



Proposed FY2026-FY2030 Capital Improvement Program

Program Overview

Department of Public Works

August 6, 2025

Presentation Outline

- Strategic Alignment & Department Mission
- Evolving System Needs
- Asset Portfolio
- Financial Information
- ARPA Projects & Execution
- Capital Improvement Program (CIP) Development
- FY2025 CIP
- Proposed FY2026-FY2030 CIP
- “Outer Years” CIP (FY2031-2035)

Strategic Alignment

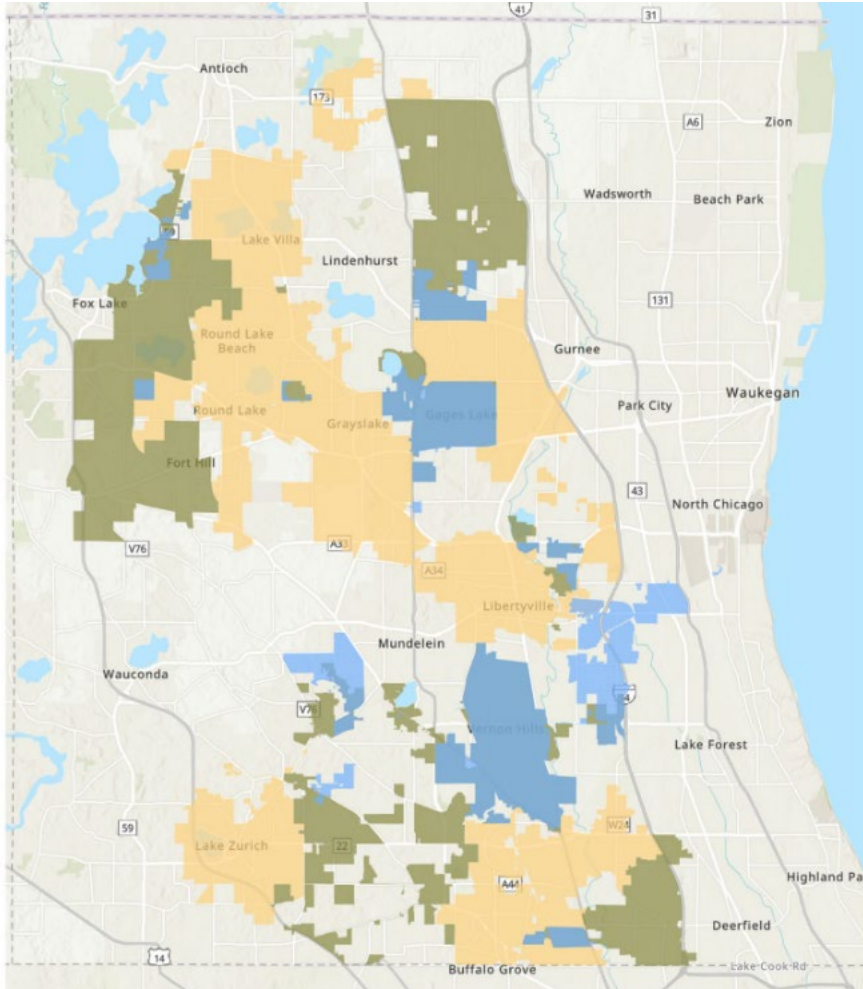
Lake County Strategic Plan



✓ STRATEGIC PRIORITY: ADAPTIVE INFRASTRUCTURE

GOAL STATEMENT: Provide County facilities, infrastructure, and technology to meet the ever-changing and evolving needs of and demands upon Lake County.

Department's Mission



Public Works Mission:
Deliver exceptional, financially sustainable, reliable, drinking water and wastewater services in a safe manner, ensuring high quality service, public health and environmental stewardship.

Evolving System Needs

Aging Infrastructure

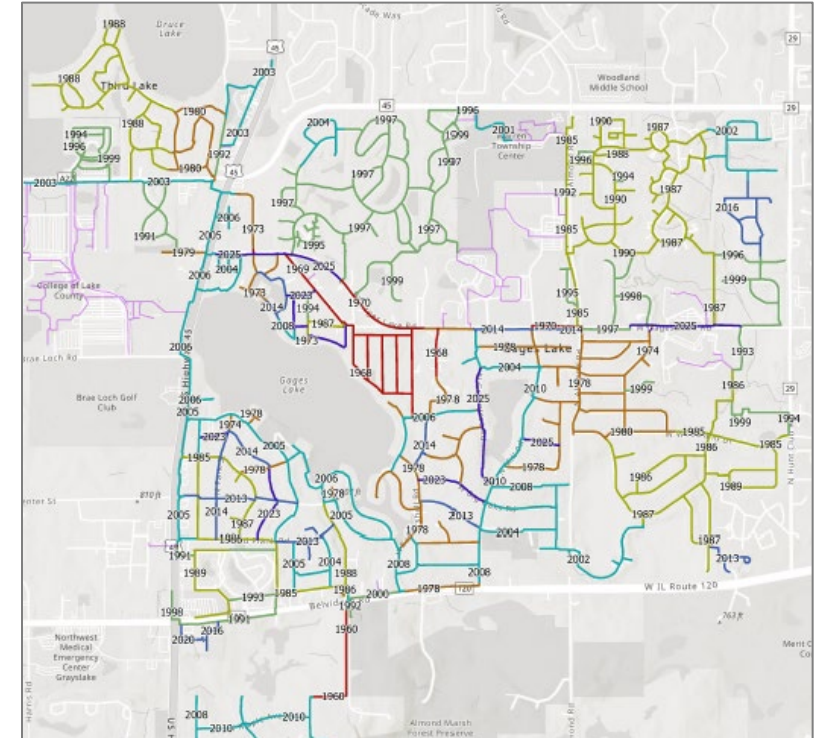
Aging infrastructure is a widespread issue, and many assets in the system are reaching the end of their service life, including pipes, facilities, equipment, etc.

With limited resources, project prioritization must be based on risk, not just age. Risk is assessed by evaluating both the likelihood of failure and the impact of failure.

In the example of water main pipes, consideration is given to the following:

- Pipe condition based upon pipe material and age.
- Risk of service disruption to critical facilities (i.e. hospitals, schools) due to limited redundancy.

LCPW's water systems include approximately 300 miles of pipe. In the last five years, more than 7 miles of water main pipe have been replaced.



Evolving System Needs

New Technology – Smart Meters

What is a Smart Meter?

- Ultrasonic meters provide enhanced accuracy.
- Allows the use of secure cellular connections to operate and manage residential water services.

Advantages of Modernizing Water Meters

- Allows for quicker response to customer needs.
- Creates efficiencies by minimizing the number of employees required in responding to customer needs.

The Department is investigating options and expects to have a pilot program in place shortly.



Department's Asset Portfolio

Macro View of Assets

Value of System

- 💧 \$900M+ value of assets
- 💧 Ongoing maintenance & operations
- 💧 Ongoing recapitalization & investment

System Level Overview

- 💧 3 water reclamation facilities
- 💧 5+ billion gallons treated annually
- 💧 8 sewer systems
- 💧 12 public water systems
- 💧 1-mile-long levee w/ stormwater pump station
(North Libertyville Estates)



Department Goal & Asset Portfolio

Micro View of Assets

Regional & local main pipes

- 💧 480+ miles sewer main pipes
- 💧 300+ miles water main pipes

Neighborhood-Level Assets

- 💧 101 pump stations & lift stations
- 💧 10,000+ manholes
- 💧 18 water storage structures
- 💧 4,000 hydrants
- 💧 8,000 water valve structures
- 💧 20,000+ b-boxes

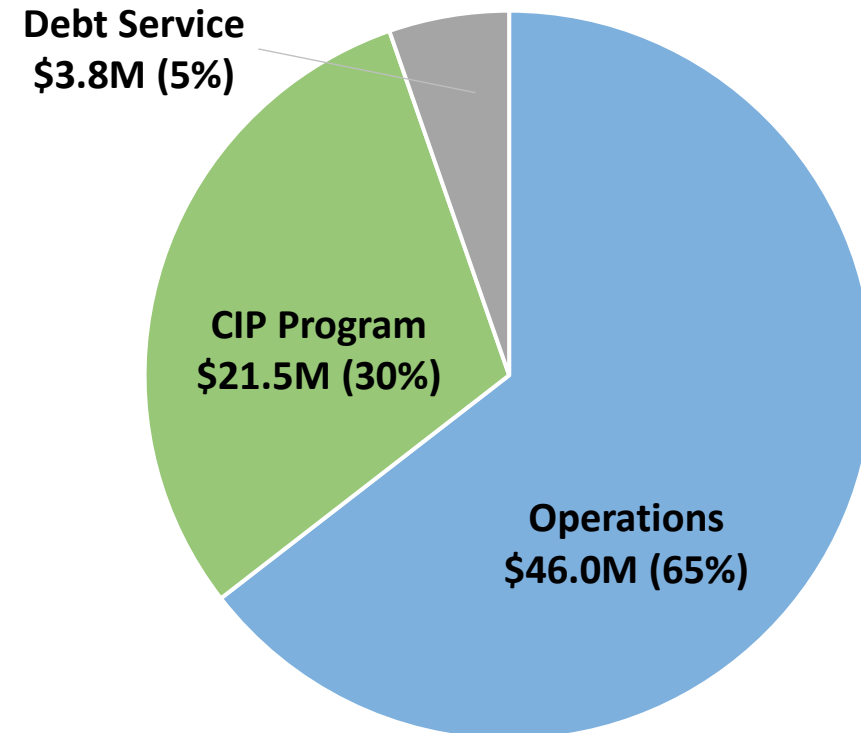


Financial Information

Budget and Funding

- County's sole Enterprise Fund
- Not property tax based
- Connection fees
- User fees from water and sewer used by customers
- \$71.3M FY2025 Department Budget
- Outside funding sources
- Exploring other funding opportunities

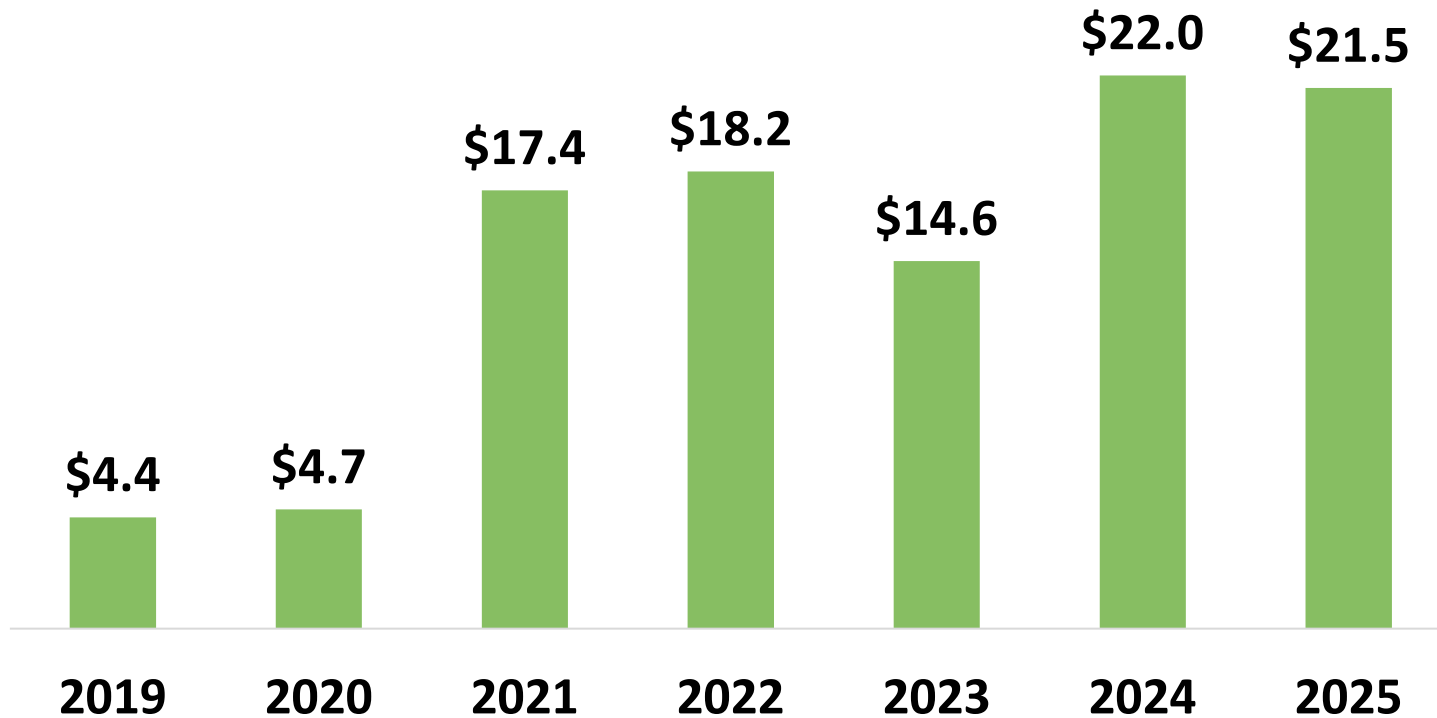
FY2025 ADOPTED BUDGET



Financial Information

Capital Budget

Enterprise Funds Capital Budget



- Core funding historically Enterprise

Financial Information

Outside Funding – Congressionally-Directed Funding



**Des Plaines River WRF
Dewatering Project Phase 2**

**Design funding awarded
80% match, up to \$400k**

**New Century Town (Vernon
Hills) WRF Dewatering
Project**

**Funding awarded
80% match, up to \$960k**

**Idlewild and Dady & Decker
Water Main Replacement**

**Funding awarded
80% match, up to \$960k**

ARPA Funds Execution

Project Status



LCPW ARPA Funded Projects	Total ARPA Budget	Status	Target Construction Year
Oak Terrace Water System Replacement	\$2,500,000	Phase 1 - Complete Phase 2 – 20% Complete	2025-2025
Highland Lake Water System Improvements	\$2,500,000	Phase 1 - Complete Phase 2 – 95% Complete	2023-2026
Pekara Lake Michigan Water Supply Connection	\$1,100,000	Complete	2025-2026
Mill Creek WRF UV Disinfection	\$1,000,000	Complete	2025-2025
DPR WRF Blowers Replacement	\$1,500,000	10% Complete	2025-2026
DPR WRF Disc Filter Installation & Clarifier Covers at DPR, NCT, MC WRFs	\$6,300,000	70% Complete	2025-2026
DPR WRF UV Disinfection	\$5,500,000	70% Complete	2025-2026
Antioch Township Sewer Expansion	\$1,000,000	30% Complete (Design)	2025-2026*
TOTAL =	\$21,400,000		

Lake County
FORWARD
American Rescue Plan Act

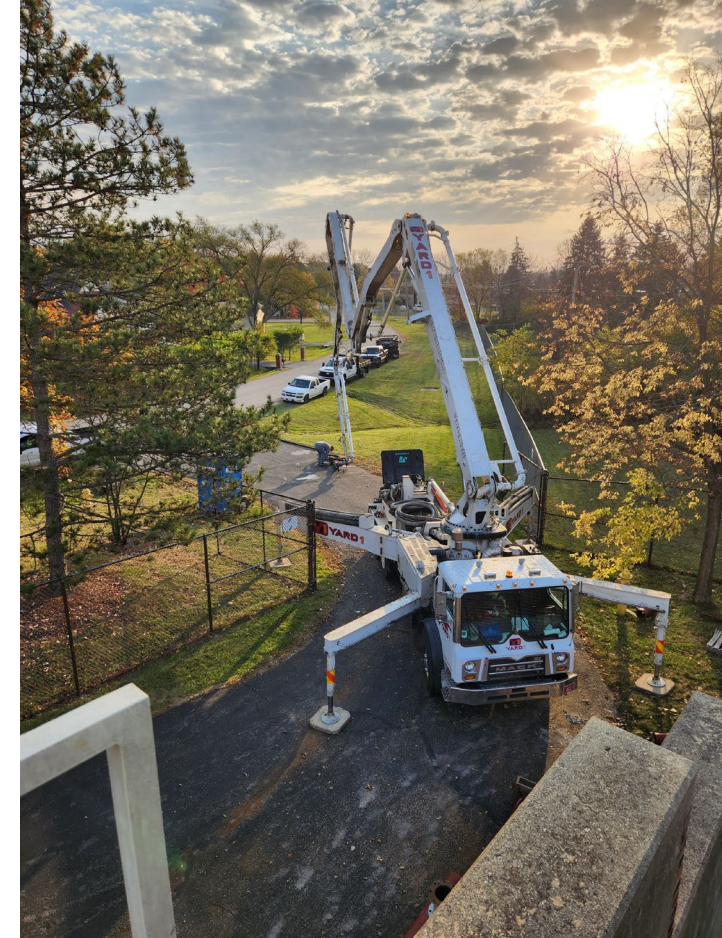
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DPR = Des Plaines River NCT = New Century Town MC = Mill Creek * Design Only
WRF = Water Reclamation Facility UV = Ultraviolet

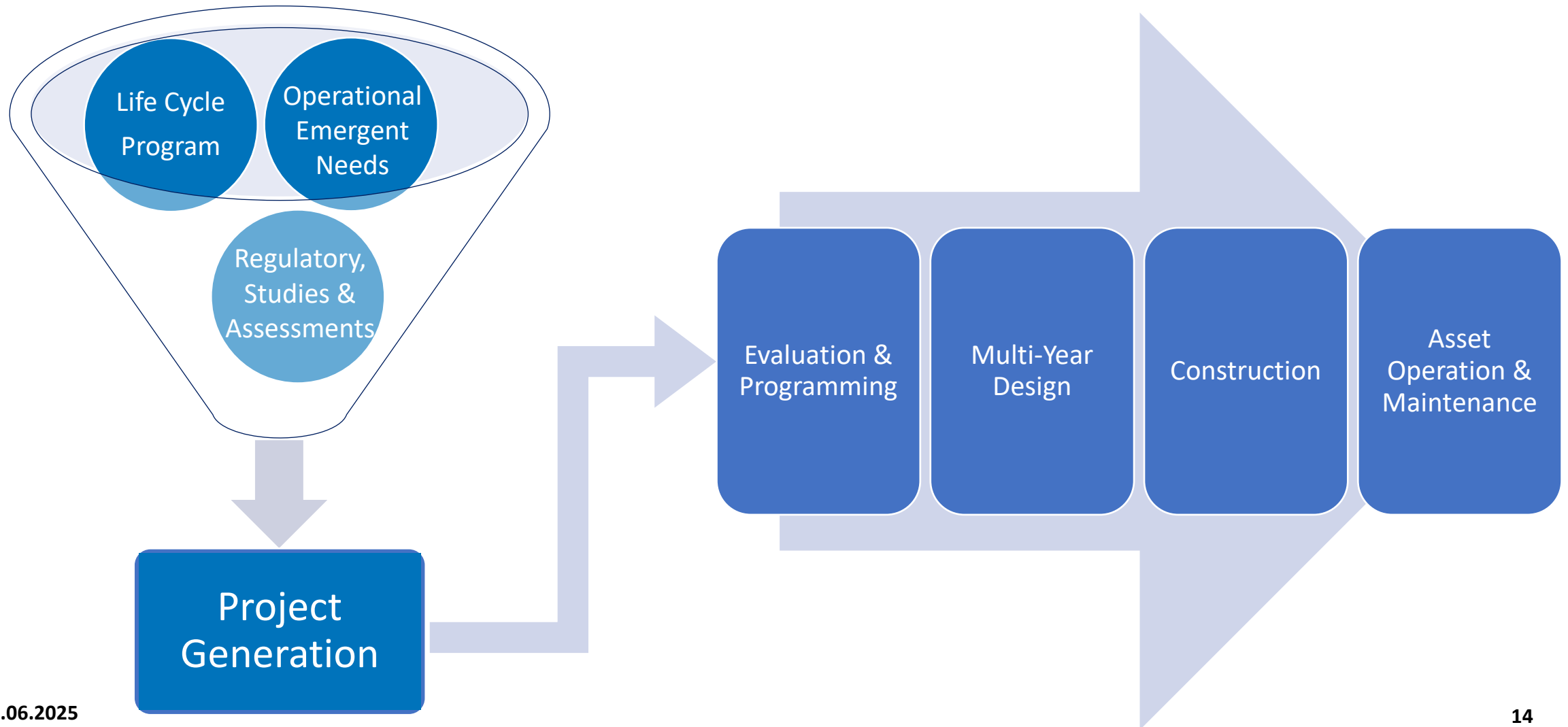
CIP Development

Program Priorities

- ✓ **Meet regulatory requirements**
- ✓ **Maximize life of existing assets**
- ✓ **Recapitalize existing capacity**
- ✓ **Meet tomorrow's capacity demands**
- ✓ **Meet goals of County Strategic Plan**



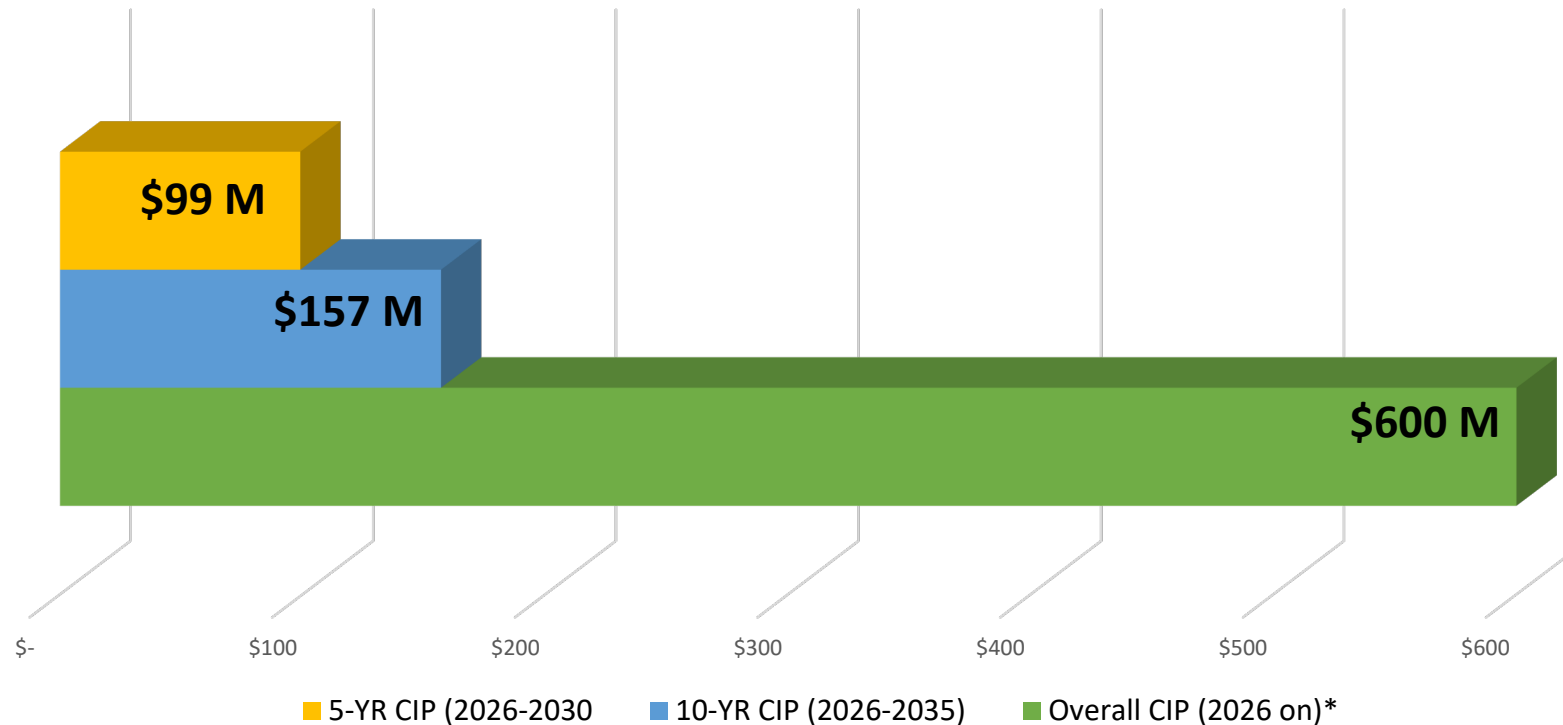
CIP Development Programming Process



CIP Development

Identified Needs

LCPW CIP Identified Needs



*** Note Long Range CIP is aspirational and includes expansion projects which would require substantial outside funding**

CIP Development

Project Types

- Preservation
Highest priority
- Modernization
Medium priority
- Expansion
Typically lowest priority



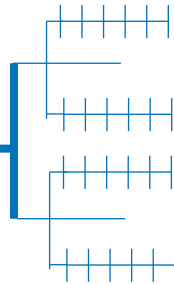
CIP Development

Program Investment Categories

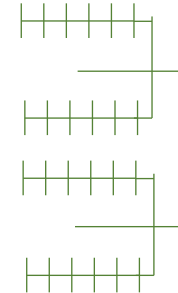
Water Production & Storage



Water Distribution



Wastewater Collection



Water Reclamation Facilities



Other Support Facilities & Equipment



FY2025 CIP

Investments From Budget



- Water Production & Storage - \$1.7 M
- Water Distribution - \$5.5 M
- Wastewater Collection - \$9.4 M
- Water Reclamation Facilities - \$1.5 M
- Other Support Facilities & Equipment - \$3.4 M

FY 2025 CIP = \$21.5 M

Construction Projects In Process



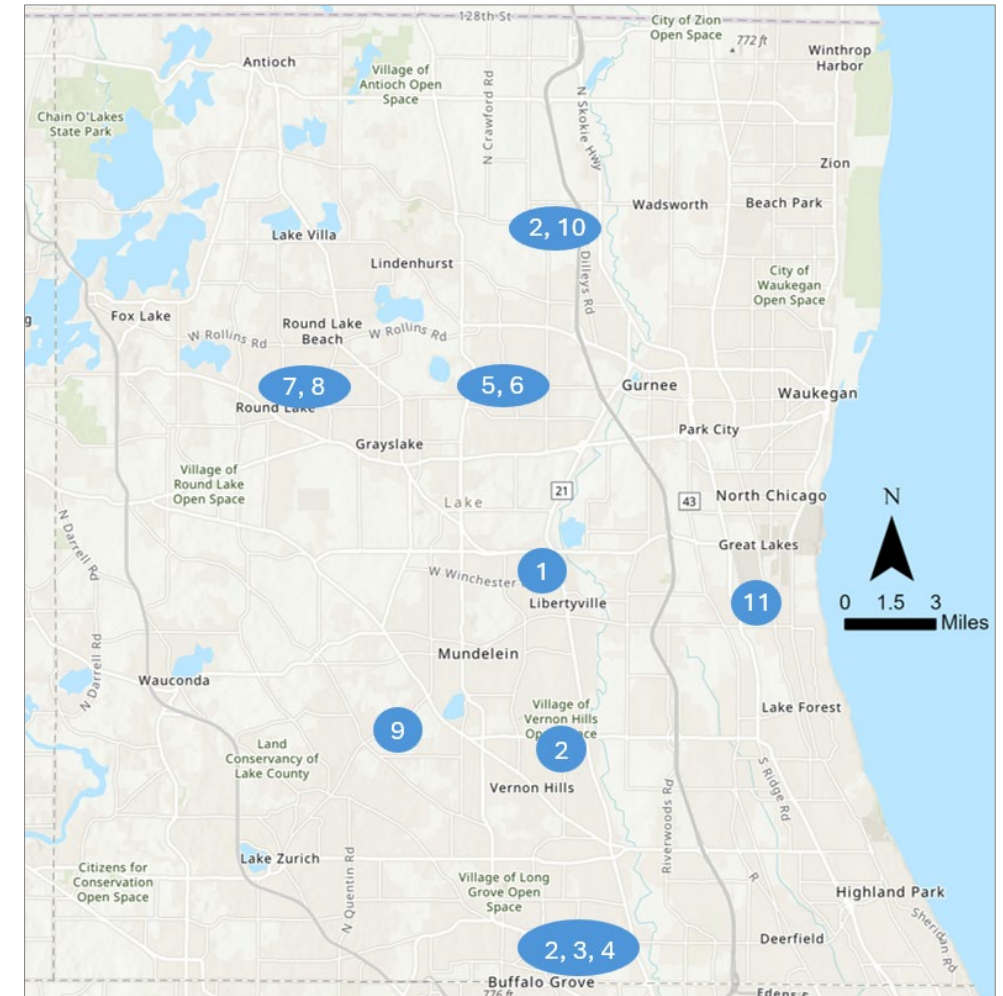
- 1. Administrative Building Expansion**
- 2. DPR WRF Filter Replacements & Clarifying Covers at all WRFs (FY24 award)****
- 3. DPR WRF High Speed Blowers Replacement (FY24 award)****
- 4. DPR WRF UV Treatment Improvements (FY24 award)****
- 5. Gages Lake Water Main Improvements**
- 6. Gages Lake Water Tower (FY23 award)**
- 7. Highland Lake Water Main Extension (Lakeside & Gerwal)**
- 8. Highland Lake Water System Test Well**
- 9. Indian Creek Club Water Main Improvements**
- 10. Mill Creek WRF UV Replacement (FY24 award)** - COMPLETED**
- 11. North Chicago Water Interconnect Meter Vault Rehabilitation**

DPR = Des Plaines River NCT = New Century Town WRF = Water Reclamation Facility

SCADA = Supervisory Control and Data Acquisition

***Various Locations – Not Mapped**

****ARPA-Funded Project**



FY2025 CIP

Construction Projects In Process Continued

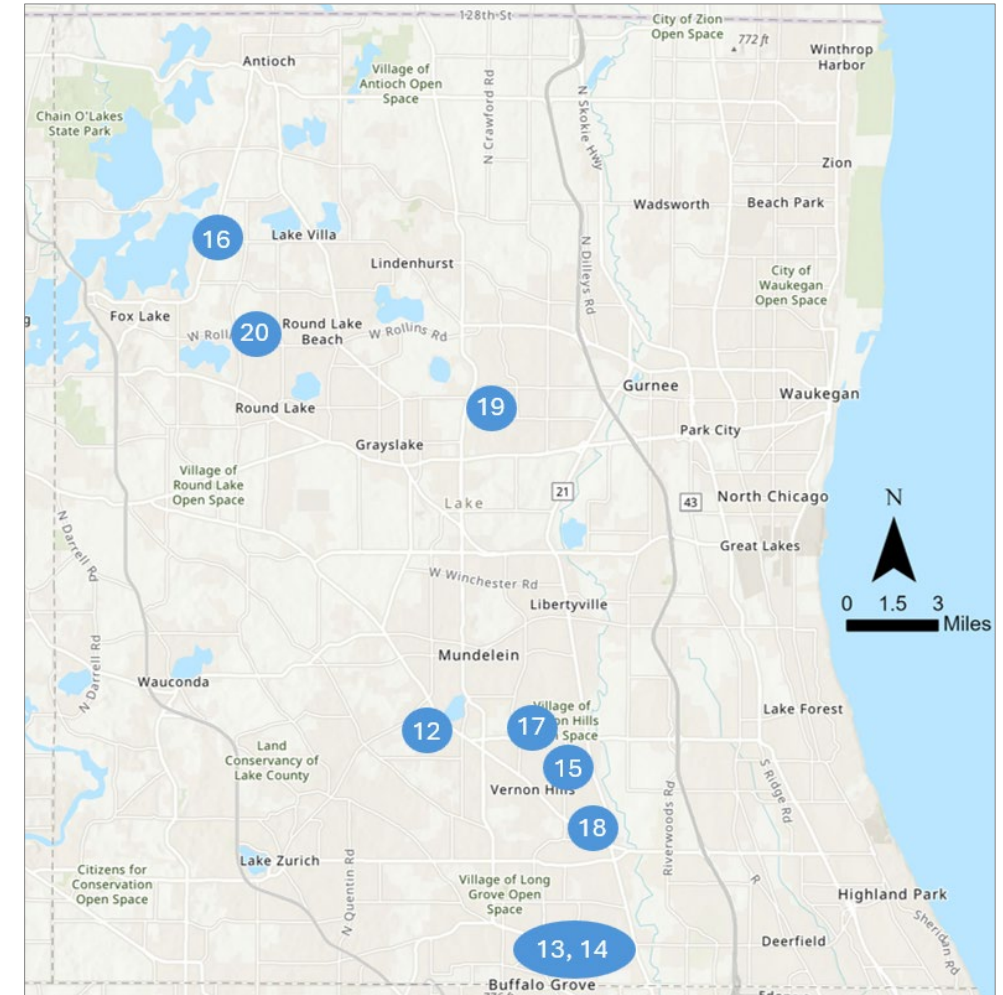
12. Oak Terrace Well House & Water System Interconnection (FY24 award)**
13. Pekara Water System – Lake Michigan Water Source (FY24 award)**
14. SCADA Improvements at DPR WRF (FY24 award)
15. SCADA Improvements at NCT WRF
16. SCADA Improvements NW Sites (FY23 award)
17. Vernon Hills White Deer Run Reservoir (FY23 award)
18. Vernon Hills Corporate Woods Reservoir Improvements
19. Wildwood Water System Controls Improvements
20. Wilson & Rollins Sewer Asset Lining (FY21 award; legacy project)
21. Annual Tower & Reservoir Painting & Maintenance Projects *

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*Various Locations – Not Mapped

**ARPA-Funded Project

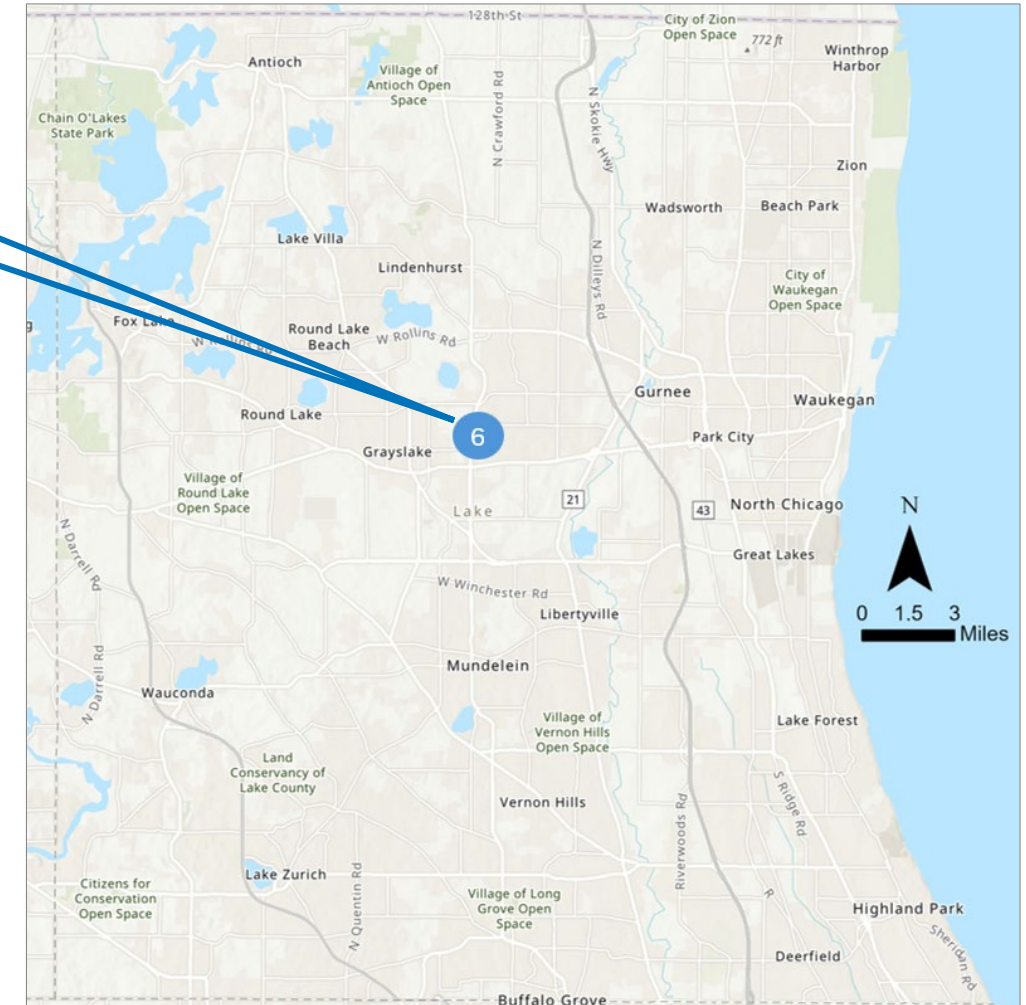


FY2025 CIP

Construction Project Highlights – Water Production & Storage

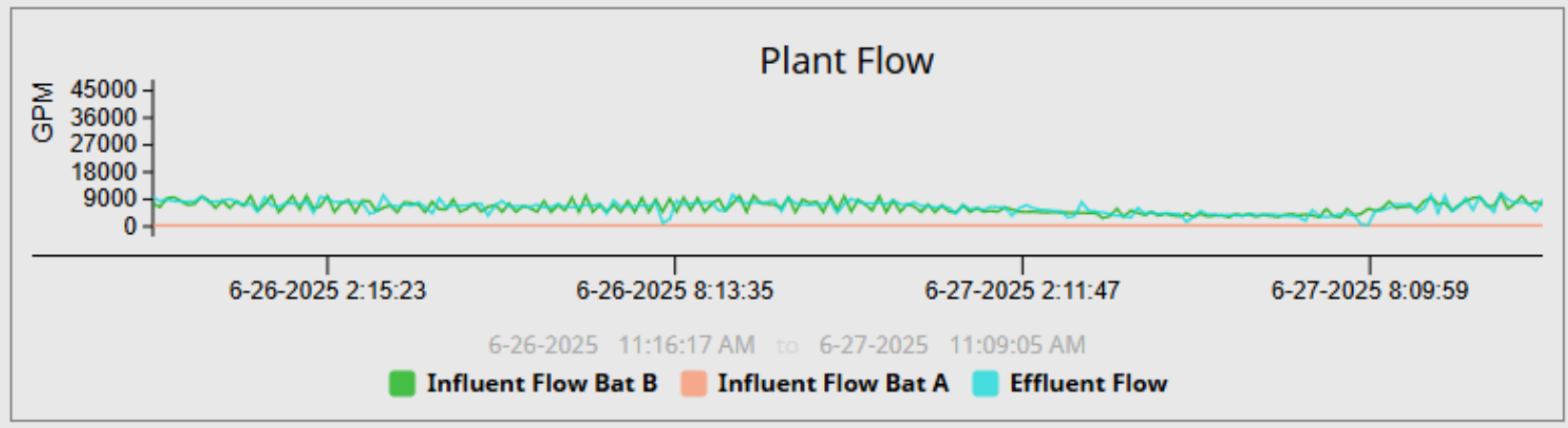
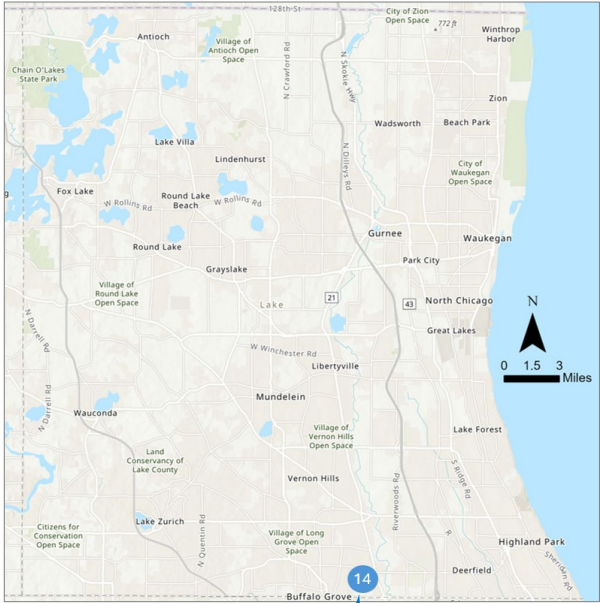
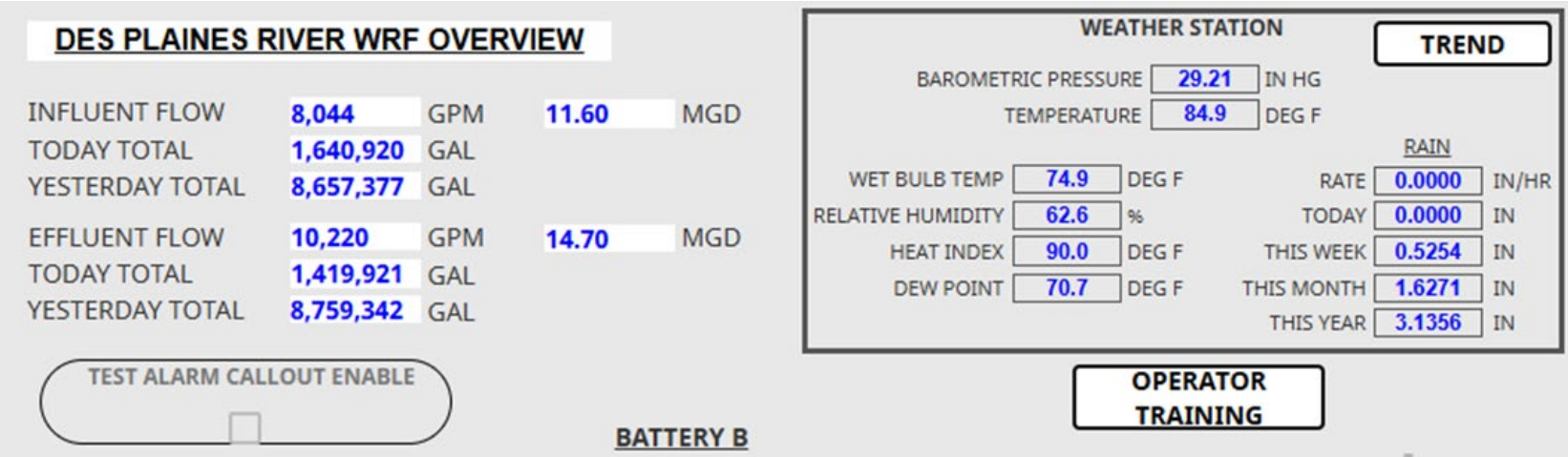


Gages Lake
Water Tower



FY2025 CIP

Construction Project Highlights – Other Support Facilities



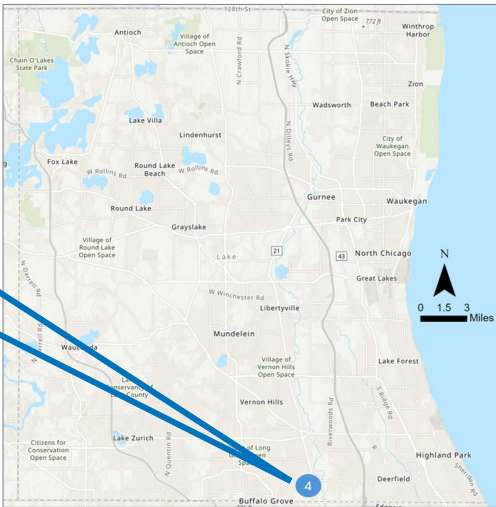
DPR WRF SCADA
Improvements

FY2025 CIP

Construction Project Highlights – Water Reclamation



**DPR WRF UV
Disinfection
Improvements**



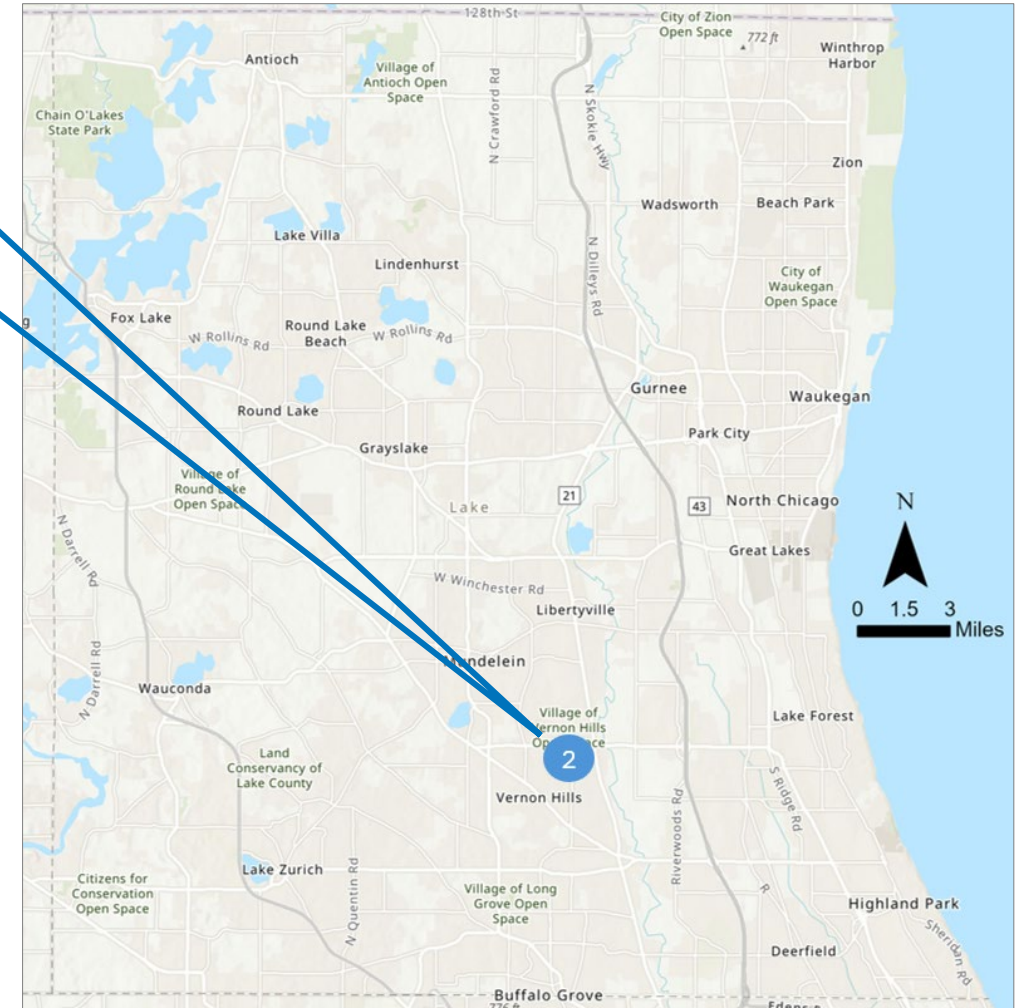
**UV Disinfection Evaluation on Viral Destruction
Mill Creek WRF Results
(Plaque Forming Units (PFU) per 100 mL)**

Sample Date	Pre-UV Disinfection	Post-UV Disinfection
9/3/2024	307	0.1
9/9/2024	109	0.1
9/16/2024	1053	0.1

FY2025 CIP

Construction Project Highlights – Water Reclamation

Clarifier Replacements at NCT WRF



Proposed FY2026-FY2030 CIP

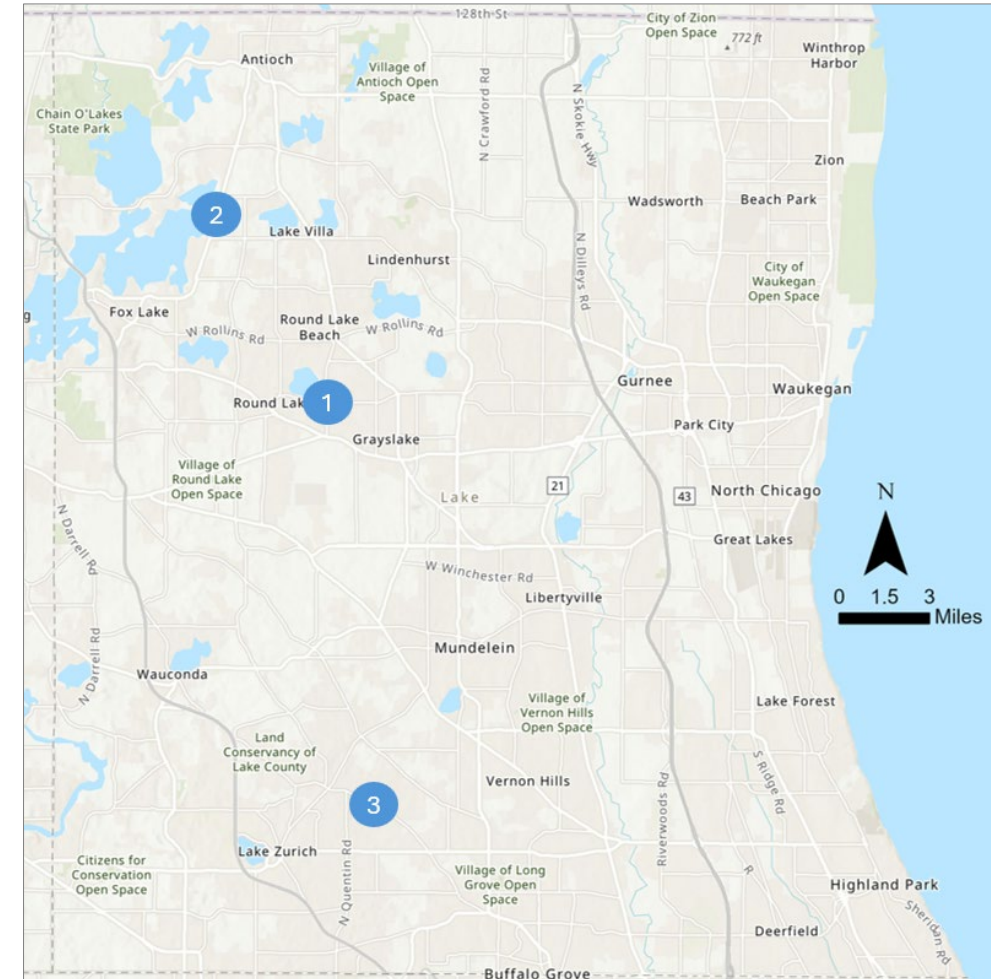


- **Water Production & Storage**
- **Water Distribution**
- **Wastewater Collection**
- **Water Reclamation Facilities**
- **Other Support Facilities & Equipment**

Proposed FY2026-FY2030 CIP

Water Production & Storage

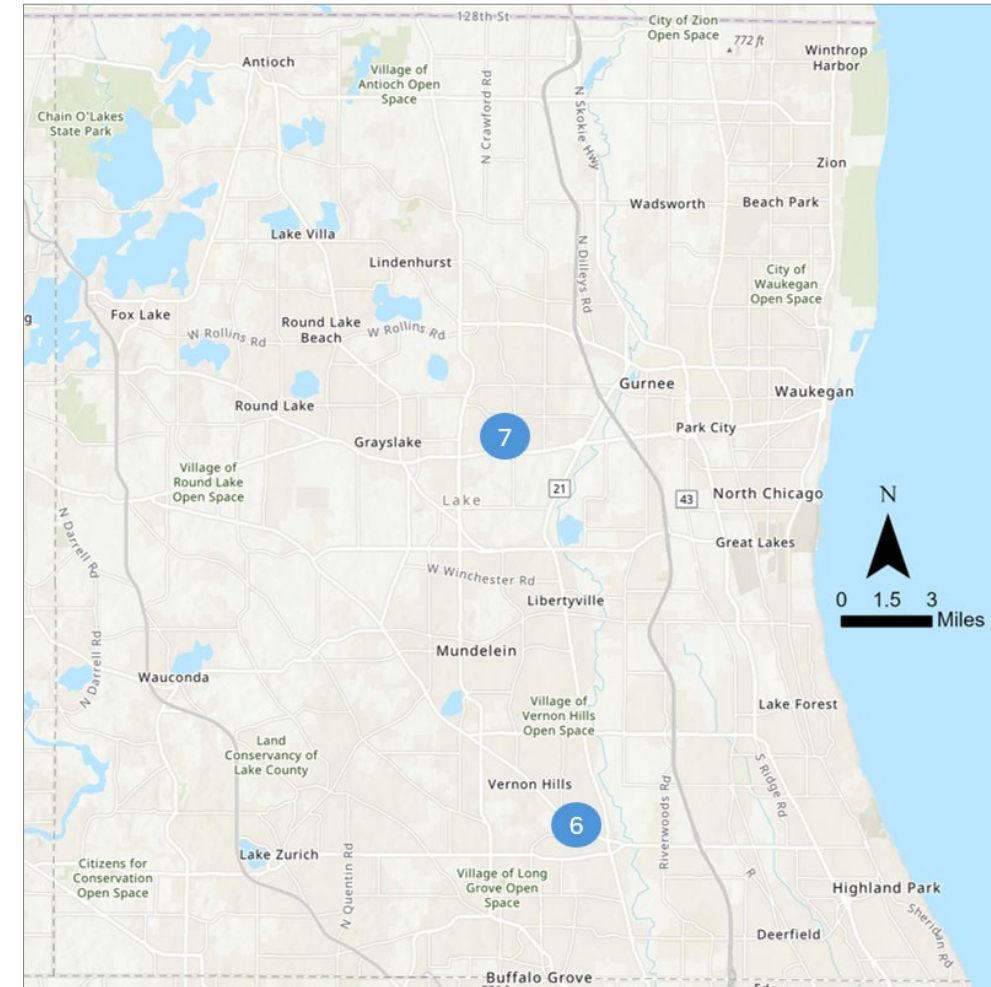
Map Key	Project Description	Project Type	Anticipated Construction Year*
1	Highland Lake Water System Water Storage Facility	Preservation	2026
2	Fox Lake Hills Water Storage Facility	Preservation	2026
3	Forest Lake/Hawthorn Woods (Glennshire)/Countryside Lake Water System Resiliency Improvements (Phased)	Preservation	2026+
4**	Vernon Hills Extended Resiliency Improvements (Phased)	Preservation	2027+



Proposed FY2026-FY2030 CIP

Water Production & Storage Continued

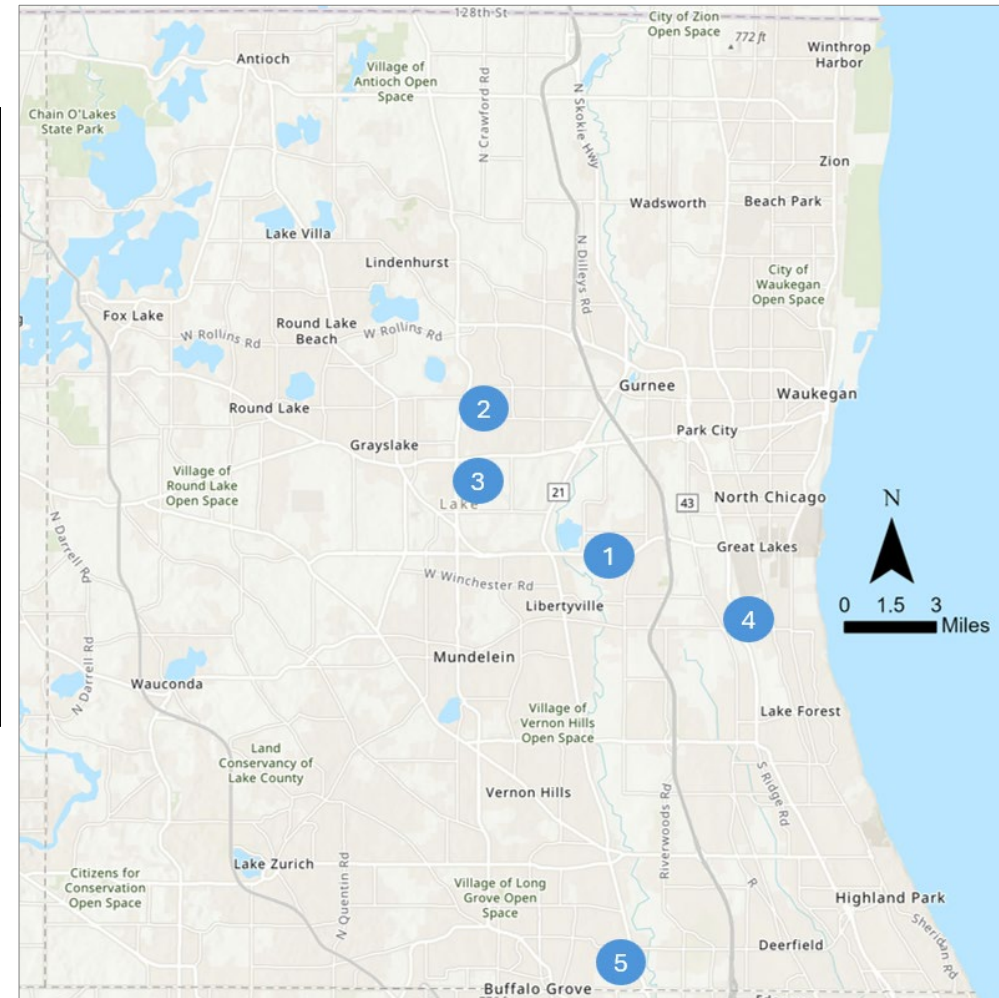
Map Key	Project Description	Project Type	Anticipated Construction Year*
5**	Wildwood Extended Resiliency Improvements (Phased)	Preservation	2028+
6	Vernon Hills Water System Emergency Interconnection with Buffalo Grove	Preservation	2030
7	John Mogg Tower Rehabilitation	Preservation	2030
8**	Annual Tower & Reservoir Painting & Maintenance Projects – Various Locations	Preservation	2026-2030



Proposed FY2026-FY2030 CIP

Water Distribution

Map Key	Project Description	Project Type	Anticipated Construction Year*
1	Countryside Manor Water Main Replacement Phase 2	Preservation	2026
2	Dady & Decker Water Main Replacement	Preservation	2026
3	Wildwood South Branch Resiliency Improvements (Phased)	Preservation	2026+
4**	IL 176/US 41 Water Main Relocation	Modernization	2027 (IDOT Project)
5	Pekara Water Main Rehabilitation Phase 2, 3 and 4	Preservation	2030



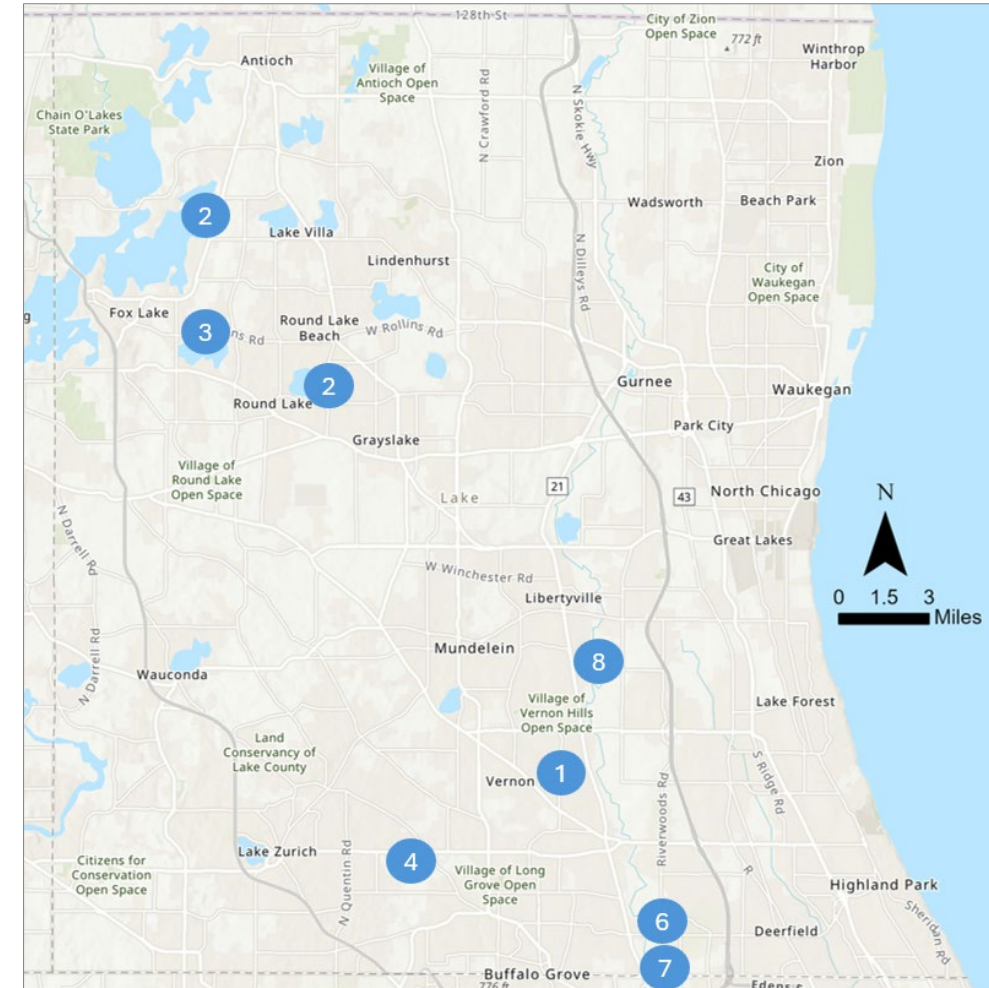
*Dependent upon project readiness and availability of funding

**Capital Cost Share for this project is TBD

Proposed FY2026-FY2030 CIP

Wastewater Collection

Map Key	Project Description	Project Type	Anticipated Construction Year*
1	VH West Pump Station Force Main Improvements	Preservation	2025
2	Force Main Replacements (Columbia Bay Rd & Lakeside Dr)	Preservation	2026
3	Rollins Road Force Main Replacement	Preservation	2026
4	Salem Lake Drive Sewer Rehab	Preservation	2026
5***	Central Division Sewer Improvements (Scope TBD)	Preservation	2027
6**	Deerfield Rd Lift Station Relocation & Sewer Rehabilitation	Modernization	2027 (LCDOT Project)
7	Portwine Rd Force Main Replacement	Preservation	2027
8	SEC Drop Chamber Replacement	Preservation	2027



*Dependent upon project readiness and availability of funding

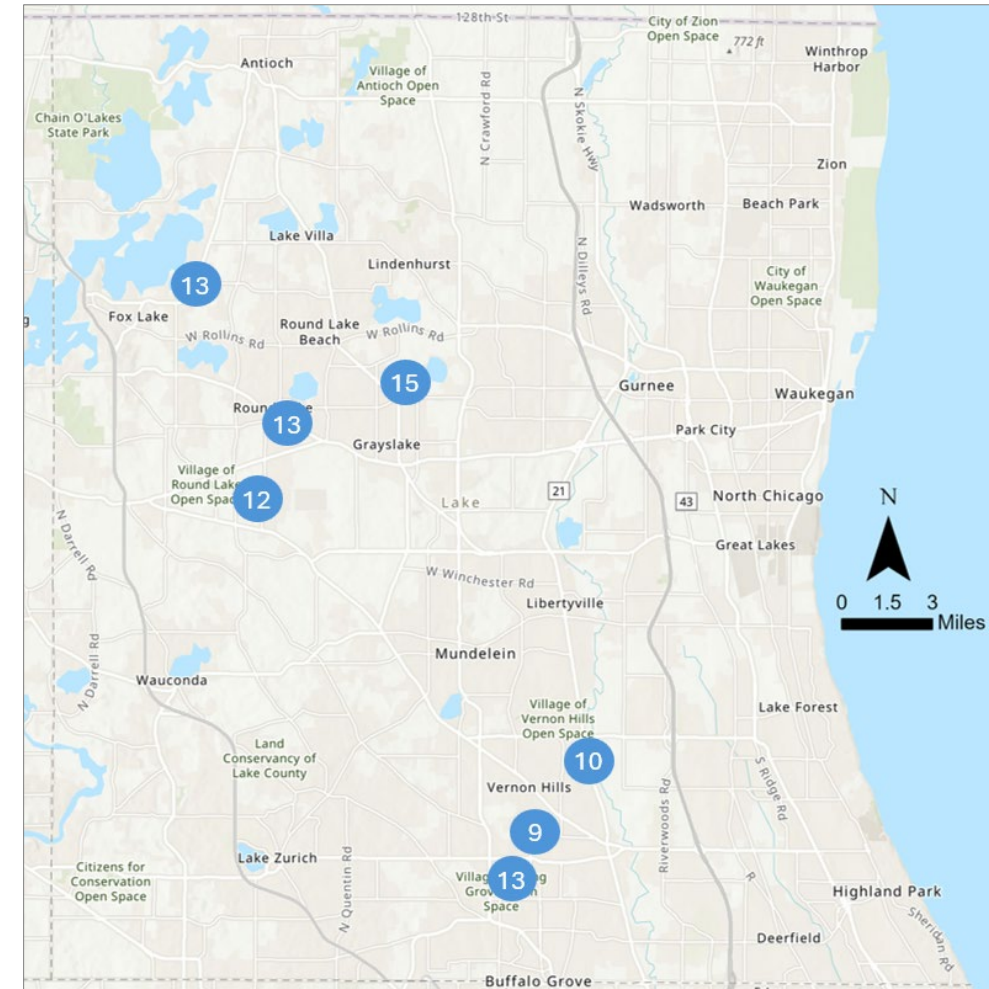
**Capital Cost Share for this project is TBD

***Various location projects not mapped

Proposed FY2026-FY2030 CIP

Wastewater Collection Continued

Map Key	Project Description	Project Type	Anticipated Construction Year*
9	Teal Lane Lift Station Diversion	Preservation	2027
10	VH Milwaukee Ave Pump Station Rehabilitation	Preservation	2027
11***	Grinder Equipment Improvements (Phased)	Modernization	2027+
12**	LCDOT Fairfield Road Culvert Replacement Sewer Relocation	Preservation	2028 (LCDOT Project)
13	Force Main Replacements (Hilltop, Jackson, Midland P2, N Cedar Crest)	Preservation	2029
14***	North Division Sewer Improvements (Scope TBD)	Preservation	2029
15	Third Lake Sanitary Sewer Relocation	Preservation	2029
16***	South Division Sewer Improvements (Scope TBD)	Preservation	2030



*Dependent upon project readiness and availability of funding

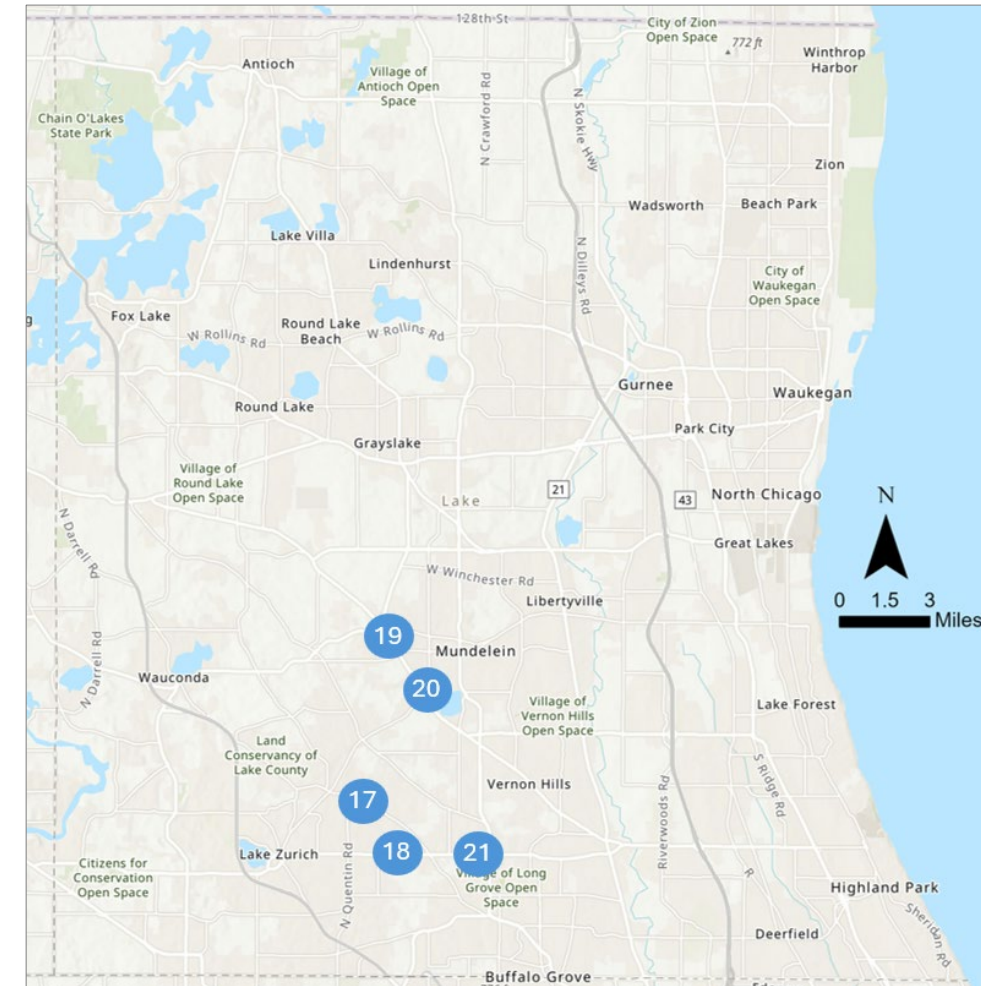
**Capital Cost Share for this project is TBD

***Various location projects not mapped

Proposed FY2026-FY2030 CIP

Wastewater Collection Continued

Map Key	Project Description	Project Type	Anticipated Construction Year*
17**	Hawthorn Woods-Area Sewer Capacity Improvements	Expansion	2027 (Village Project)
18**	IL 22 Trunk Sewer Relocation	Preservation	2027 (IDOT Project)
19**	IL 60/IL 83 - North Sewer Relocation	Preservation	2027 (IDOT Project)
20**	IL 60/IL 83 South Sewer Relocation	Preservation	2028 (IDOT Project)
21**	IL 22/IL 83 Intersection Improvements	Preservation	2029 (IDOT Project)
22***	Annual I&I SSES & Improvements – Various Locations	Modernization	2027-2030
23***	Annual Lift Station and Sewer Improvements – Various Locations	Preservation	2027-2030
24***	Interceptor Sewer Evaluation & Improvements – Various Locations	Preservation	2027-2030



*Dependent upon project readiness and availability of funding

**Capital Cost Share for this project is TBD

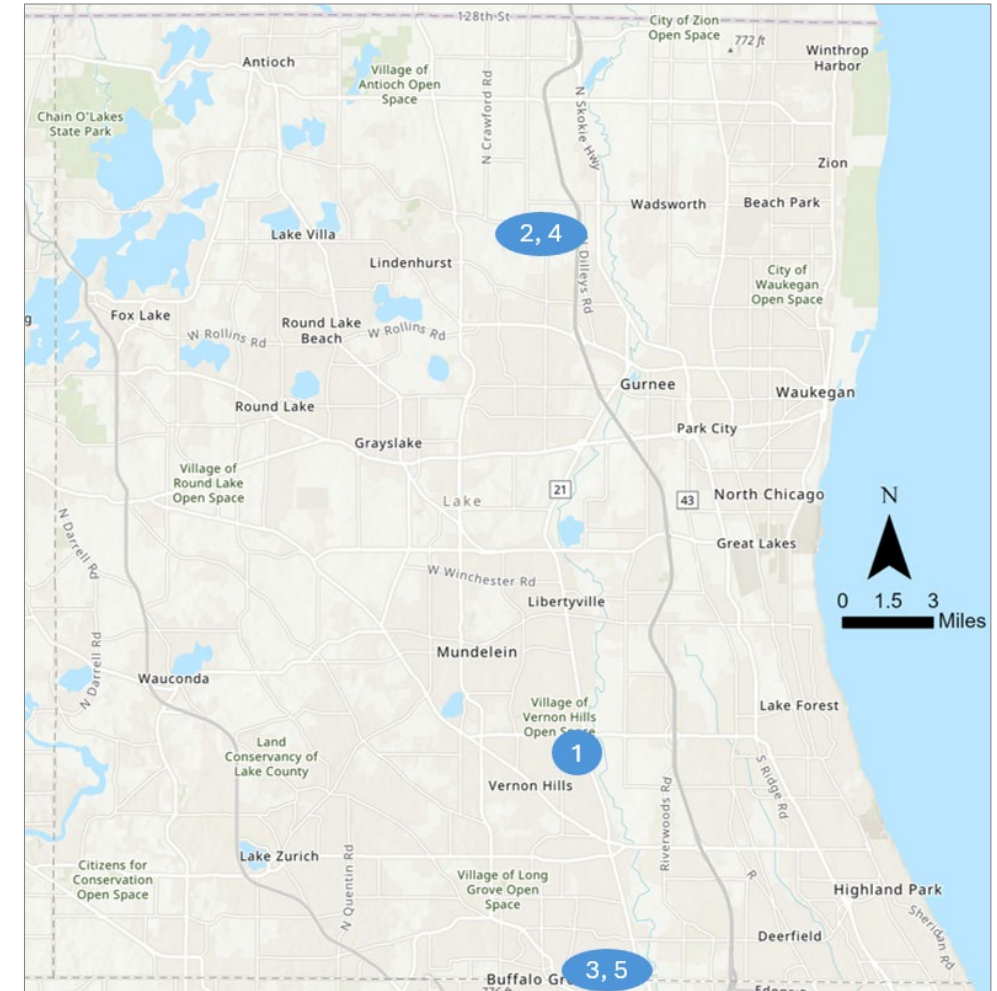
***Various location projects not mapped

Proposed FY2026-FY2030 CIP

Water Reclamation Facilities (WRF)

Map Key	Project Description	Project Type	Anticipated Construction Year*
1	NCT WRF Dewatering Improvements	Modernization	2026
2	Mill Creek WRF Dewatering Improvements	Modernization	2027
3	DPR WRF Dewatering Improvements Phase 2	Modernization	2028
4	Mill Creek WRF Bar Screen Equipment Replacement	Preservation	2029
5	DPR WRF Denitrification Pump Improvements	Modernization	2030

DPR = Des Plaines River NCT = New Century Town MC = Mill Creek
 UV = Ultraviolet WRF = Water Reclamation Facility



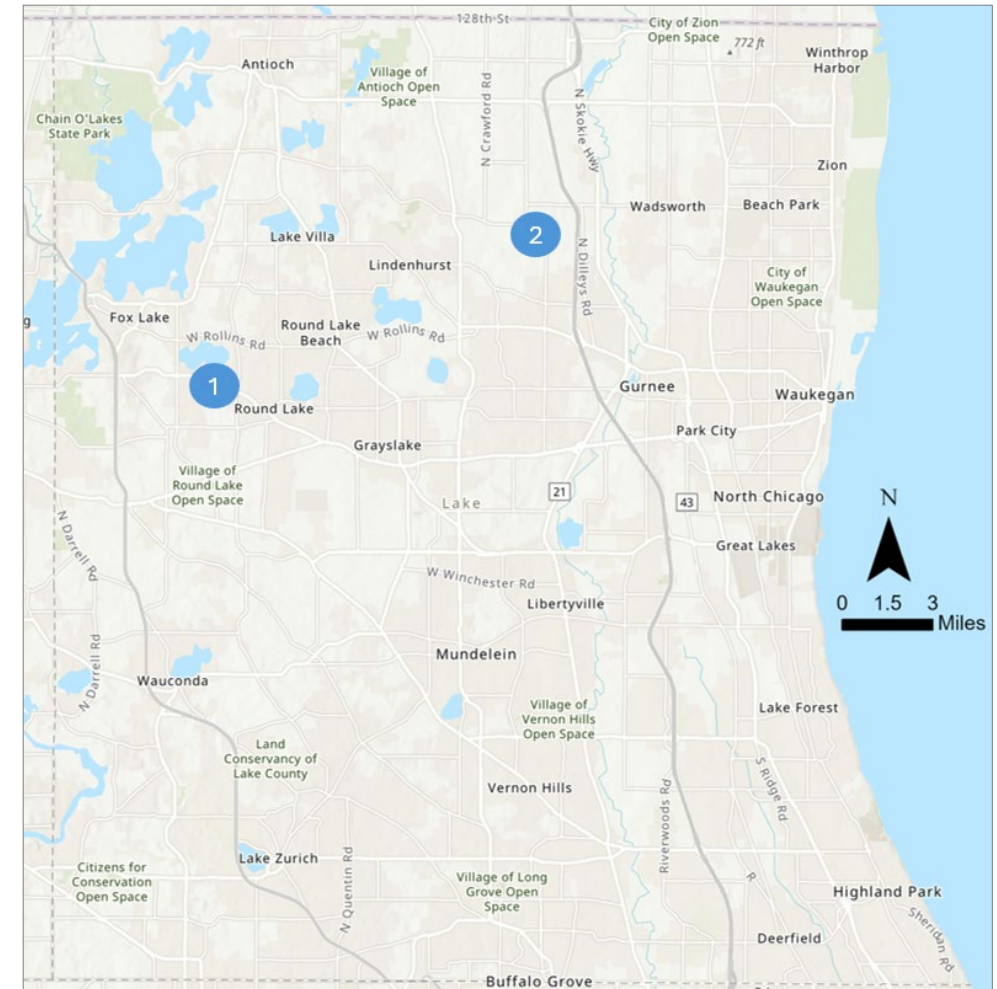
*Dependent upon project readiness and availability of funding

Proposed FY2026-FY2030 CIP

Other Support Facilities & Equipment

Map Key	Project Description	Project Type	Anticipated Construction Year*
1	Manitou Creek Shoreline Stabilization Improvements (East Main Pump Station)	Preservation	2026
2	SCADA Improvements at Mill Creek WRF	Modernization	2026

WRF = Water Reclamation Facility



*Dependent upon project readiness and availability of funding

Proposed FY2026 CIP

Enterprise Fund Investments



- Water Production & Storage - \$8.2 M
- Water Distribution - \$4.6 M
- Wastewater Collection - \$1.9 M
- Water Reclamation Facilities - \$6.0 M
- Other Support Facilities & Equipment - \$1.7 M

FY 2026 CIP Proposed Total = \$22.4 M

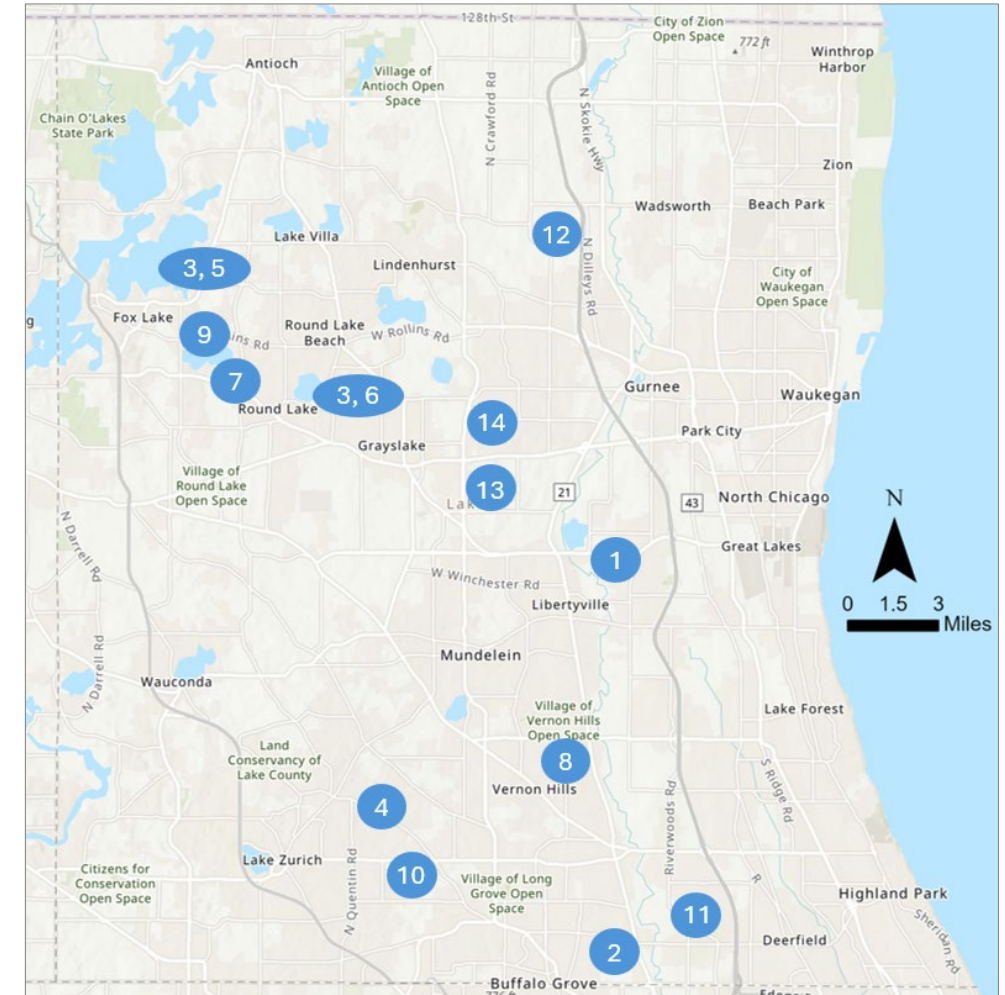
Proposed FY2026 CIP

Anticipated New Construction Projects (Enterprise Funds)

1. Countryside Manor Water Main Replacement Phase 2
2. DPR WRF Biosolids Conveyor Equipment Replacement
3. Force Main Replacements (Columbia Bay Rd & Lakeside Dr)
4. Forest Lake/Hawthorn Woods (Glennshire)/Countryside Lake Water System Resiliency Improvements (Phased)
5. Fox Lake Hills Water Storage Facility
6. Highland Lake Water System Water Storage Facility
7. Manitou Creek Shoreline Stabilization Improvements (East Main Pump Station)
8. NCT WRF Dewatering Improvements
9. Rollins Road Force Main Replacement
10. Salem Lake Drive Sewer Rehab
11. Saunders Road Sewer Improvements Phase 2 (FY25 award anticipated)
12. SCADA Improvements at Mill Creek WRF
13. Wildwood South Branch Resiliency Improvements (Phased)
14. Wildwood Dady & Decker/Idlewild Water Main Improvements
15. Annual Tower & Reservoir Painting & Maintenance Projects *

DPR = Des Plaines River NCT = New Century Town WRF = Water Reclamation Facility
SCADA = Supervisory Control and Data Acquisition

*Various Locations – Not Mapped



Out Years CIP FY2031-FY2035

Years 6 to 10 – Prospective Projects



- **Antioch Township Sewer Expansion**
- **Biosolids Storage Facility**
- **Butterfield Tower Rehabilitation**
- **Countryside Manor Water System Resiliency Improvements (North End)**
- **Countryside Lake Water System Resiliency Improvements (North End)**
- **Diamond Sylvan Lake Sanitary Sewer Improvements**
- **DPR WRF Excess Flow Facility Improvements**
- **Drying Bed Improvements (Northwest Area)**
- **FLH Water System Resiliency Improvements (North End)**
- **Highland Lake Water System - Lake Michigan Water Source**
- **Horatio Gardens Water Main Replacement (Phased)**
- **IDOT IL 83 Improvements (South of Washington) - Utility Relocation**
- **IDOT US-45 Improvements (Washington to IL Rte 132) - Utility Relocation**
- **IDOT US-45/Buffalo Grove Road Improvements - Utility Relocation**

Out Years CIP FY2031-FY2035

Years 6 to 10 – Prospective Projects (Continued)



- **IL 83 Force Main Realign Insertion Valve**
- **Maintenance Storage Building Expansion**
- **Mill Creek WRF Administrative Building Expansion**
- **Mill Creek WRF Blower Improvements**
- **Mill Creek WRF Digester Improvements**
- **Mill Creek WRF Disc Filter Improvements**
- **Mill Creek WRF Vehicle Storage Building**
- **NCT WRF Clarifiers and RAS Improvements**
- **NCT WRF Digester Blower Replacement**
- **NCT WRF Grit Removal System Improvements**
- **Pavement Reconstruction at WRF Sites**
- **Pekara Water System Well Improvements**
- **Southeast Interceptor Capacity Improvements Near IL 83 (Buffalo Grove Area)**
- **VH Water System South Delivery Structure Booster Pump Improvements**
- **Westmoreland Sewer and Water Main Replacement**

Thank you & Questions

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- Choose “Projects”
- Contact us:
publicworks@lakecountyiil.gov
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lakecountyiil.gov/CodeRED

