230,354
BARCLIFFE LANE	SAGAMORE DR	NORTH END	1443	AAC	49.43	222	*6,430*	MR1	$7.20	$46,298
BEECH DRIVE	SUMMIT DR	FAIRFIELD CT	2735	AC	41.25	1770	*60,182*	MR1	$7.20	$433,308
BRISTOL LANE	NORTH END	SOUTH END	1995	APZ	44.75	288	*8,353*	MR1	$7.20	$60,141
CEDARCREST DRIVE	SAMOSET LN	CEDAR CT	2485	AAC	43.91	740	*21,448*	MR1	$7.20	$154,425
CEDARCREST DRIVE	CEDAR CT	HILLTOP DR	2499	AAC	47.20	334	*9,673*	MR1	$7.20	$69,645
CHALFONT DRIVE	IVERSON LN	SELKIRK DR	328	AC	50.51	1201	*34,820*	MR1	$7.20	$250,707
ELMHURST LANE	ALLISON LN	SELKIRK DR	32	AC	49.16	290	*8,398*	MR1	$7.20	$60,468
GROEN COURT	WEST END	GROEN LN	1352	AC	43.75	372	*8,936*	MR1	$7.20	$64,337
HYANNIS COURT	SALEM DR	EAST END	920	AAC	50.60	285	*6,835*	MR1	$7.20	$49,214
IVERSON LANE	COLWYN DR	CHALFONT DR	1636	AC	48.36	256	*7,438*	MR1	$7.20	$53,557
LINCOLNSHIRE COURT	WEST END	STOCK PORT LN	2279	AAC	49.07	243	*5,832*	MR1	$7.20	$41,992
LINSEY AVENUE	LAWSON RD	MELODY CT	2579	AAC	41.57	558	*16,168*	MR1	$7.20	$116,409
PARKER DRIVE	JONES RD	BRISTOL LN	2209	AAC	50.78	340	*9,860*	MR1	$7.20	$70,993
QUANSET COURT	WEST END	SAGAMORE DR	2253	AAC	49.70	389	*11,273*	MR1	$7.20	$81,164
ROMM COURT	WALNUT LN	EAST END	2539	AC	47.47	292	*7,008*	MR1	$7.20	$50,455
VIOLA COURT	WALNUT LN	SOUTH END	24	AC	48.63	147	*3,531*	MR1	$7.20	$25,421
WAPOOS COURT	NORTH END	SAGAMORE DR	1442	AAC	49.34	245	*5,885*	MR1	$7.20	$42,369
WINGATE DRIVE	BERKSHIRE LN	GROEN LN	390	AC	43.54	437	*12,668*	MR1	$7.20	$91,211
WYOMA LANE	WARWICK LN	WEATHERSFIELD W	2194	APZ	48.36	1014	*29,401*	MR1	$7.20	$211,689
ARLEEN COURT	WALNUT LN	EAST END	2538	AAC	36.60	324	*7,784*	MR2	$8.85	$68,887
BERWICK COURT	WEST END	HAZEL DR	1426	AC	39.40	177	*4,239*	MR2	$8.85	$37,514
CEDAR COURT	NORTH END	CEDARCREST DR	188	AAC	34.10	159	*3,819*	MR2	$8.85	$33,794
CEDARCREST DRIVE	HILLTOP DR	BRANCHWOOD DR	1578	AAC	31.60	238	*6,903*	MR2	$8.85	$61,091
CEDARCREST DRIVE	BRANCHWOOD DR	LINWOOD CT	1579	AAC	39.50	486	*14,088*	MR2	$8.85	$124,676
GROEN LANE	GROEN CT	WEATHERSFIELD W	1351	AC	31.10	372	*10,779*	MR2	$8.85	$95,390
LEEDS PASS	CHALFONT DR	BRAINTREE DR	1019	AAC	39.60	295	*8,548*	MR2	$8.85	$75,647
LINSEY AVENUE	IVY CT	WALNUT LN	1628	AAC	38.40	235	*6,818*	MR2	$8.85	$60,341
MILTON LN 2	BRISTOL LN	VILLAGE LIMITS	6083	AAC	37.90	142	*4,118*	MR2	$8.85	$36,444
OSAGE LANE	SALEM DR	EAST END	921	AAC	33.20	294	*8,514*	MR2	$8.85	$75,349
ROCKNE COURT	WALNUT LN	SOUTH END	1634	AC	34.60	170	*4,075*	MR2	$8.85	$36,061

Street Name	From	To	SectionID	Surface Type	Predicted PCI	Length (ft)	Area (sf)	Treatment	Cost / sf	Estimated Budget
SANTUIT COURT	WEST END	SALEM DR	2206	AAC	30.00	212	*5,078*	MR2	$8.85	$44,936
SELKIRK DRIVE	ELMHURST LN	ALLISON LN	1635	AC	37.90	843	*24,453*	MR2	$8.85	$216,412
TIFFANY DRIVE	YARDLEY LN	STAFFIRE DR	396	AAC	35.90	619	*17,963*	MR2	$8.85	$158,969
WINGATE DRIVE	PRESTON LN	WEATHERSFIELD W	2309	AC	32.70	547	*15,856*	MR2	$8.85	$140,324
					Totals	**16,787**		**3.18**	**miles**	**$3,710,253**
RECONSTRUCTION										
BEECH DRIVE	FAIRFIELD CT	BEECH DR FRONTAGE	412	APZ	25.40	141	*4,101*	RCN	$9.15	$37,523
BEECH DRIVE	BEECH DR FRONTAGE	BEECH DR FRONTAGE	1963	APZ	20.30	488	*14,150*	RCN	$9.15	$129,477
BEECH DRIVE	BEECH DR FRONTAGE	JULI DR	2326	APZ	21.07	131	*3,813*	RCN	$9.15	$34,886
BEECH DRIVE	JULI DR	ROSELLE RD	411	APZ	19.30	445	*12,892*	RCN	$9.15	$117,962
BERRY COURT	WEST END	WALNUT LN	2526	AC	26.90	211	*5,075*	RCN	$9.15	$46,433
GROEN LANE	WINGATE DR	GROEN CT	1350	AC	23.60	928	*26,903*	RCN	$9.15	$246,163
HILLTOP DRIVE	CEDARCREST DR	SOUTH END	1576	APZ	23.70	290	*8,404*	RCN	$9.15	$76,898
KNOLLWOOD COURT	WEST END	KNOLLWOOD DR	1993	AC	20.80	139	*3,342*	RCN	$9.15	$30,576
PRESTON LANE	WEATHERSFIELD W	WINGATE DR	388	APZ	25.70	914	*26,519*	RCN	$9.15	$242,652
TRURO COURT	NORTH END	AIMTREE PL	2543	AAC	24.00	149	*3,587*	RCN	$9.15	$32,825
WINGATE DRIVE	GROEN LN	PRESTON LN	2308	AC	26.70	316	*9,175*	RCN	$9.15	$83,950
YARDLEY LANE	WALNUT LN	TIFFANY DR	1366	AAC	25.60	785	*22,754*	RCN	$9.15	$208,199
					Totals	**4,938**		**0.94**	**miles**	**$1,287,544**

Contract Total		**$7,297,746**
7.64	**miles**	

CDBG										
WINFIELD CT	HEATHERWOOD DR	SOUTH END	203	AAC	20.70	216	*6,278*	RCN	$9.15	$57,446
ODLUM CT	NORTH END	ODLUM DR	2518	AAC	24.70	259	*7,506*	RCN	$9.15	$68,684
					Totals	**475**		**0.09**	**miles**	**$126,130**

CHASTAIN
CONSULTING ENGINEERS



Proposed 2026 Streets Program

VILLAGE OF SCHAUMBURG

2026 - BIKE PATH LIST							
ID	**Location**	**From**	**To**	**Width**	**Length**	**Area**	**Estimated Cost**
100344	Basswood Rd & Plum Grove Rd	Basswood Rd	Midpoint	8	659.63	5,277.04	$ 42,216.00
104313	Basswood Rd & Plum Grove Rd	Midpoint	Plum Grove Rd	8	637.97	5,103.76	$ 40,830.00
100525	Bode Rd	Walnut Ln	Apple Dr	8	1,608.32	12,866.56	$ 51,466.00
100526	Bode Rd	Apple Dr	Harmon Blvd	8	343.92	2,751.36	$ 11,005.00
104326	Bode Rd	Driveway	Braintree Dr	8	999.60	7,996.80	$ 31,987.00
100255	Bode Rd	CRC Eastern Boarder	Driveway	8	999.89	7,999.12	$ 31,996.00
104123	Commerce Dr to Basswood Rd	Corner	Intersection	8	752.36	6,018.88	$ 24,076.00
104124	Commerce Dr to Basswood Rd	Corner	Corner	8	422.98	3,383.84	$ 13,535.00
104125	Commerce Dr to Basswood Rd	Commerce Dr	Corner	8	838.27	6,706.16	$ 26,825.00
100497	IL 390 South Frontage Rd	Springinsguth Rd	Driveway	8	1,183.87	9,470.96	$ 37,884.00
100498	IL 390 South Frontage Rd	Driveway	Il 19/Irving Park Rd	8	342.02	2,736.16	$ 10,945.00
100297	Roosevelt Blvd	McConnor Pkwy	Two Century Driveway	8	824.30	6,594.40	$ 26,378.00
104105	Roosevelt Blvd	Two Century Driveway	Walter Payton Dr	8	621.59	4,972.72	$ 19,891.00
100346	State Pkwy	Driveway	Plum Grove Rd	8	727.13	5,817.04	$ 23,268.00
100454	Whitman Dr	Azalea Dr	Burberry Ln	8	334.23	2,673.84	$ 10,695.00
100329	Wise Rd	Dickens Way	Shopping Plaza	8	950.46	7,603.65	$ 30,415.00
100441	Woodfield Rd to Higgins Rd	Corner	Il 72/Higgins Rd	8	456.60	3,652.80	$ 14,611.00
104163	Woodfield Rd to Higgins Rd	Woodfield Rd	Corner	8	564.55	4,516.40	$ 18,066.00
				TOTAL	**13,267.69**	**106,141.49**	**$ 466,089.00**

2.51 Miles

CHASTAIN
CONSULTING ENGINEERS

HIGGINS ROAD
GOLF ROAD
ROSELLE ROAD
ALGONQUIN ROAD
BARRINGTON ROAD
IRVING PARK ROAD
PLUM GROVE ROAD

90
62
53
72
290
390
19

N
W E
S

Legend

- Schaumburg Limits
- Schaumburg Centerline
- 2026 Bike Path Program

0 0.38 0.75 1.5 2.25 3 Miles

Proposed 2026 Bike Path Program

VILLAGE OF SCHAUMBURG

12/17/2025

Document Path: <LINK>C:\Users\sparr\OneDrive</LINK> - Chastain & Associates LLC\Documents\ArcGIS\Projects\Schaumburg_Projects\Schaumburg_Project...

VILLAGE OF SCHAUMBURG

AGENDA ITEM SUMMARY

Recommendation to Approve Ratification of Expenditures for the American Lane and Plaza Drive Improvements with Builders Paving
12/30/25
Engineering and Public Works Committee

Presenter: Joe Velna, Engineering Inspector
Lead Department: Engineering and Public Works

Account(s):	Budget:	Expense Request:
4409010-7454 (26004 20-230)	$0.00	$86,880.20

The budget status for this request is: Over Budget

Amount Over Budget: $86,880.20

Executive Summary:

In June of 2025, the Village Board approved a resolution to utilize Rebuild Illinois (RBI) funds to complete improvements on Plaza Drive from Golf Road to Woodfield Road and American Lane from Plaza Drive to National Parkway. This resolution authorized the allocation of $940,028.09, the remaining balance of the Village's RBI funds.

In August of 2025, the Village Board awarded the American Lane and Plaza Drive improvements to Builders Paving, LLC (Builders) in the amount of $940,028.09. This award was $13,220.09 over Builders low bid amount of $926,808.00. Staff recommended the awarded amount to ensure that the Village's remaining RBI funds would be expended.

Bid quantities for sidewalk removal and replacement, curb and gutter removal and replacement, and commercial driveway replacement were estimated based on preliminary analysis by the design engineer. During construction, additional curb and gutter, sidewalk, and driveways were determined to require replacement. Although other cost savings were realized throughout the duration of construction, these reductions did not fully offset the additional work. As a result, construction costs totaled $1,026,908.29, or $86,880.20 above the awarded amount.

Staff proposes an internal budget transfer from the Street Recon and Repair program to cover the overage. Due to rollover from FY 24/25 and favorable bid prices, there are sufficient unencumbered funds available in 4409010-7454 (23029 20-230) to cover these additional expenditures.

Recommended Action:

The Village Manager recommends the Engineering and Public Works Committee recommend the Village Board approve ratification of expenditures for the American Lane and Plaza Drive Improvements with Builders Paving, LLC of Hillside, IL, in the amount of $86,880.20.

ATTACHMENTS:

- Pay Estimate
- Invoice

PAYABLE TO: BUILDERS PAVING, LLC
ADDRESS: 4401 ROOSEVELT ROAD
HILLSIDE, IL, 60162

ENGINEERS PAYMENT ESTIMATE NO. 3
2025 AMERICAN LANE AND PLAZA DRIVE IMPROVEMENTS
VILLAGE OF SCHAUMBURG

PAY PERIOD
FROM: 11/13/2025 **TO:** 12/3/2025

ITEM NO.	ITEMS	UNIT	QUANTITY	AWARDED VALUE	ADDED QUANTITY	DEDUCTED QUANTITY	UNIT PRICE	COMPLETED QUANTITY THIS PAY PERIOD	COMPLETED VALUE THIS PAY PERIOD	TOTAL COMPLETED QUANTITY	TOTAL COMPLETED VALUE
44201721	CLASS D PATCHES, 6 INCH, TYPE III	SQ YD	447.0	$ 19,668.00			$ 44.00	0.00	$ -	0.00	$ -
44201723	CLASS D PATCHES, 6 INCH, TYPE IV	SQ YD	1042.0	$ 29,176.00			$ 28.00	0.00	$ -	626.10	$ 17,530.80
44000173	HOT-MIX ASPHALT SURFACE REMOVAL, 6"	SQ YD	14885.0	$ 126,522.50			$ 8.50	0.00	$ -	14885.00	$ 126,522.50
40600985	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	124.0	$ 1,860.00			$ 15.00	0.00	$ -	124.00	$ 1,860.00
X0300003	BITUMINOUS MATERIALS - TRACKLESS TACK COAT	POUND	40230.0	$ 402.30			$ 0.01	0.00	$ -	14660.00	$ 146.60
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	3819.0	$ 295,972.50			$ 77.50	0.00	$ -	3696.47	$ 286,476.43
40604062	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	1273.0	$ 112,660.50			$ 88.50	0.00	$ -	1315.09	$ 116,385.47
X4400503	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	2311.0	$ 85,507.00			$ 37.00	666.70	$ 24,667.90	4166.70	$ 154,167.90
44000600	SIDEWALK REMOVAL	SQ FT	370.0	$ 2,220.00			$ 6.00	1790.50	$ 10,743.00	4635.90	$ 27,815.40
42400200	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SQ FT	2716.0	$ 21,728.00			$ 8.00	3257.00	$ 26,056.00	6557.00	$ 52,456.00
42400800	DETECTABLE WARNINGS	SQ FT	274.0	$ 8,220.00			$ 30.00	0.00	$ -	597.00	$ 17,910.00
60260100	INLETS TO BE ADJUSTED	EACH	23.0	$ 9,200.00			$ 400.00	0.00	$ -	21.00	$ 8,400.00
60261300	INLETS TO BE ADJUSTED W/ NEW TYPE 11 FRAME AND GRATE	EACH	1.0	$ 1,285.00			$ 1,285.00	0.00	$ -	1.00	$ 1,285.00
VS602003	DRAINAGE STRUCTURE TO BE RECONSTRUCTED	EACH	2.0	$ 2,570.00			$ 1,285.00	0.00	$ -	6.00	$ 7,710.00
VSX62003	DRAINAGE STRUCTURE TO BE RECONSTRUCTED W/ NEW TYPE 11 FRAME AND GRATE	EACH	2.0	$ 4,000.00			$ 2,000.00	0.00	$ -	2.00	$ 4,000.00
VSX62004	DRAINAGE STRUCTURE TO BE RECONSTRUCTED W/ NEW FLAT TOP, SPECIAL	EACH	3.0	$ 7,095.00			$ 2,365.00	0.00	$ -	1.00	$ 2,365.00
60500060	INLET REMOVAL	EACH	1.0	$ 250.00			$ 250.00	0.00	$ -	1.00	$ 250.00
60202405	CATCH BASIN TYPE A WITH TYPE 11 FRAME AND GRATE	EACH	1.0	$ 8,850.00			$ 8,850.00	0.00	$ -	1.00	$ 8,850.00
VS602001	MANHOLE TO BE ADJUSTED	EACH	4.0	$ 4,000.00			$ 1,000.00	0.00	$ -	4.00	$ 4,000.00
60406100	MANHOLE TO BE ADJUSTED W/ NEW TYPE 1 FRAME CLOSED LID	EACH	1.0	$ 1,525.00			$ 1,525.00	0.00	$ -	1.00	$ 1,525.00
VSX46021	HOT-MIX ASPHALT BIKE PATH REMOVAL AND REPLACEMENT	SQ YD	153.0	$ 12,546.00			$ 82.00	0.00	$ -	139.00	$ 11,398.00
X0327036	HOT-MIX ASPHALT BIKE PATH REMOVAL	SQ YD	261.0	$ 2,871.00			$ 11.00	0.00	$ -	213.50	$ 2,348.50
42400800	PORTLAND CEMENT CONCRETE MEDIAN REMOVAL AND REPLACEMENT	SQ FT	250.0	$ 4,500.00			$ 18.00	0.00	$ -	285.80	$ 5,144.40
VSX42340	PORTLAND CEMENT CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT	SQ YD	153.0	$ 15,147.00			$ 99.00	0.00	$ -	227.30	$ 22,502.70
VSX46001	HOT-MIX ASPHALT DRIVEWAY REMOVAL AND REPLACEMENT	SQ YD	102.0	$ 7,956.00			$ 78.00	3.90	$ 304.20	270.00	$ 21,060.00
78000200	THERMOPLASTIC PAVEMENT MARKING LINE - 4"	FOOT	8674.0	$ 8,240.30			$ 0.95	0.00	$ -	8692.00	$ 8,257.40
78000400	THERMOPLASTIC PAVEMENT MARKING LINE - 6"	FOOT	1047.0	$ 1,361.10			$ 1.30	0.00	$ -	1000.00	$ 1,300.00
78000600	THERMOPLASTIC PAVEMENT MARKING LINE - 12"	FOOT	81.0	$ 243.00			$ 3.00	0.00	$ -	90.00	$ 270.00
78000650	THERMOPLASTIC PAVEMENT MARKING LINE - 24"	FOOT	126.0	$ 661.50			$ 5.25	0.00	$ -	129.00	$ 677.25
78001100	THERMOPLASTIC PAVEMENT MARKING LETTERS & SYMBOLS	SQ FT	488.8	$ 2,566.20			$ 5.25	0.00	$ -	509.60	$ 2,675.40
70300100	SHORT TERM PAVEMENT MARKING	FOOT	3287.0	$ 4,930.50			$ 1.50	0.00	$ -	3287.00	$ 4,930.50
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	FOOT	3287.0	$ 1,643.50			$ 0.50	0.00	$ -	3287.00	$ 1,643.50
X4022000	TEMPORARY ACCESS (COMMERCIAL ENTRANCE)	EACH	22.0	$ 1,100.00			$ 50.00	0.00	$ -	22.00	$ 1,100.00
X4023000	TEMPORARY ACCESS (ROAD)	EACH	5.0	$ 5,000.00			$ 1,000.00	0.00	$ -	5.00	$ 5,000.00
88600600	DETECTOR LOOP REPLACEMENT	FOOT	549.0	$ 16,470.00			$ 30.00	0.00	$ -	0.00	$ -
X2520700	SODDING, SPECIAL	SQ YD	975.0	$ 24,375.00			$ 25.00	885.60	$ 22,140.00	885.60	$ 22,140.00
20101700	SUPPLEMENTAL WATERING	EACH	10.0	$ 650.00			$ 65.00	0.00	$ -	0.00	$ -
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1.0	$ 73,585.10			$ 73,585.10	0.00	$ -	1.00	$ 73,585.10
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1.0	$ 250.00			$ 250.00	0.00	$ -	1.00	$ 250.00
		BID VALUE AWARDED:		**$ 926,808.00**			**VALUE COMPLETED - THIS REQUEST:**		**$ 83,911.10**	**- TO DATE:**	**$ 1,023,938.85**

ITEM NO.	ITEMS	UNIT	QUANTITY	AWARDED VALUE	ADDED QUANTITY	DEDUCTED QUANTITY	UNIT PRICE	COMPLETED QUANTITY THIS PAY PERIOD	COMPLETED VALUE THIS PAY PERIOD	TOTAL COMPLETED QUANTITY	TOTAL COMPLETED VALUE

MISCELLANEOUS ADDITIONS		**QUANTITY**	**UNIT PRICE**		**VALUES**
1	AUP #1 - IRRIGATION REPAIR	1	$ 2,969.44	$	2,969.44
2				$	-
3				$	-
4					
5					

DEBITS			**VALUES**
1	PAY ESTIMATE NO. 1	$	842,959.73
2	PAY ESTIMATE NO. 2	$	87,667.74
3			
4			
5			

SUMMARY		
TOTAL COMPLETED CONSTRUCTION COSTS	$	1,026,908.29
DEDUCT RETAINAGE (1%)	$	10,269.08
TOTAL AMOUNT DUE TO CONTRACTOR	$	1,016,639.21
TOTAL DEBITS	$	930,627.47
NET AMOUNT DUE - THIS PAYMENT	**$**	**86,011.73**

PREPARED BY: _____

APPROVED BY: _____

ENGINEERING ENTERPRISES, INC.
52 WHEELER ROAD
SUGAR GROVE, ILLINOIS 60554

Builders Paving, LLC
4401 West Roosevelt Road
Hillside, IL 60162

INVOICE

To : **Village of Schaumburg**
101 Schaumburg Rd
Schaumburg, IL 60193

Invoice #: **2514903**
Date: **12/04/25**
Application #: **3**
Customer Reference: **9025149**
Invoice Due Date: **01/03/26**
Payment Terms: **Net 30 Days**

Contract : 90.25149. Schaumburg American & Plaza Drive Imp

Contract Item	Quantity JTD	Unit Price	U/M	Total To Date
01 CLASS D PATCHES 6 INCH TY III {SY}	0.000	44.00000	SY	0.00
02 CLASS D PATCHES 6 INCH TY IV {SY}	626.100	28.00000	SY	17,530.80
03 HMA SURFACE REM 6" {SY}	14,885.000	8.50000	SY	126,522.50
04 HMA SURFACE REM BUTT JOINT {SY}	124.000	15.00000	SY	1,860.00
05 BIT MATLS TRACKLESS TACK COAT {LB}	14,660.000	0.01000	LB	146.60
06 HMA BINDER CSE IL-19.0 N70 {TN}	3,696.470	77.50000	TN	286,476.43
07 HMA SURFACE CSE MIX D N70 {TN}	1,315.090	88.50000	TN	116,385.47
08 COMB CONC C&G REM & REPL	4,166.700	37.00000	FT	154,167.90
09 SIDEWALK REMOVAL	4,635.900	6.00000	SF	27,815.40
10 PCC SIDEWALK 5"	6,557.000	8.00000	SF	52,456.00
11 DETECTABLE WARNINGS	597.000	30.00000	SF	17,910.00
12 INLETS TO BE ADJUSTED	21.000	400.00000	EA	8,400.00
13 INLETS TO BE ADJ W/ NEW TY 11 F&G	1.000	1,285.00000	EA	1,285.00
14 DRAIN STRUCTURE TO BE RECON	6.000	1,285.00000	EA	7,710.00
15 DRAIN STR RECON W/ NEW TY 11 F&G	2.000	2,000.00000	EA	4,000.00
16 DRAIN STR RECON W/ NEW FLAT TOP SPCL	1.000	2,365.00000	EA	2,365.00
17 INLET REMOVAL	1.000	250.00000	EA	250.00
18 CATCH BASIN TY A W/ TY 11 F&G	1.000	8,850.00000	EA	8,850.00
19 MANHOLE TO BE ADJUSTED	4.000	1,000.00000	EA	4,000.00
20 MH ADJ W/ NEW TY 1 FRAME CL	1.000	1,525.00000	EA	1,525.00
21 HMA BIKE PATH REM & REPL {SY}	139.000	82.00000	SY	11,398.00
22 HMA BIKE PATH REMOVAL	213.500	11.00000	SY	2,348.50
23 PCC MED REM & REPL	285.800	18.00000	SF	5,144.40
24 PCC DRIVEWAY REM & REPL	227.300	99.00000	SY	22,502.70
25 HMA DRIVEWAY REM & REPL {SY}	270.000	78.00000	SY	21,060.00
26 THERMO PVMT MARK LINE 4"	8,692.000	0.95000	FT	8,257.40
27 THERMO PVMT MARK LINE 6"	1,000.000	1.30000	FT	1,300.00
28 THERMO PVMT MARK LINE 12"	90.000	3.00000	FT	270.00
29 THERMO PVMT MARK LINE 24"	129.000	5.25000	FT	677.25
30 THERMO PVMT MARK LINE L&S	509.600	5.25000	SF	2,675.40
31 SHORT TERM PVMT MARK {FT}	3,287.000	1.50000	FT	4,930.50
32 SHORT TERM PVMT MARK REM {FT}	3,287.000	0.50000	FT	1,643.50
33 TEMPORARY ACCESS (COMMERCIAL)	22.000	50.00000	EA	1,100.00
34 TEMPORARY ACCESS (ROAD) {EA}	5.000	1,000.00000	EA	5,000.00
35 DETECTOR LOOP REPLACEMENT	0.000	30.00000	FT	0.00
36 SODDING SPECIAL	885.600	25.00000	SY	22,140.00
37 SUPPLEMENTAL WATERING	0.000	65.00000	EA	0.00
38 TC&P STANDARD 701501	1.000	73,585.10000	LSU	73,585.10
39 TC&P STANDARD 701801	1.000	250.00000	LSU	250.00
999 HMA QC/QA Material Testing	0.000	0.00000	DY	0.00
CO01.01 IRRIGATION REPAIR	1.000	2,969.44000	LSU	2,969.44

Builders Paving, LLC
4401 West Roosevelt Road
Hillside, IL 60162

INVOICE

To : **Village of Schaumburg**
101 Schaumburg Rd
Schaumburg, IL 60193

Invoice #: **2514903**
Date: **12/04/25**
Application #: **3**
Customer Reference: **9025149**
Invoice Due Date: **01/03/26**
Payment Terms: **Net 30 Days**

Contract : 90.25149. Schaumburg American & Plaza Drive Imp

Contract Item	Quantity JTD	Unit Price	U/M	Total To Date

Total To Date :	1,026,908.29
Plus Previous Tax :	0.00
Plus Tax This Invoice :	0.00
Less Retainage :	10,269.08
Less Previous Applications :	930,627.48
Total Due This Invoice :	**86,011.73**

VILLAGE OF SCHAUMBURG

AGENDA ITEM SUMMARY

January 13, 2026
12/30/25
Engineering and Public Works Committee

Presenter:
Lead Department: General Government

Executive Summary:

Recommended Action: