



# **Proposed FY2024-FY2028 Capital Improvement Program**

## **Program Overview**

**Department of Public Works  
September 27, 2023**

# Presentation Outline

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- **Strategic Alignment**
- **Capital Improvement Program (CIP) Development**
- **FY2023 CIP**
- **Strategic System Expansion**
- **Proposed FY2024-FY2028 CIP**
- **Out Years CIP FY2029-2033**

# Strategic Alignment

## Lake County Strategic Plan and Public Works



### ✓ GOAL: ADAPTIVE INFRASTRUCTURE

- 2.0 MG water reservoir in Vernon Hills
- 1.25 MG water tower in Wildwood
- 7,200 LF water main replacement in Wildwood
- 9,000 LF force main installation along Saunders Rd
- Pekara Water System Lake Michigan Water (1,200 connections)

# Strategic Alignment

## Lake County Strategic Plan and Public Works

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### ✓ GOAL: SUSTAINABLE ENVIRONMENT

- Nutrient reduction in treated wastewater (over 5 billion gallons treated yearly)
- Addressing emerging contaminants for potable water
- ComEd Wastewater Strategic Energy Management
- SCADA System Improvements

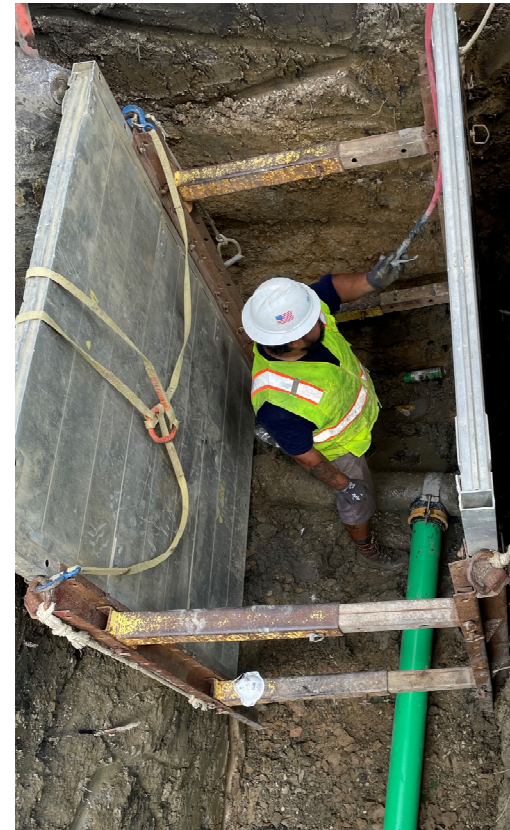


# CIP Development

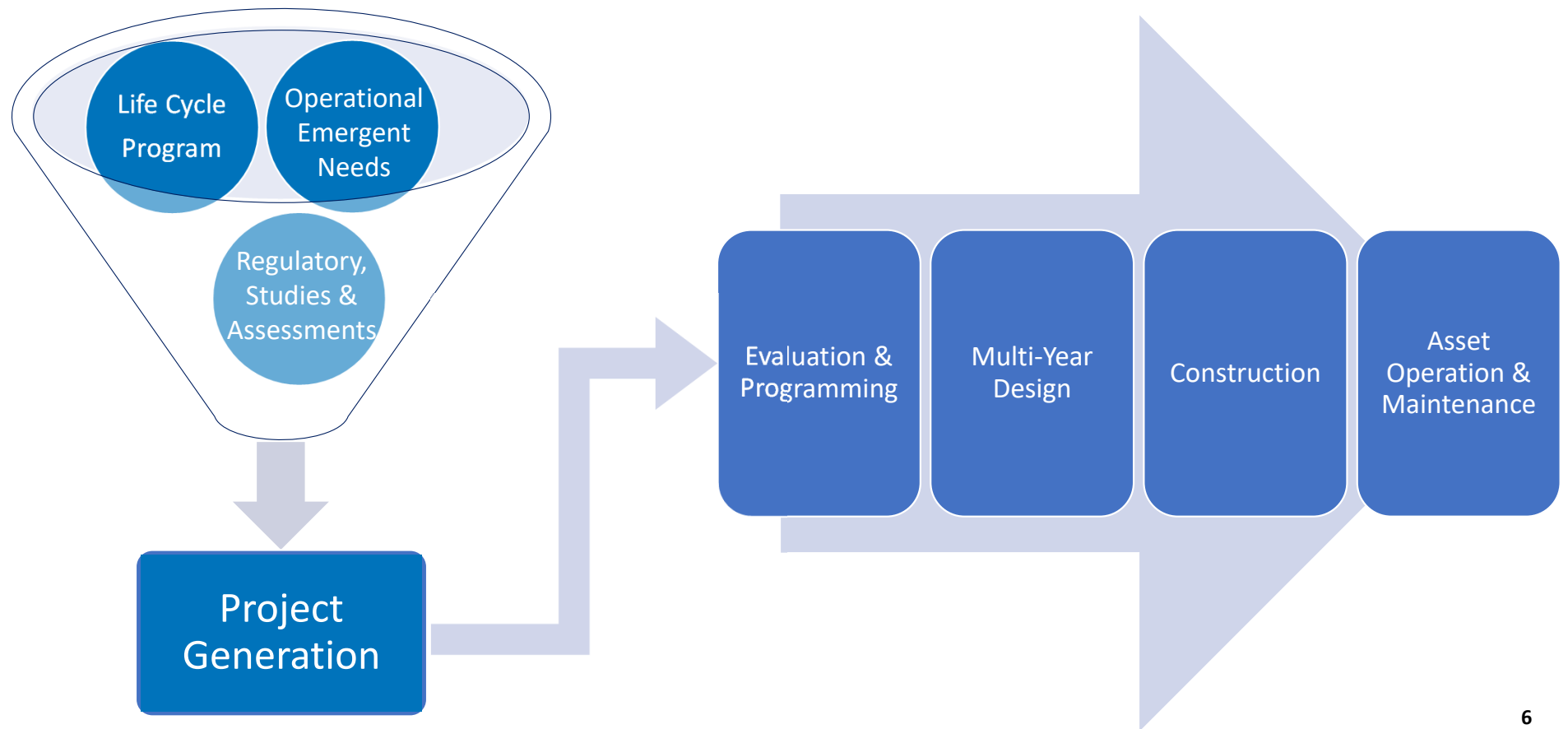
## Program Priorities

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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

## Impact from Other Agencies

- Roadway improvement projects
- IEPA - unfunded mandates



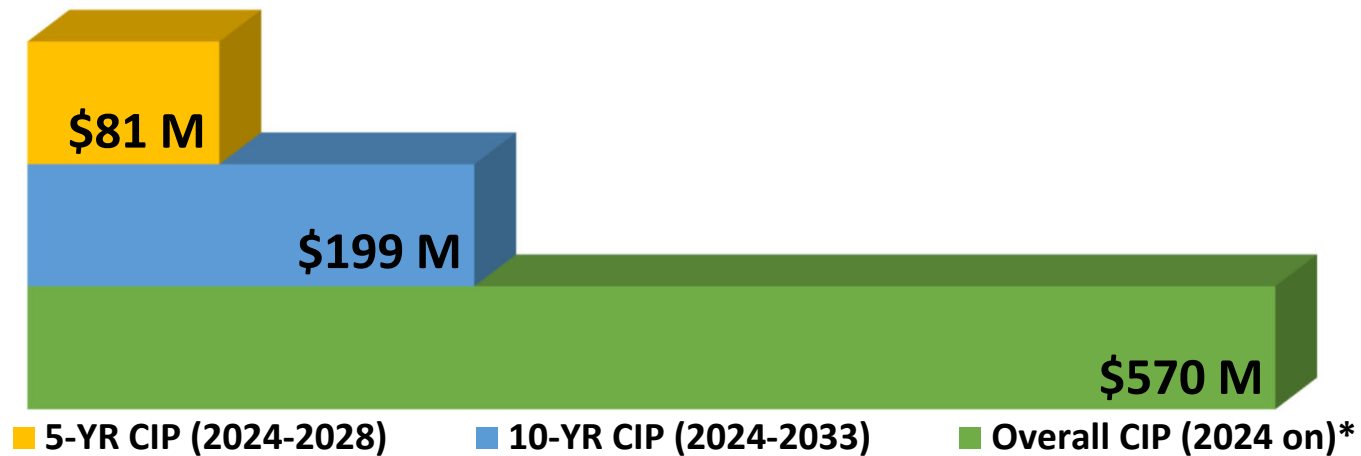
Roadway Initiated CIP  
Projects = anticipated  
\$17.3M (over 5-years)

**FY 2024-2028 CIP = \$80.9M**

# CIP Development

## Identified Needs

### Extent of Identified CIP Needs



**\* Overall CIP includes long-range 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



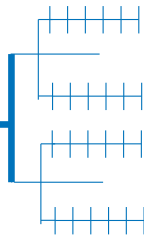
# CIP Development

## Program Investment Categories

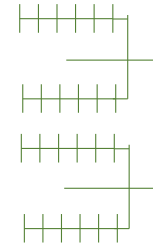
Water  
Production &  
Storage



Water  
Distribution



Wastewater  
Collection



Water  
Reclamation  
Facilities



Other Support Facilities &  
Equipment



# FY2023 CIP

## Investments From Budget



- Water Production & Storage - \$5.8 M
- Water Distribution - \$4.2 M
- Wastewater Collection - \$3.8 M
- Water Reclamation Facilities - \$0 M
- Other Support Facilities & Equipment - \$0.8 M

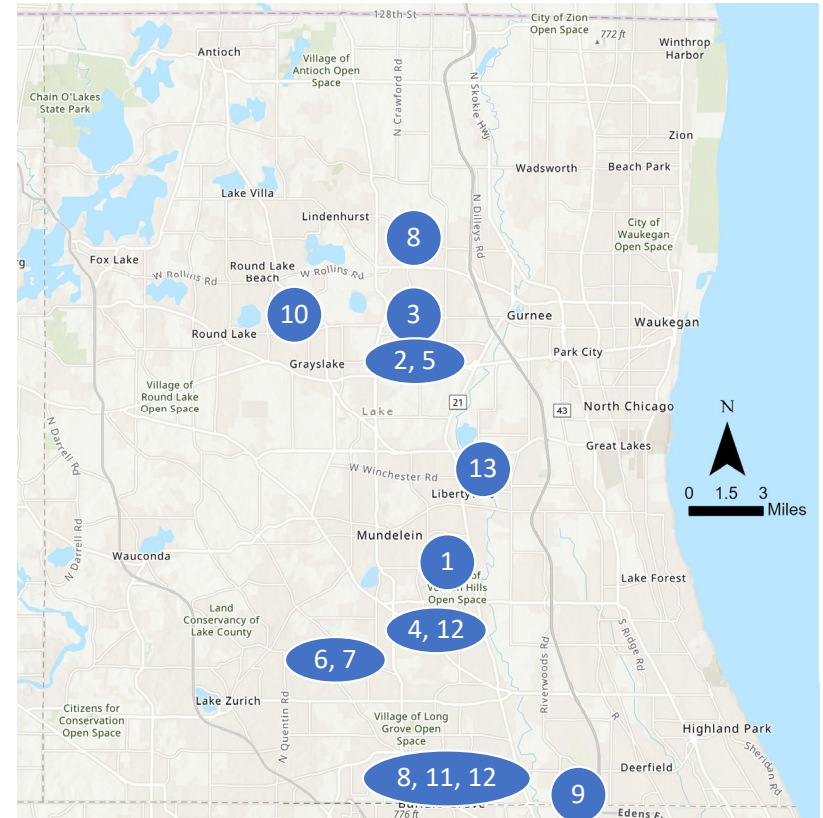
**FY2023 CIP Adopted Budget Total = \$14.6 M**

# FY2023 CIP

## Construction Projects In Process



1. Vernon Hills Water System White Deer Run Reservoir
2. Gages Lake Water Tower (bid September 2023)
3. Washington Street Water Main Relocation (LCDOT Project)
4. Lakeview Parkway Water Asset Relocation (Vernon Hills Project)
5. 2023 Water Main Replacement (Wildwood)
6. Water Meter Pit Rehab (Hawthorn Woods)
7. Water Meter Pit Rehab (Forest Lake)
8. Pekara Water Main Resiliency
9. Saunders Rd Force Main Improvements Phase 1
10. Highland Lake Water System Upgrade Phase 1 (ARPA)
11. DPR WRF Dewatering Improvements Phase 1 (carried from 2022)
12. NCT and DPR WRF Bar Screens (carried from 2022, completed)
13. NLE Levee Drainage Improvement (carried from 2022, completed)
14. SCADA Phase 3 Implementation\*
15. Annual Tower & Reservoir Painting & Maintenance Projects \*



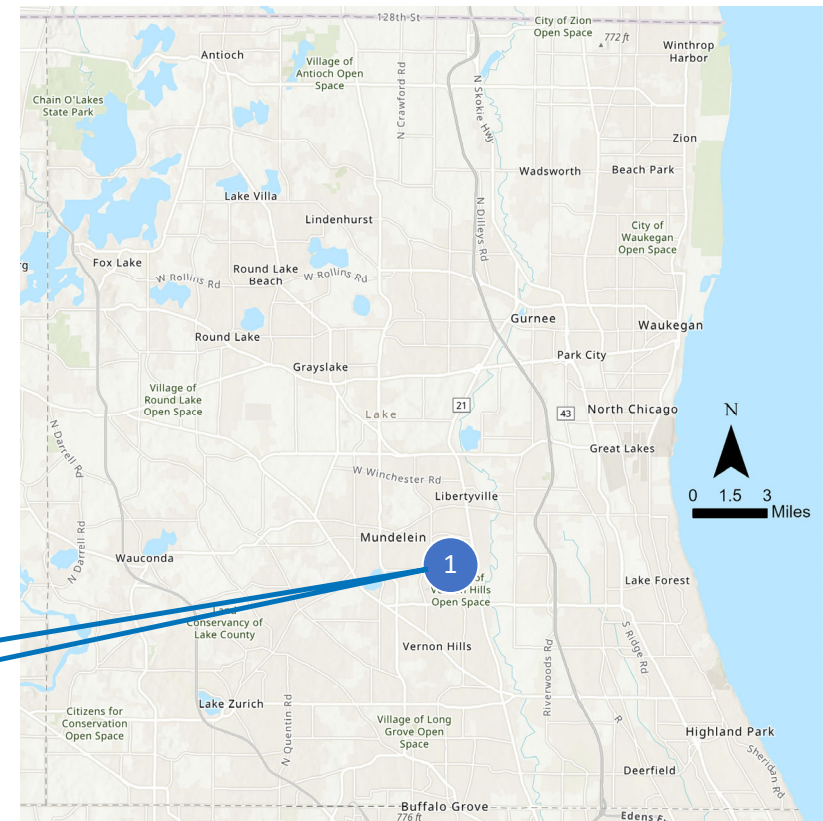
\*Various Locations – Not Mapped DPR = Des Plaines River NCT = New Century Town

# FY2023 CIP

## Construction Project Highlights – Water Production & Storage



**Vernon Hills  
White Deer Run Reservoir**

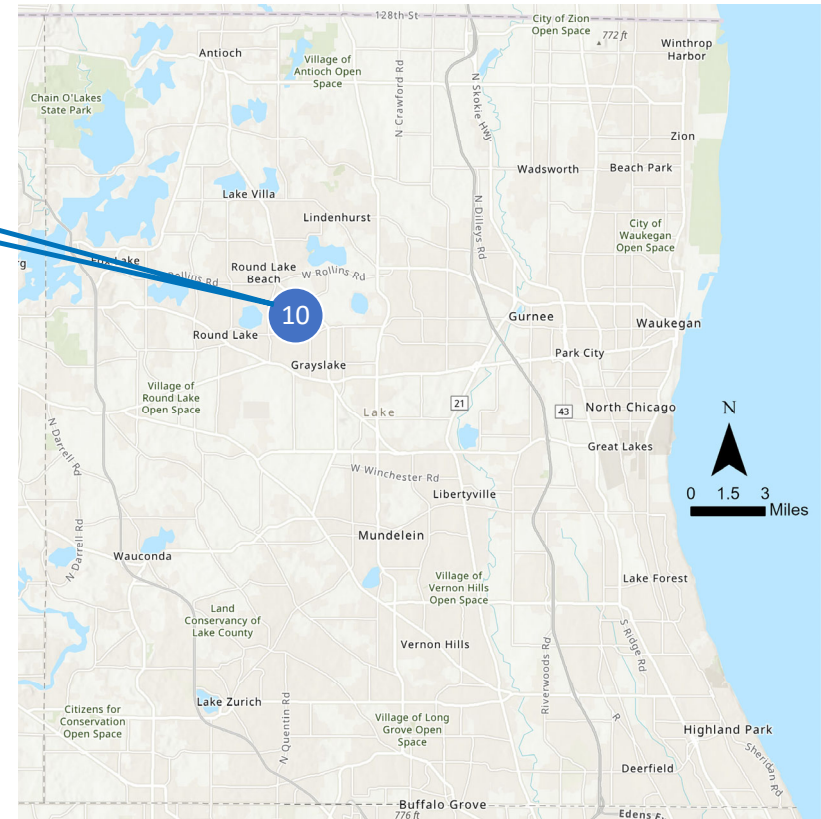


# FY2023 CIP

## Construction Project Highlights – Water Distribution



**Highland Lake Water System Upgrade Phase I (ARPA)**

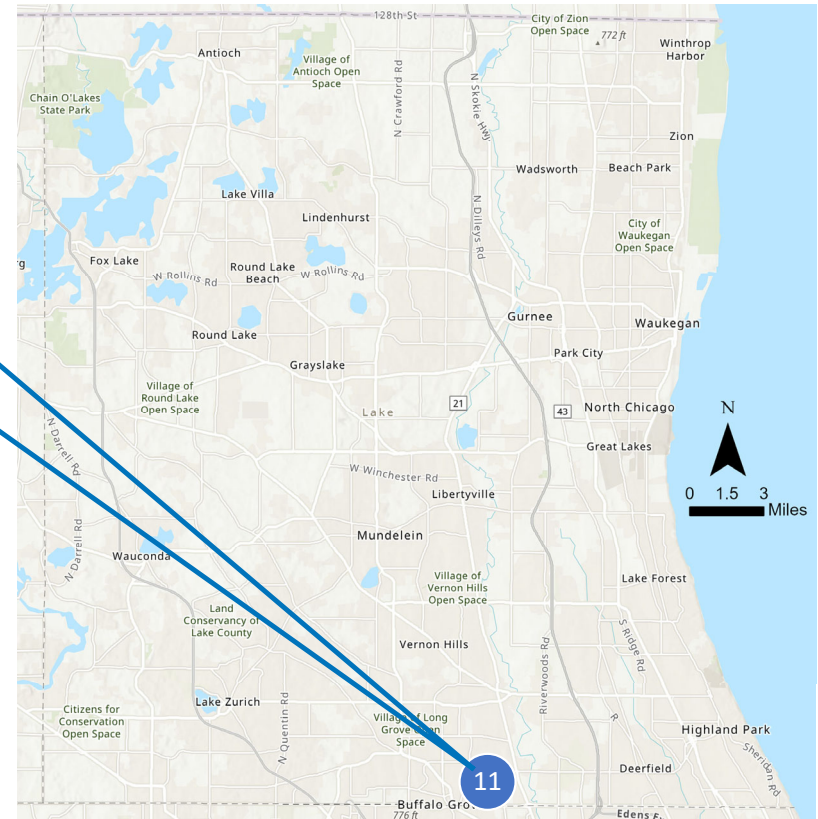


# FY2023 CIP

## Construction Project Highlights – Water Reclamation



**DPR WRF Dewatering Improvements Phase 1**

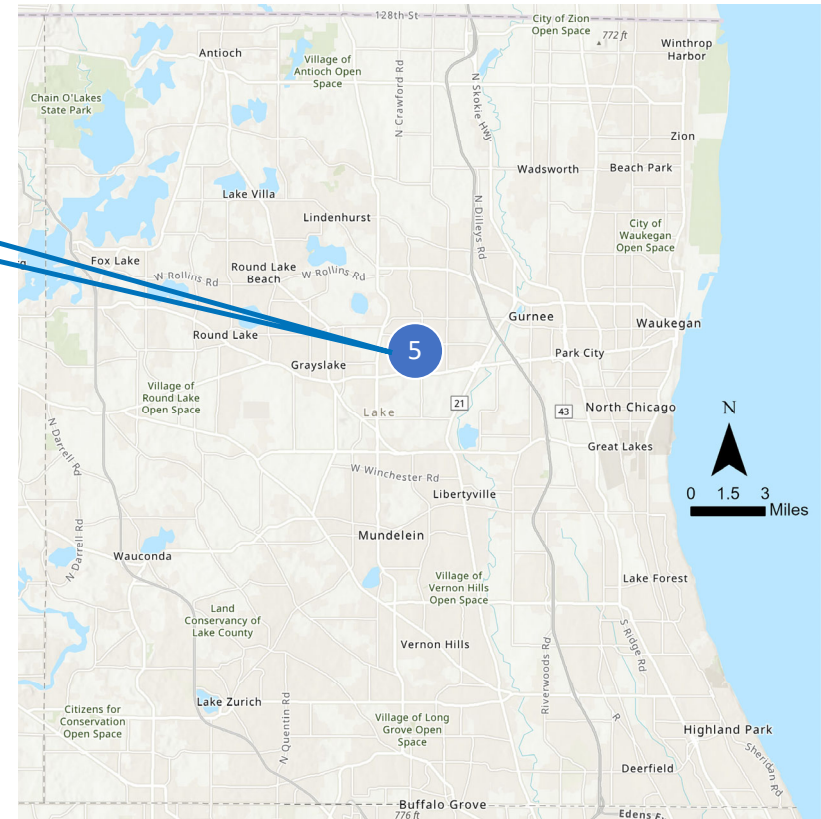


# FY2023 CIP

## Construction Project Highlights – Water Distribution



**2023 Water Main Replacement (Wildwood)**



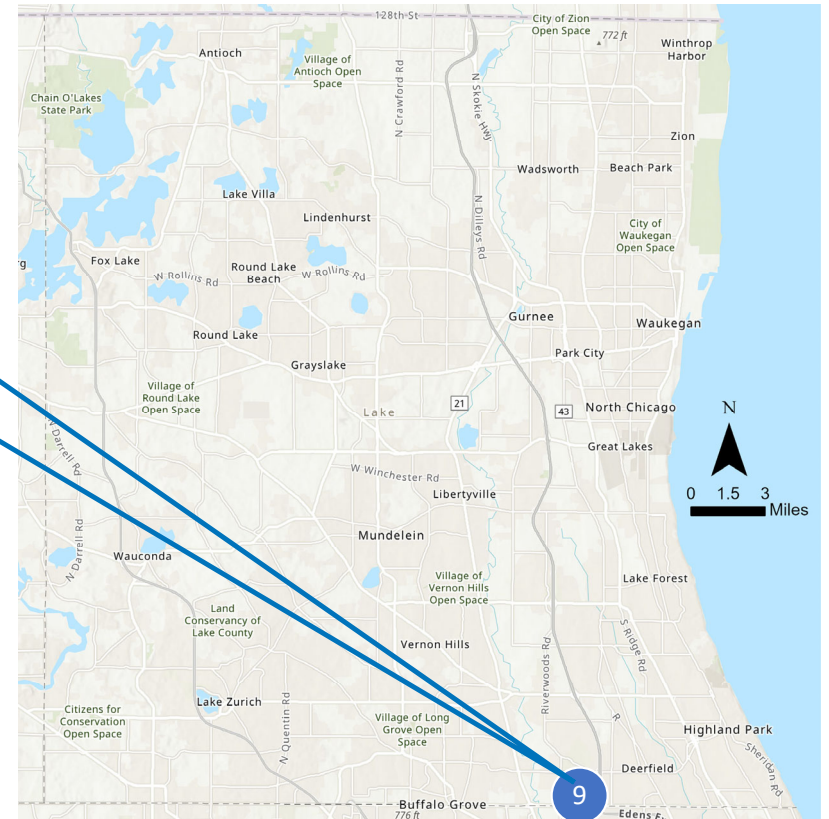


# FY2023 CIP

## Construction Project Highlights – Wastewater Collection



**Saunders Rd Force Main Improvements Phase 1**



# Strategic System Expansion

## Strategic Approach



### Unserved Communities

Respond to community interest

Advise on SSA establishment

Prepare master plans



### Private Systems

Support legacy community systems that lack operational expertise



### Intentional Development

Consider maximum potential development demand during site plan approval



### Community Growth Plans

Communicate with partners to plan for the future

Prepare master plans



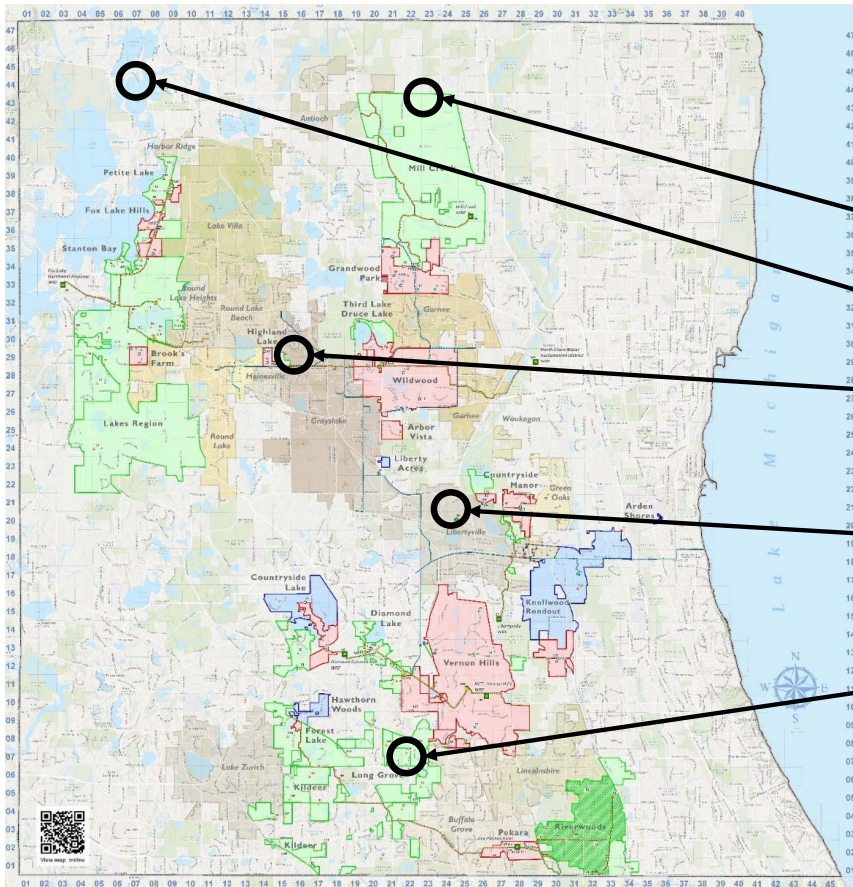
### Shared Services & Consolidation

Evaluate opportunities

Prioritize preservation of service

# Strategic System Expansion

## Examples of System Expansion Inquires



### Examples of Unserved & Private Service Areas

- Gateway District (IL 173) (sewer)
- Chain O' Lakes Area (sewer)
- Highland Lake Water Company (water - in process)
- Sunset Acres/Providence Acres (Libertyville Area)(sewer)
- Areas southwest of Vernon Hills (water)

# Proposed FY2024-FY2028 CIP

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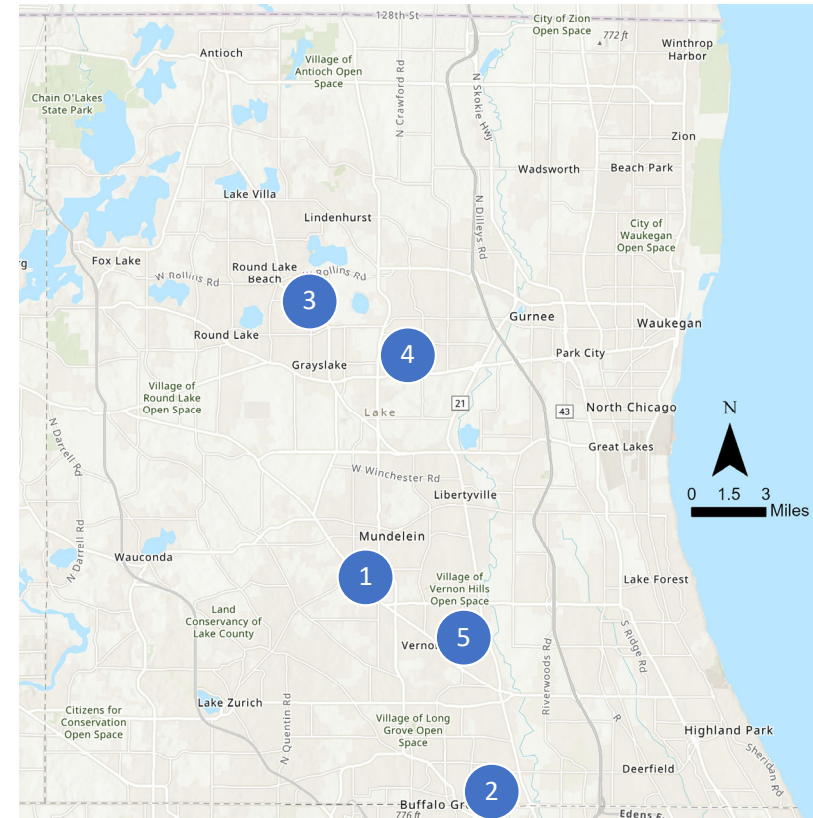
- **Water Production & Storage**
- **Water Distribution**
- **Wastewater Collection**
- **Water Reclamation Facilities**
- **Other Support Facilities & Equipment**

# Proposed FY2024-FY2028 CIP

## Water Production & Storage



Map Key	Project Description	Project Type	Anticipated Construction Year*
1	Oak Terrace/West Oak Middle School Water System Upgrade (ARPA)	Preservation	2024
2	Pekara Water System Lake Michigan Water Connection (ARPA)	Modernization	2024
3	Highland Lake Water System Upgrade Phase 2 (ARPA)	Modernization	2024
4	John Mogg Tower Rehabilitation	Modernization	2027
5	Corporate Woods Reservoir Improvements	Preservation	2027
6**	Annual Tower & Reservoir Painting & Maintenance Projects – Various Locations	Preservation	2024-2028



\*Dependent upon project readiness and availability of funding

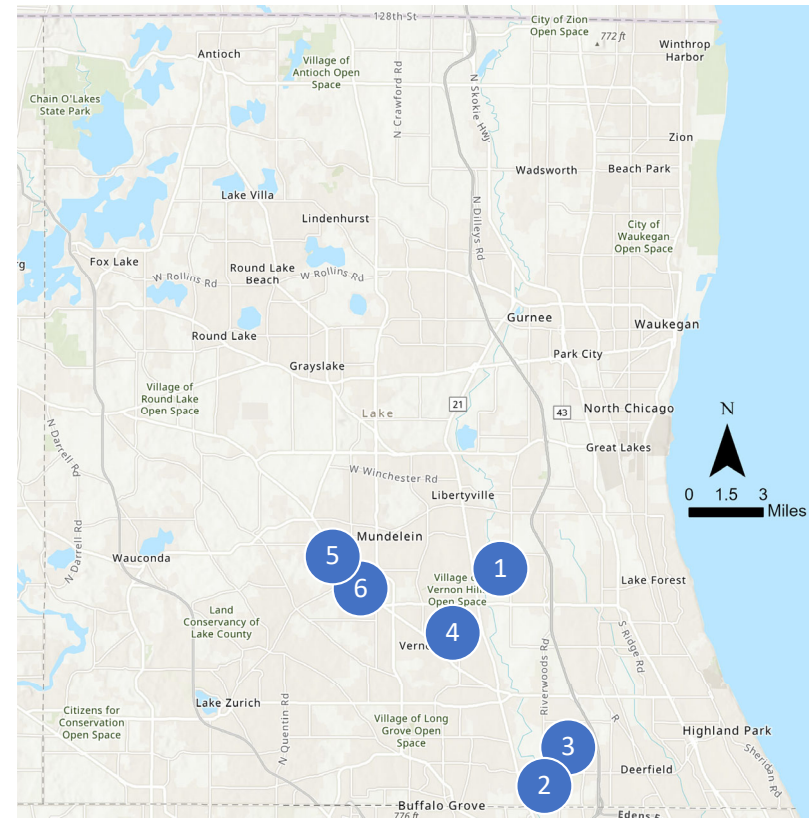
\*\*Annual Tower & Reservoir Painting & Maintenance Projects not mapped



# Proposed FY2024-FY2028 CIP Wastewater Collection



Map Key	Project Description	Project Type	Anticipated Construction Year*
1	SEC Interceptor Sewer Drop Chamber Replacement	Preservation	2024
2**	Deerfield Rd Lift Station Relocation & Sewer Rehabilitation	Modernization	2025 (LCDOT Project)
3	Saunders Rd Lift Station & Sewer Improvements Phase 2	Preservation & Expansion	2025
4	VH West Pump Station Force Main Rehabilitation	Preservation	2025
5**	IL 60/IL 83 (IL 176 - Midlothian Rd) Sewer Relocation	Modernization	2025 (IDOT Project)
6**	IL 60/IL 83 (Midlothian Rd – IL 60) Sewer Relocation	Modernization	2027 (IDOT Project)



\*Dependent upon project readiness and availability of funding

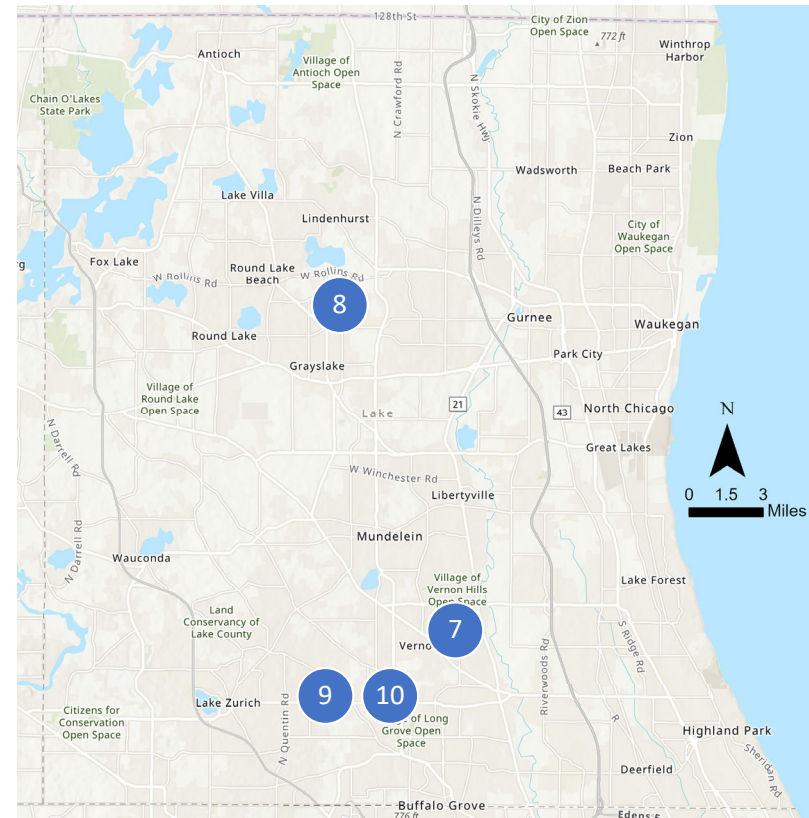
\*\*Capital Cost Share for this project is TBD

# Proposed FY2024-FY2028 CIP

## Wastewater Collection Continued



Map Key	Project Description	Project Type	Anticipated Construction Year*
7	Milwaukee Ave Pump Station Rehabilitation	Preservation	2026
8	Third Lake Sanitary Sewer Relocation	Modernization	2026
9**	IL Route 22 Sewer Relocation	Preservation	2025 (IDOT Project)
10**	IL 22/IL 83 Intersection Improvement	Preservation	2027 (IDOT Project)
11***	Lift Station Capacity Improvements (Various Locations)	Modernization	2026-2028
12***	Interceptor Sewer Rehabilitation (Various Locations)	Preservation	2026-2028
13***	Annual Painting & Repair Maintenance Projects – Various Locations	Preservation	2024-2028



\*Dependent upon project readiness and availability of funding

\*\*Capital Cost Share for this project is TBD

\*\*\*Various location Projects not mapped

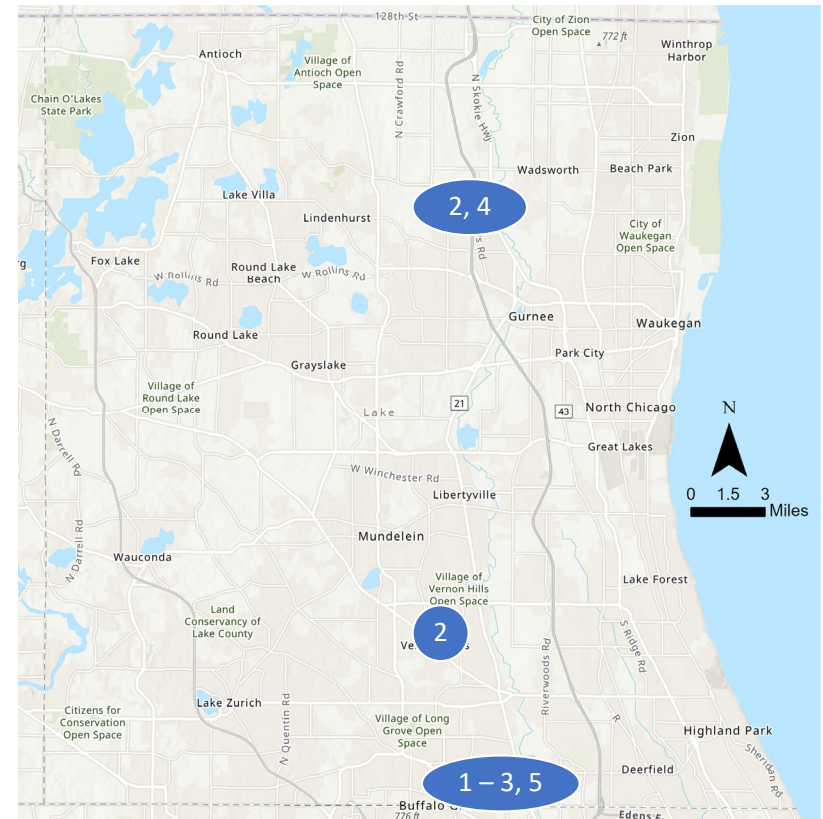


# Proposed FY2024-FY2028 CIP Water Reclamation Facilities (WRF)



Map Key	Project Description	Project Type	Anticipated Construction Year*
1	DPR WRF High Speed Blowers Replacement (ARPA)	Modernization	2024
2	DPR WRF Disc Filters & Clarifier Launder Covers at MC, NCT & DPR WRFs (ARPA)	Modernization	2024
3	DPR WRF UV Disinfection Treatment (ARPA)	Modernization	2024
4	Mill Creek UV Disinfection Treatment Replacement (ARPA)	Preservation	2024
5	DPR WRF Dewatering Improvement Phase 2	Preservation	2028

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 FY2024-FY2028 CIP

## Other Support Facilities and Equipment

- Annual Painting & Repair Maintenance Projects (various locations)



- SCADA Phase 3 Implementation will continue into 2024-2025 (various locations)
- SCADA Critical Upgrades (various locations) planned for 2024 thru 2028

Before...



...After



# Proposed FY2024 CIP

## Enterprise Fund Investments



- 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**

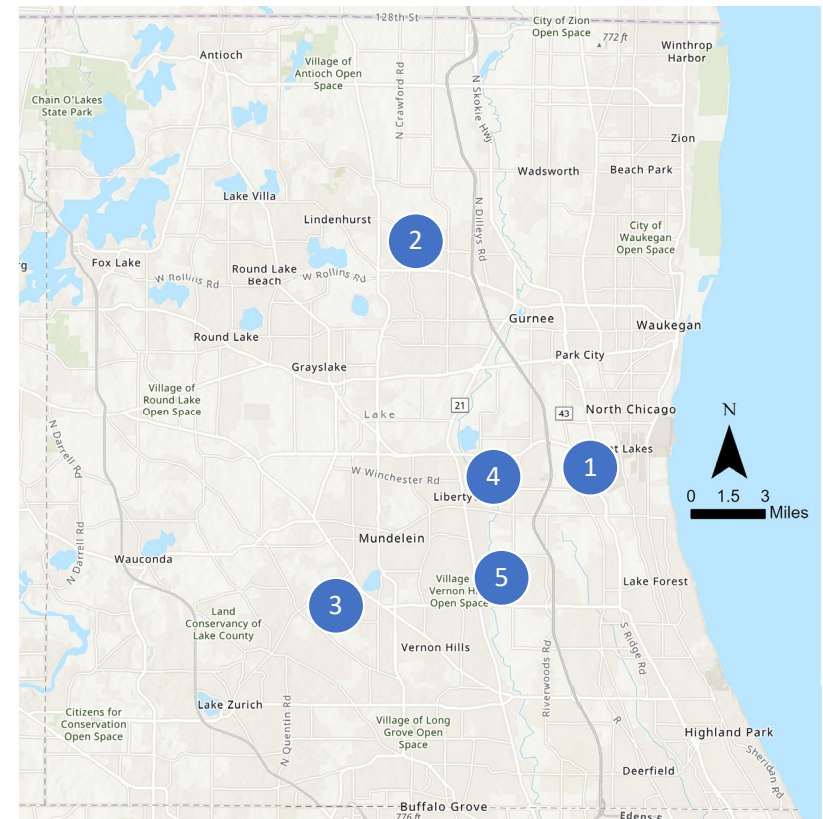
# Proposed FY2024 CIP

## Anticipated New Construction Projects (Enterprise Funds)



1. US 41 North Chicago Interconnect Meter Pit Rehabilitation
2. Grandwood Park Water Main Replacement
3. Countryside Lake Water Main Replacement (Indian Creek Club)
4. Countryside Manor Water Main Replacement Phase I
5. Drop Chamber Replacement at SEC Interceptor Termination
6. SCADA Critical Infrastructure Upgrades (various locations)\*
7. Annual Tower & Reservoir Painting & Maintenance Projects \*

\*Various Locations – Not Mapped



# Proposed FY2024-FY2028 CIP

## Anticipated Program Costs (Enterprise Funds)



Investment Category	FY2024	FY2025	FY2026	FY2027	FY2028
Water Production & Storage	\$0.1M	\$0.2M	\$0.2M	\$1.7M	\$0.2M
Water Distribution	\$8.5M	\$3.8M	\$7.5M	\$3.5M	\$1.5M
Wastewater Collection	\$1.9M	\$8.8M	\$6.2M	\$6.4M	\$6.3M
Water Reclamation Facilities	\$0.2M	\$0M	\$0M	\$2M	\$7.6M
Other Support Facilities & Equipment	\$3.4M	\$3.0M	\$2.3M	\$3.2M	\$2.3M
<b>Programmed Total*</b>	<b>\$14.1M</b>	<b>\$15.8M</b>	<b>\$16.2M</b>	<b>\$16.8M</b>	<b>\$17.9M</b>

\*Outside funding (ARPA & Community Funding) not included in totals

# Out Years CIP FY2029-FY2033

## Years 6 to 10 – Prospective Projects

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- **Vernon Hills Water System to Green Oaks Emergency Interconnect**
- **Butterfield Tower Rehabilitation**
- **Fox Lake Hills Water System Storage**
- **Vernon Hills Water System Additional Storage**
- **Countryside Lake Water System Resiliency**
- **Wildwood Water Main Replacement (Idlewild, Dady & Decker area)**
- **Pekara Water Main Rehabilitation Phases 2, 3 & 4**
- **Horatio Gardens Water Main Replacements Phases 1 & 2**
- **Vernon Hills Westmoreland Water Main Replacement**
- **Fox Lake Hills Water System Resiliency**
- **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 Improvement**
- **Biosolids Storage Building**
- **Annual Tower & Reservoir Painting & Maintenance Projects**
- **Interceptor Sewer Rehabilitation**

# Out Years CIP FY2029-FY2033

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

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- **Lift Station Assessments & Capacity Improvements**
- **IL 83 Forcemain Valve Insertion**
- **IL 83 Relief Sewer (Buffalo Grove area)**
- **Lakeside, Jackson & N Cedar Crest Force Main Replacements**
- **Hilltop, Midland & Columbia Bay Rd Force Main Replacements**
- **Teal Lane Sewer Interconnection**
- **Vernon Hills Westmoreland Sewer Replacement**
- **Rollins Rd Force Main Rehabilitation**
- **Antioch Township Sanitary Sewer Collection System**
- **Des Plaines River WRF Upsizing Denitrification Pumps**
- **Mill Creek WRF Blower Replacement**
- **New Century Town WRF Building 81 Dewatering Improvements**
- **New Century Town WRF Building 85 Replacement Digester Blowers**
- **New Century Town WRF Clarifier Retrofits & Building #46 Rehabilitation**
- **Mill Creek WRF Dewatering & Miscellaneous Improvements**
- **Forest Lake & Hawthorn Woods Water System Resiliency Improvements**

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)

