



# **Proposed FY2025-FY2029 Capital Improvement Program**

## **Program Overview**

**Department of Public Works  
August 28, 2024**

# Presentation Outline

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- **Strategic Alignment & Department Mission**
- **Public Health Significance**
- **Asset Portfolio**
- **Financial Information**
- **ARPA Projects & Execution**
- **Capital Improvement Program (CIP) Development**
- **FY2024 CIP**
- **Proposed FY2025-FY2029 CIP**
- **“Outer Years” CIP (FY2030-2034)**

# Strategic Alignment

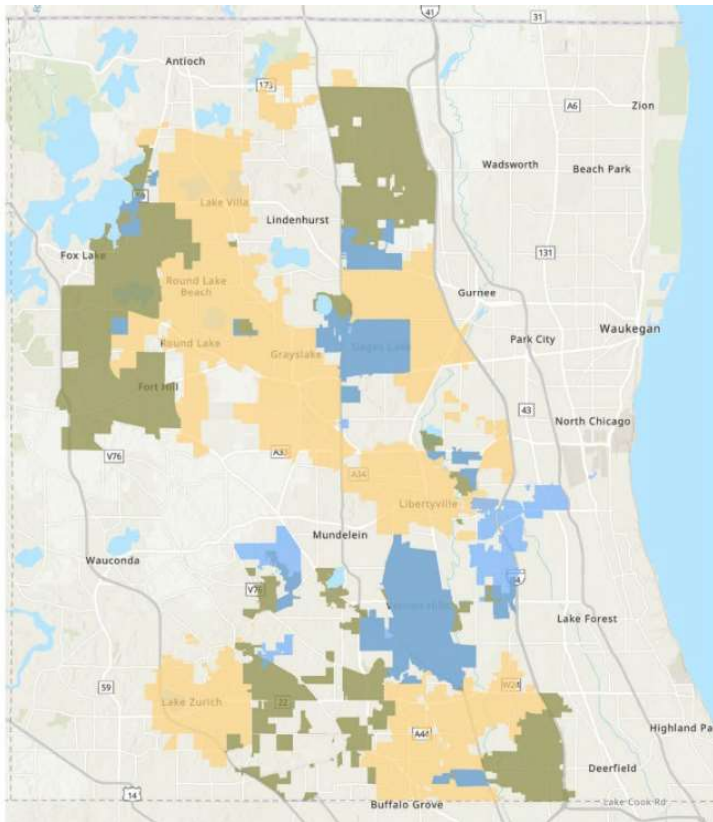
## Lake County Strategic Plan



### ✓ 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.**

# Public Health Significance

Good Public Sanitation and Quality Drinking Water are among the key building blocks to a healthy and developing community

Failure to have these building blocks in a community could result in:

- **Inability** to build close communities
- **Increased** risk of disease (cholera, dysentery, typhoid, polio)
- **Increase** mortality rate
- **Reduced** social and economic development
- **Environmental** Degradation

Key Fact:

- **Over 1.5 billion people still do not have basic sanitation**



# 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

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### 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

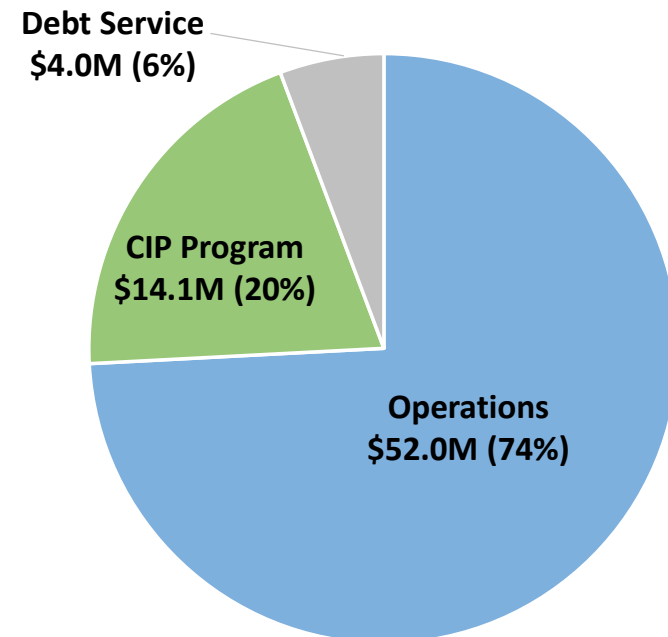


# Financial Information

## Budget and Funding

- County's sole Enterprise Fund
- Not property tax based
- Connection fees
- User fees from water and sewer used by customers
- \$70.1M FY2024 Department Budget
- Outside funding sources
- Exploring other funding opportunities

### FY2024 ADOPTED BUDGET

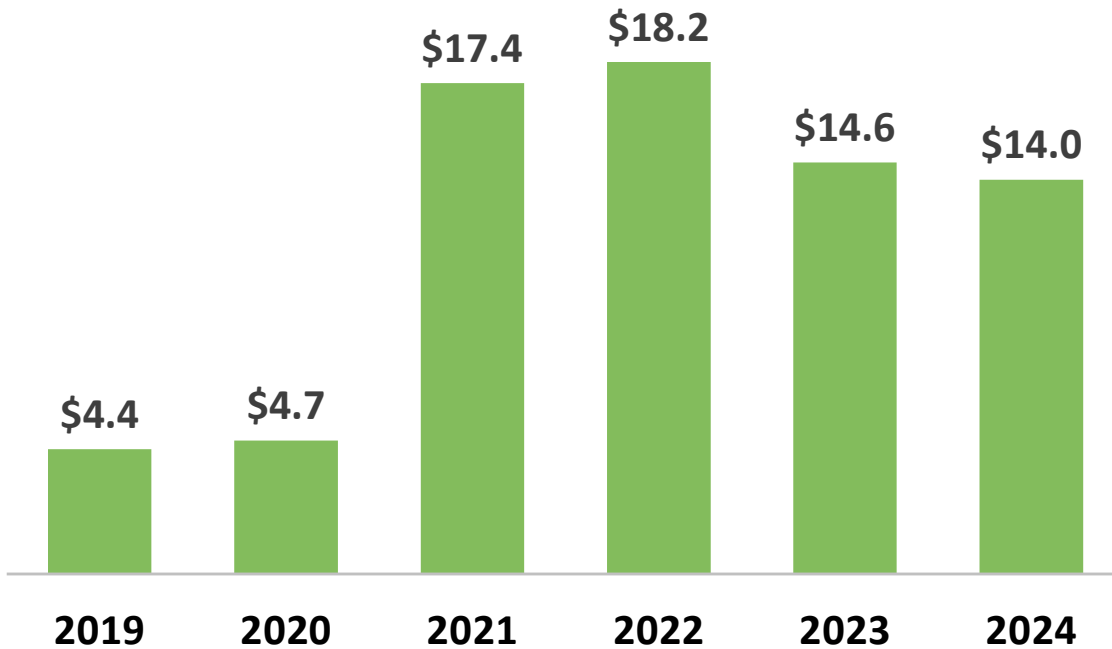




# Financial Information

## Capital Budget

### Enterprise Funds Capital Budget



- Core funding historically Enterprise

# Financial Information

## Outside Funding – Congressionally-Directed Funding



<b>Des Plaines River WRF Dewatering Project Phase 2</b>	<b>Design funding awarded 80% match, up to \$400k</b>
<b>New Century Town (Vernon Hills) WRF* Dewatering Project</b>	<b>Design funding award in process 80% match, up to \$960k</b>
<b>Idlewild and Dady &amp; Decker Water Main Replacement</b>	<b>Design funding award in process 80% match, up to \$960k</b>
<b>Forest Lake/Hawthorn Woods (Glennshire) Improvements</b>	<b>Under Consideration</b>
<b>Antioch Township Sewer Expansion</b>	<b>Under Consideration</b>

08.28.2024

\*WRF = Water Reclamation Facility

# 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 – Contract Awarded	2024-2025
Highland Lake Water System Improvements	\$2,500,000	Phase 1 - Complete Phase 2 - In Design	2023-2026
Pekara Lake Michigan Water Supply Connection	\$1,100,000	Contract Awarded	2024-2026
Mill Creek WRF UV Disinfection	\$1,000,000	Contract Awarded	2024-2025
DPR WRF Blowers Replacement	\$1,500,000	Contract Awarded	2024-2026
DPR WRF Disc Filter Installation & Clarifier Covers at DPR, NCT, MC WRFs	\$6,300,000	Contract Awarded	2024-2026
DPR WRF UV Disinfection	\$5,500,000	Contract Awarded	2024-2026
Antioch Township Sewer Expansion	\$1,000,000	Under Review; Waiting to Proceed	2024-2026*
<b>TOTAL =</b>	<b>\$21,400,000</b>		



American Rescue Plan Act

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

\* Design Only

# CIP Development

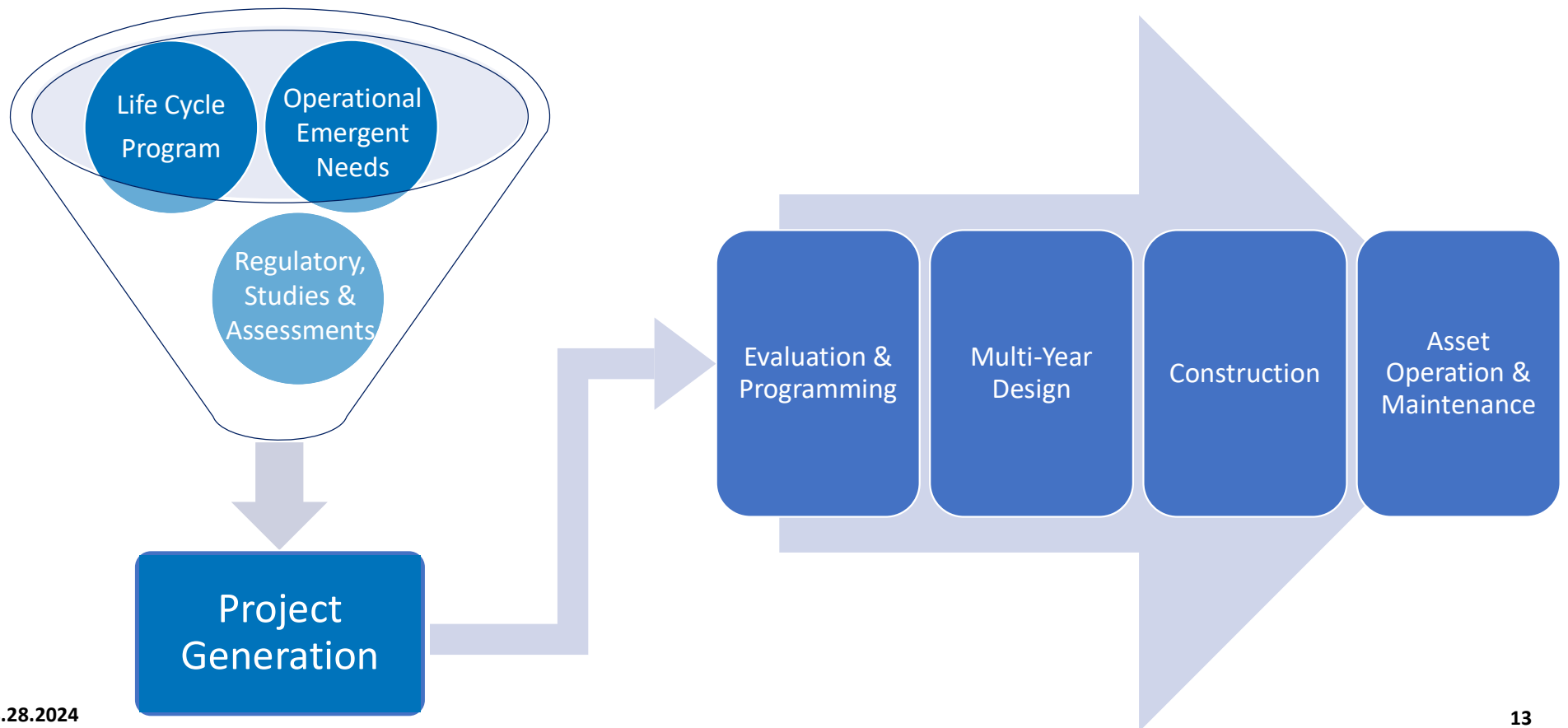
## Program Priorities

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- ✓ **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

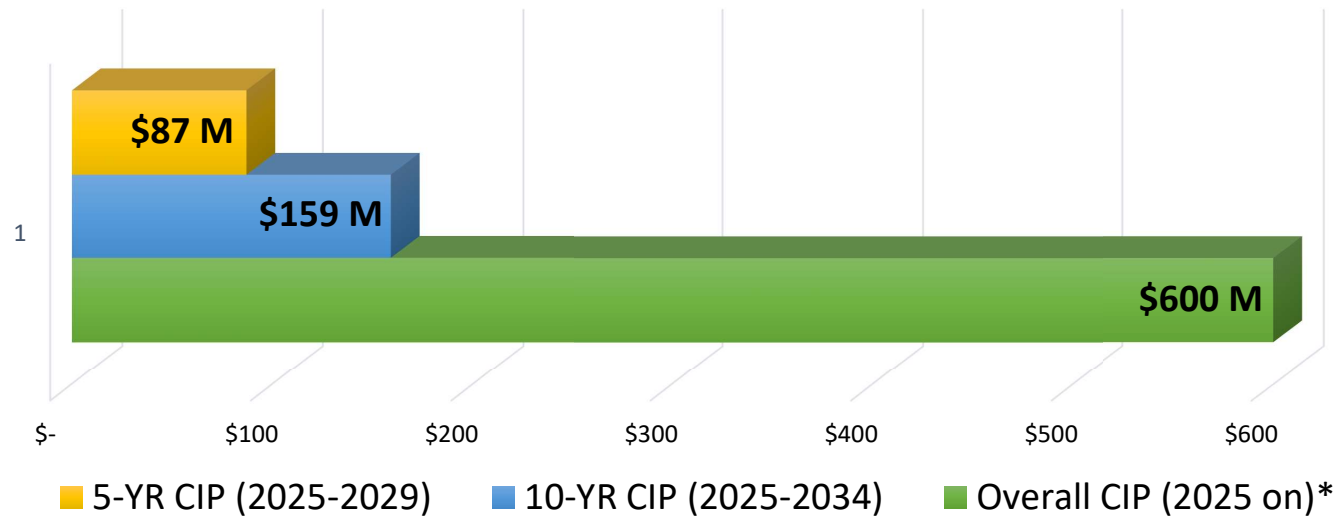




# CIP Development

## 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

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



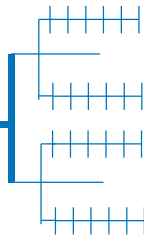
# CIP Development

## Program Investment Categories

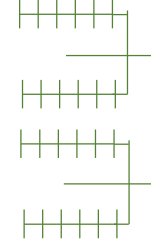
### Water Production & Storage



### Water Distribution



### Wastewater Collection



### Water Reclamation Facilities



### Other Support Facilities & Equipment



# FY2024 CIP

## Investments From Budget



- Water Production & Storage - \$0.1 M
- Water Distribution - \$8.5 M
- Wastewater Collection - \$1.9 M
- Water Reclamation Facilities - \$0.2 M
- Other Support Facilities & Equipment - \$3.4 M

**FY 2024 CIP Proposed Total = \$14.1 M**

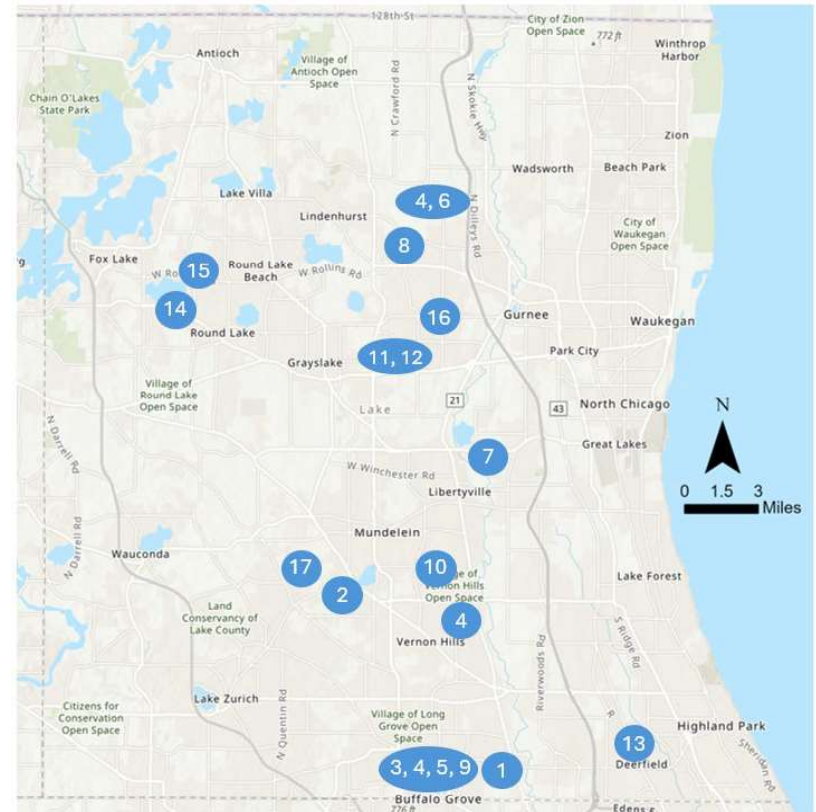


# FY2024 CIP

## Construction Projects In Process



1. Pekara Water System – Lake Michigan Water Connection\*\*
2. Oak Terrace Well House & Water System Interconnection\*\*
3. DPR WRF UV Treatment Improvements\*\*
4. DPR WRF Filter Replacements & Clarifying Covers at all WRFs\*\*
5. DPR WRF High Speed Blowers Replacement\*\*
6. Mill Creek WRF UV Replacement\*\*
7. Countryside Manor Water Main Replacement Phase 1
8. Grandwood Park Water Main Replacement
9. DPR WRF SCADA Critical Improvements
10. Vernon Hills Water System White Deer Run Reservoir (FY23 award)
11. Gages Lake Water Tower (FY23 award)
12. Wildwood & Allen Farms Water Main Replacement (FY23 award)
13. Saunders Rd Sewer Improvements Phase 1 (FY23 award)
14. SCADA Phase 3 Implementation – NW Sites (FY23 award)
15. Wilson & Rollins Sewer Asset Lining (FY21 award; legacy project)
16. Washington Street Water Main Relocation (LCDOT Project)
17. Sylvan Lake Dam Sewer Main Relocation (SMC/FEMA Project)
18. Annual Tower & Reservoir Painting & Maintenance Projects \*



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

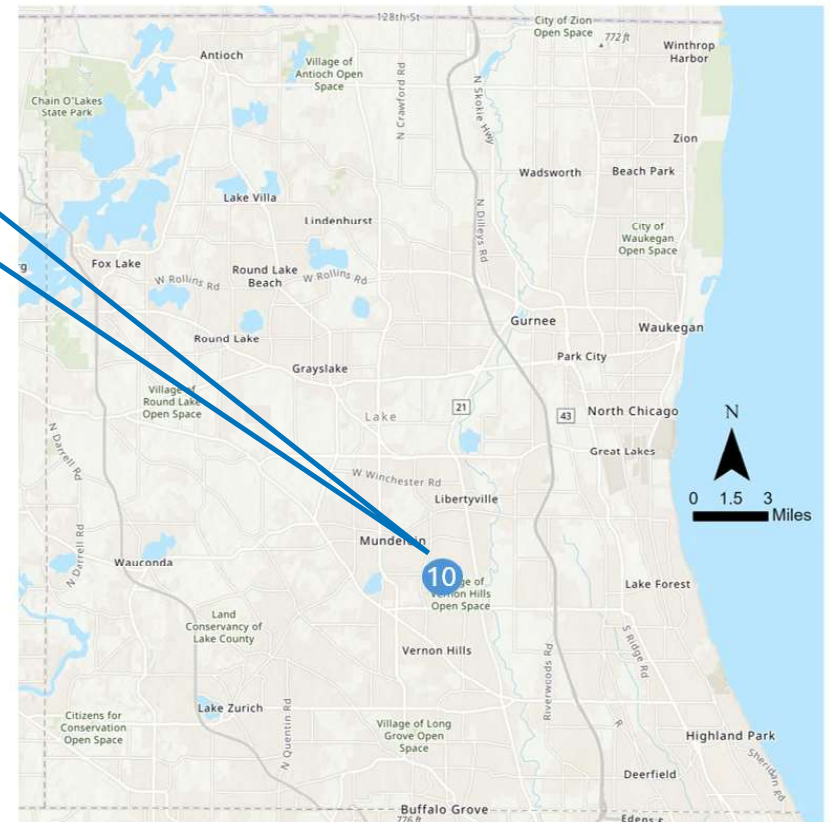


# FY2024 CIP

## Construction Project Highlights – Water Production & Storage



Vernon Hills White Deer Run Reservoir

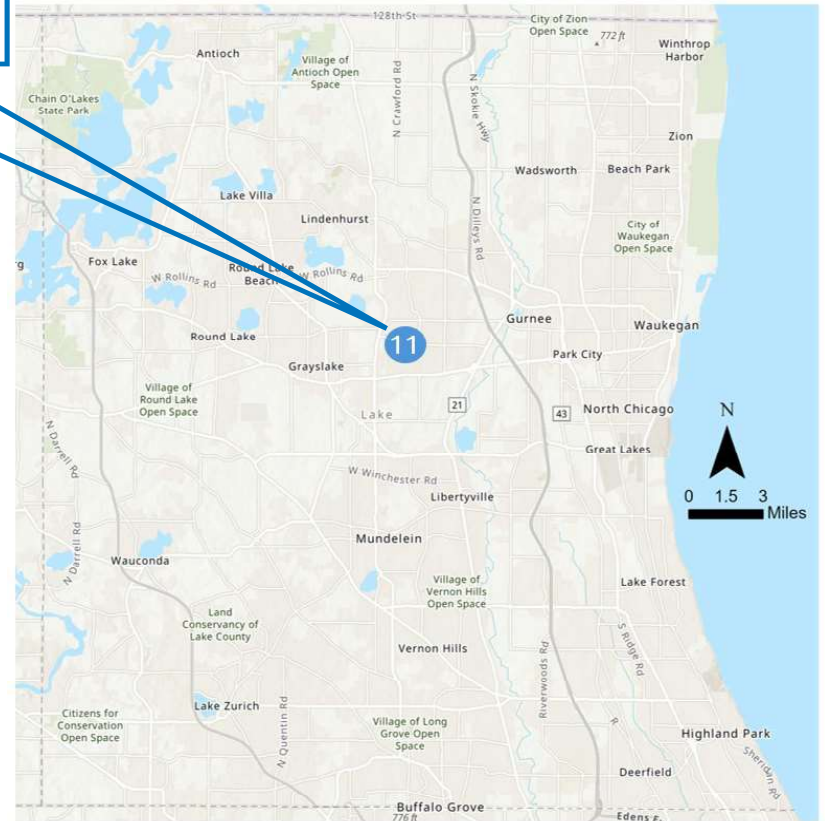
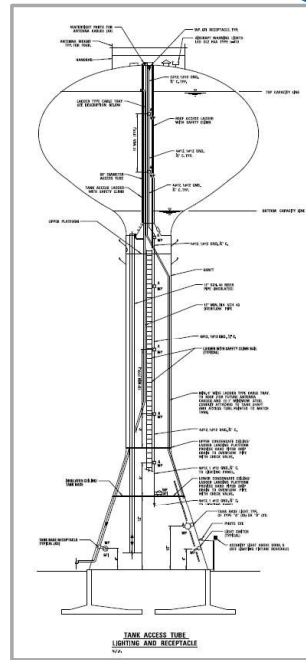


# FY2024 CIP

## Construction Project Highlights – Water Production & Storage



### Gages Lake Water Tower



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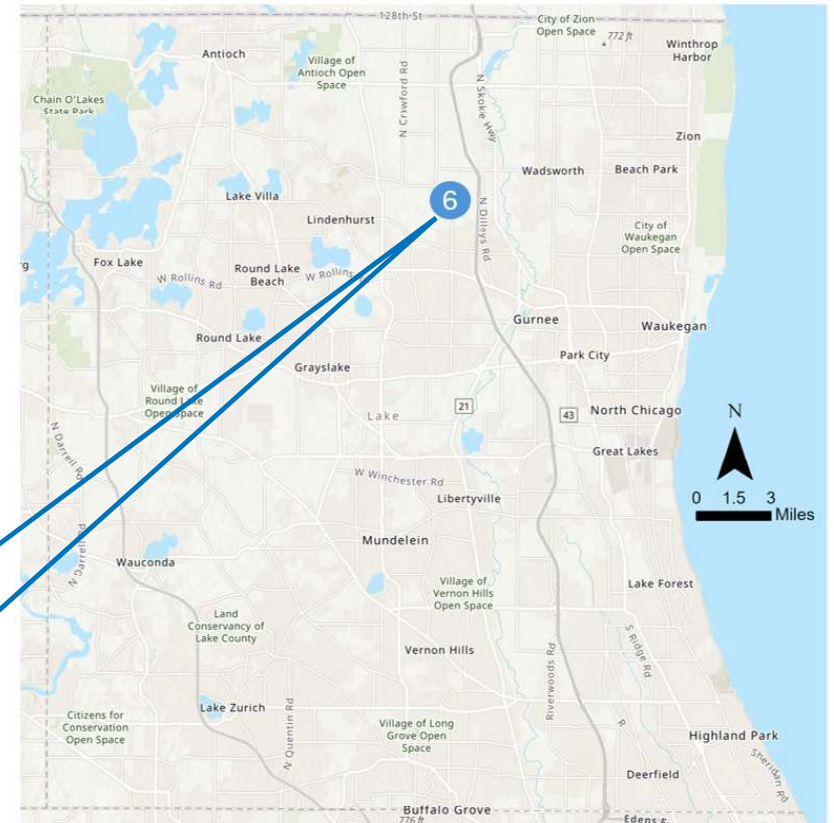


# FY2024 CIP

## Construction Project Highlights – Water Reclamation



**Mill Creek WRF UV  
Equipment Replacement**



# Proposed FY2025-FY2029 CIP

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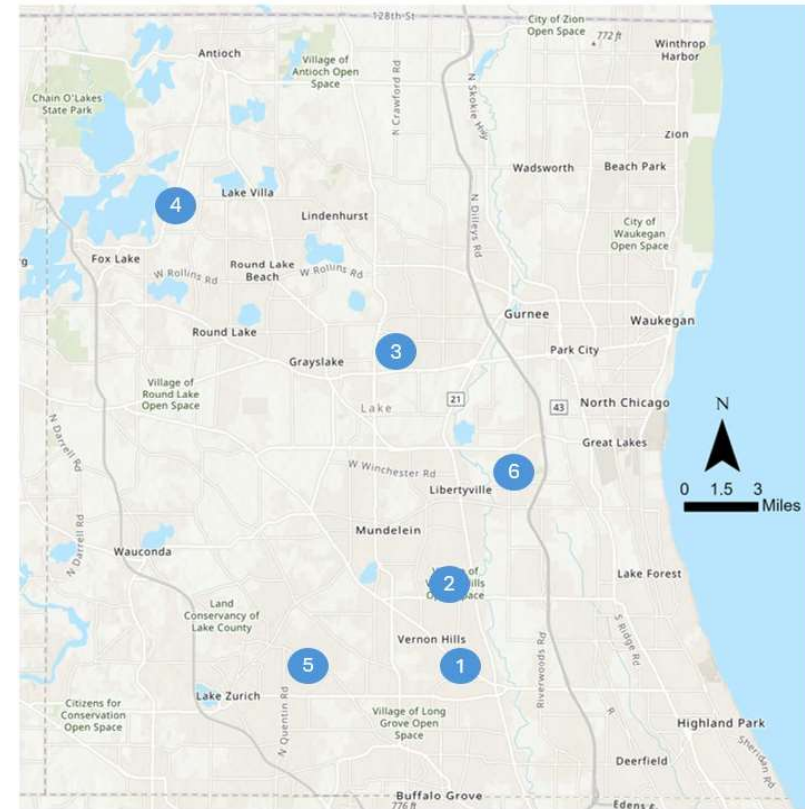
- **Water Production & Storage**
- **Water Distribution**
- **Wastewater Collection**
- **Water Reclamation Facilities**
- **Other Support Facilities & Equipment**

# Proposed FY2025-FY2029 CIP

## Water Production & Storage



Map Key	Project Description	Project Type	Anticipated Construction Year*
1	Corporate Woods Reservoir Improvements	Preservation	2025
2	Vernon Hills Extended Resiliency Improvements (Phased)	Preservation	2025+
3	Wildwood Extended Resiliency Improvements (Phased)	Preservation	2025+
4	Fox Lake Hills Water Storage Facility	Preservation	2026
5	Forest Lake/Hawthorn Woods (Glenshire) Water System Resiliency Improvements	Preservation	2027
6	Vernon Hills Water System Emergency Interconnection with Green Oaks	Preservation	2029
7**	Annual Tower & Reservoir Painting & Maintenance Projects – Various Locations	Preservation	2025-2029



\*Dependent upon project readiness and availability of funding

\*\*Various location projects not mapped

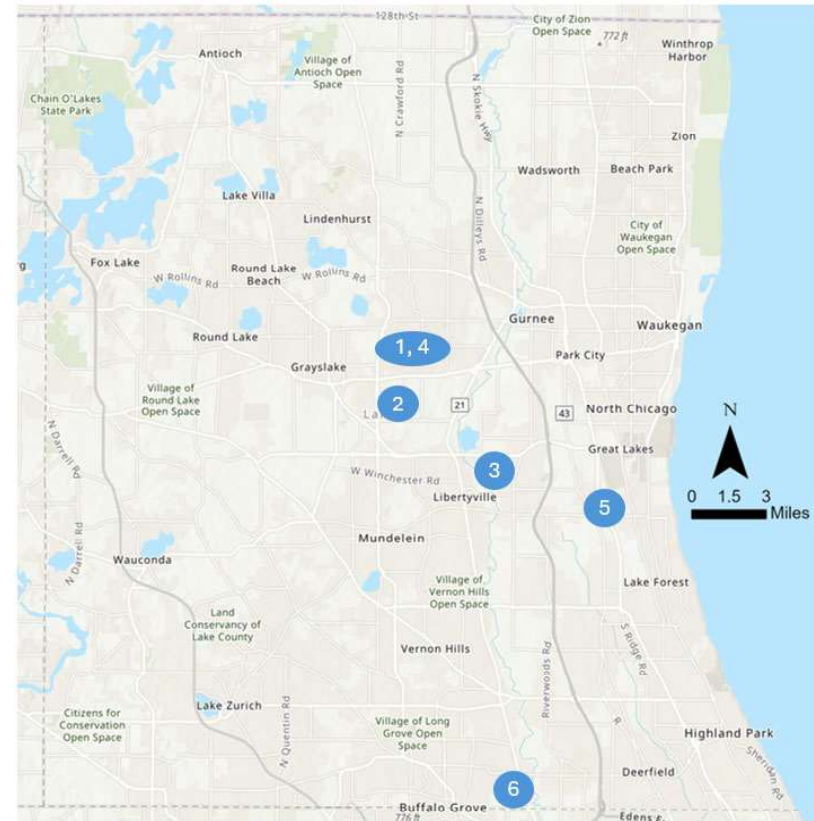


# Proposed FY2025-FY2029 CIP

## Water Distribution



Map Key	Project Description	Project Type	Anticipated Construction Year*
1	Gages Lake Rd Water Main Improvements	Preservation	2025
2	Wildwood South Branch Resiliency Improvements (Phased)	Preservation	2025+
3	Countryside Manor Water Main Replacement Phase 2	Preservation	2026
4	Idlewild/Dady & Decker Water Main Replacement	Preservation	2027
5	IL 176/US 41 Water Main Relocation	Modernization	2028 (IDOT Project)
6	Pekara Water Main Rehabilitation Phase 2, 3 and 4	Preservation	2029

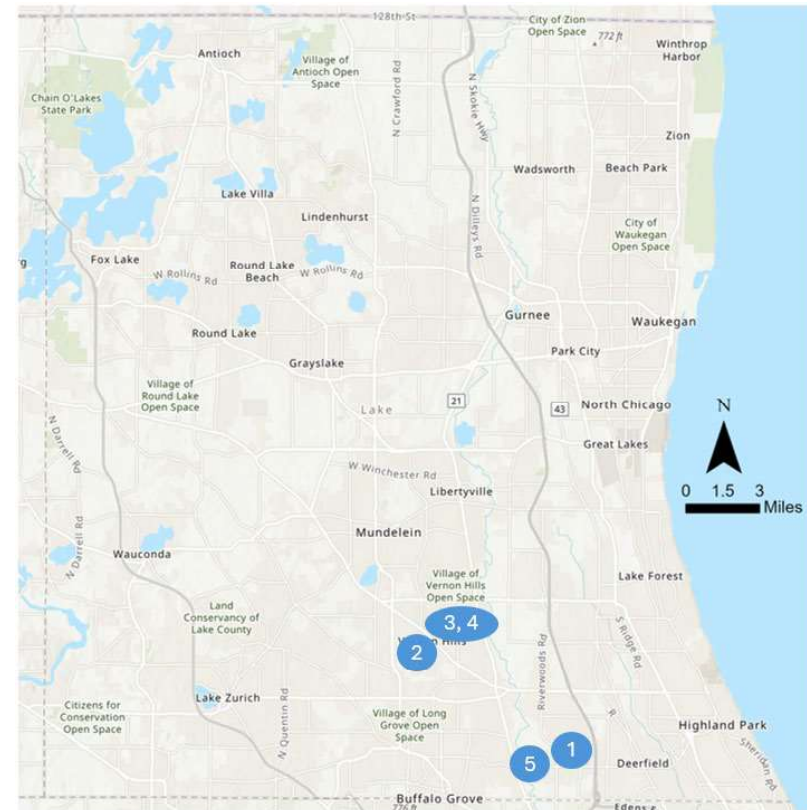


\*Dependent upon project readiness and availability of funding

# Proposed FY2025-FY2029 CIP Wastewater Collection



Map Key	Project Description	Project Type	Anticipated Construction Year*
1	Saunders Rd Lift Station & Sewer Improvements Phase 2	Preservation & Expansion	2025
2	Teal Lane Lift Station Diversion	Preservation	2025
3	VH West Pump Station Force Main Replacement	Preservation	2026
4	Milwaukee Ave Pump Station Rehabilitation	Preservation	2026
5	Deerfield Rd Lift Station Relocation & Sewer Rehabilitation	Modernization	2026 (LCDOT Project)



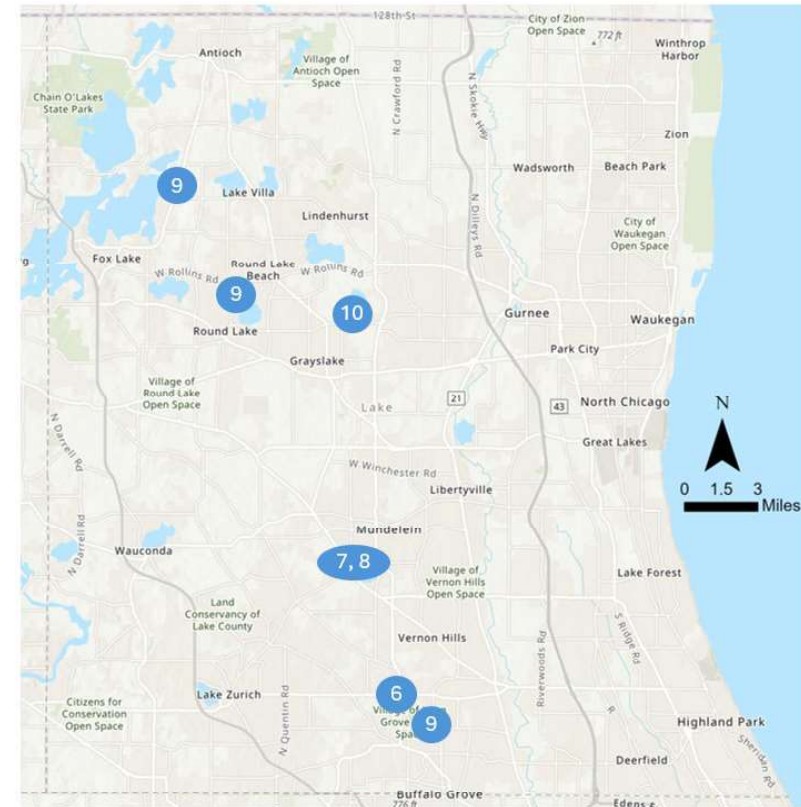
\*Dependent upon project readiness and availability of funding

# Proposed FY2025-FY2029 CIP

## Wastewater Collection Continued



Map Key	Project Description	Project Type	Anticipated Construction Year*
6**	IL 22/IL 83 Intersection Improvements	Modernization	2028 (IDOT Project)
7**	IL 60/IL83 (IL 176 - Midlothian Rd) Sewer Relocation	Modernization	2028 (IDOT Project)
8**	IL 60/IL83 (Midlothian Rd – IL 60) Sewer Relocation	Modernization	2028 (IDOT Project)
9	Hilltop, Midland Phase 2, and Columbia Bay Road Force Main Replacements	Preservation	2029
10	Third Lake Sanitary Sewer Relocation	Modernization	2029
11***	Annual Lift Station and Sewer Improvements – Various Locations	Preservation	2025-2029



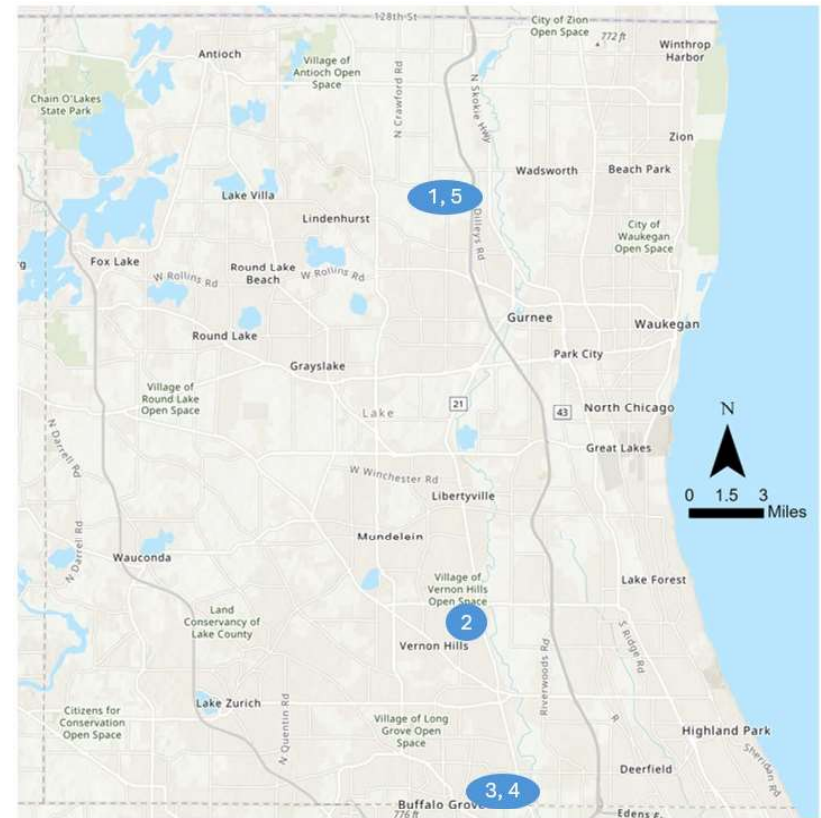
\*Dependent upon project readiness and availability of funding  
 \*\*Capital Cost Share for this project is TBD  
 \*\*\*Various location projects not mapped

# Proposed FY2025-FY2029 CIP Water Reclamation Facilities (WRF)



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

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



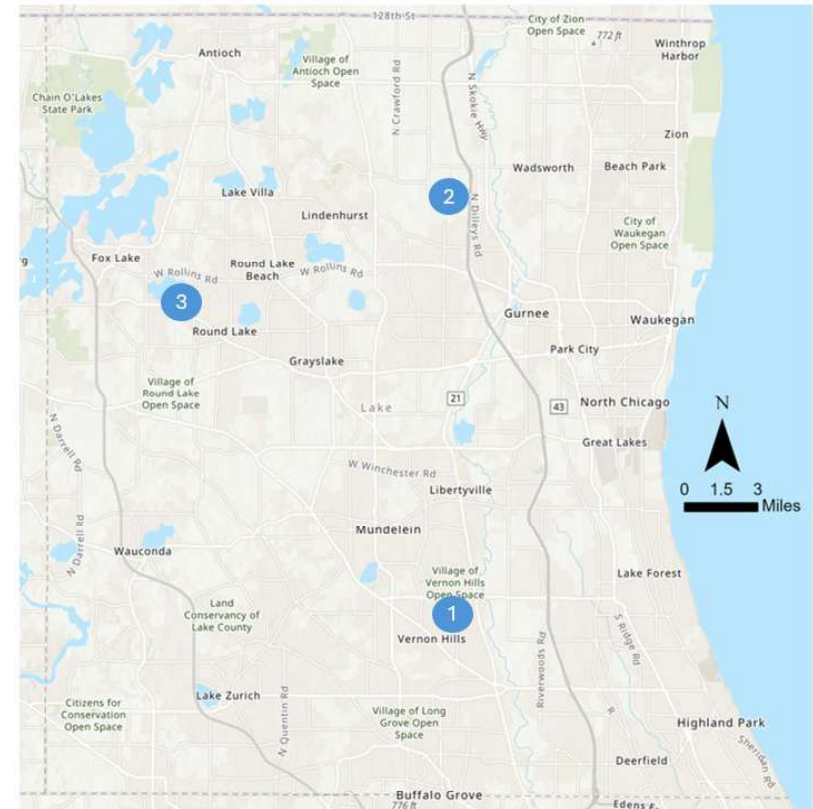
\*Dependent upon project readiness and availability of funding

# Proposed FY2025-FY2029 CIP

## Other Support Facilities & Equipment



Map Key	Project Description	Project Type	Anticipated Construction Year*
1	SCADA Modernization: New Century Town WRF	Modernization	2025
2	SCADA Modernization: Mill Creek WRF	Modernization	2026
3	Manitou Creek Shoreline Stabilization Improvements (East Main Pump Station)	Preservation	2026



\*Dependent upon project readiness and availability of funding



# Proposed FY2025 CIP

## Enterprise Fund Investments



- **Water Production & Storage - \$2.0 M**
- **Water Distribution - \$4.3 M**
- **Wastewater Collection - \$6.5 M**
- **Water Reclamation Facilities - \$1.0 M**
- **Other Support Facilities & Equipment - \$1.5 M**

**FY 2025 CIP Proposed Total = \$15.3 M**

# Proposed FY2025 CIP

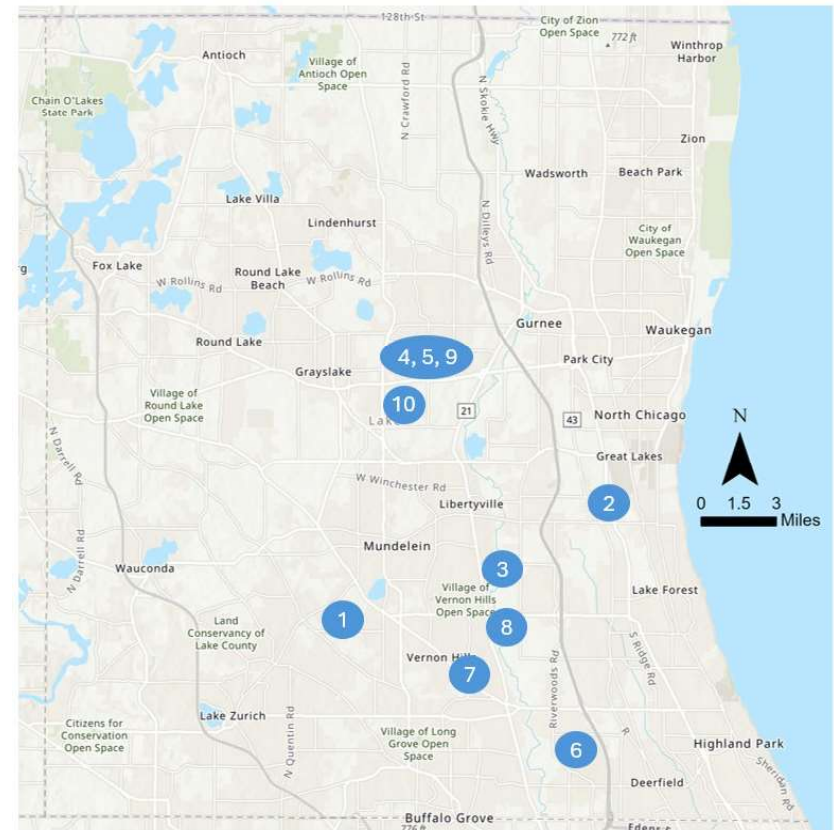
## Anticipated New Construction Projects (Enterprise Funds)



1. Indian Creek Club Water Main Replacement\*\*
2. US 41 North Chicago Interconnect Meter Pit Rehabilitation\*\*
3. SEC Drop Chamber Replacement\*\*
4. Wildwood Water System Controls Modernization\*\*
5. Gages Lake Rd Water Main Improvements
6. Saunders Rd Sewer Improvements Phase 2
7. Vernon Hills Corporate Woods Reservoir Improvements
8. Vernon Hills Water System Extended Resiliency Improvements (Scope TBD)
9. Wildwood Water System Extended Resiliency Improvements (Scope TBD)
10. Wildwood “South Branch” Water System Improvements
11. SCADA Critical Infrastructure Upgrades (various locations)\*
12. Annual Tower & Reservoir Painting & Maintenance Projects \*

Note: eight (8) existing, multi-year projects will be active in FY25

\*Various Locations – Not Mapped  
 \*\*FY24 Projects to be Awarded in FY25



# Out Years CIP FY2030-FY2034

## Years 6 to 10 – Prospective Projects

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- **Butterfield Tower Rehabilitation**
- **Vernon Hills Water System Additional Storage**
- **Countryside Lake Water System Resiliency**
- **Horatio Gardens Water Main Replacements Phases 1 & 2**
- **Vernon Hills Westmoreland Water Main Replacement**
- **Vernon Hills Westmoreland Sewer Main Replacement**
- **John Mogg Water Tower Rehabilitation**
- **Countryside Manor/North Libertyville Estates Water Main Loop Improvements on IL Route 137**
- **Highland Lake Water System Lake Michigan Water Connection**
- **IDOT US 45 (Washington St to Grand Ave) – potential sewer/water impacts**
- **IDOT US 45 at Buffalo Grove Rd – potential sewer/water impacts**
- **SCADA Critical Improvements**
- **LCPW Libertyville Campus Improvements**
- **LCPW Maintenance Storage Building Improvements**
- **Biosolids Storage Building**
- **Annual Water Storage Rehabilitation**
- **Annual Collection Sewer Rehabilitation**
- **Annual Lift & Pump Station Improvements**

# Out Years CIP FY2030-FY2034

## Years 6 to 10 – Prospective Projects (Continued)

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- **IL 83 Forcemain Valve Insertion**
- **IL 83 Relief Sewer (Buffalo Grove area)**
- **Lakeside, Jackson & N Cedar Crest Force Main Replacements**
- **Vernon Hills Westmoreland Sewer Replacement**
- **Rollins Rd Force Main Rehabilitation**
- **Fox Lake Hills Water System Resiliency Improvements near Bald Eagle Rd and IL Route 59**
- **Antioch Township Sanitary Sewer Collection System**
- **Mill Creek WRF Blower Replacement**
- **New Century Town WRF Building 85 Replacement Digester Blowers**
- **New Century Town WRF Clarifier Retrofits & Building #46 Rehabilitation**
- **Mill Creek WRF Dewatering & Miscellaneous Improvements**
- **Countryside Lake, Forest Lake, and Hawthorn Woods (Glennshire) Lake Michigan Water Source**
- **Countryside Lake Water Main Resiliency Improvements (North Side of System)**

WRF = Water Reclamation Facility



# Thank you & Questions

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## Connect with us!

- Online:  
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- Choose “Projects”
- Contact us:  
[publicworks@lakecountyil.gov](mailto:publicworks@lakecountyil.gov)
- Alerts:  
[lakecountyil.gov/CodeRED](https://lakecountyil.gov/CodeRED)

