



Proposed FY2023-FY2027 Capital Improvement Program

Program Overview & Adoption

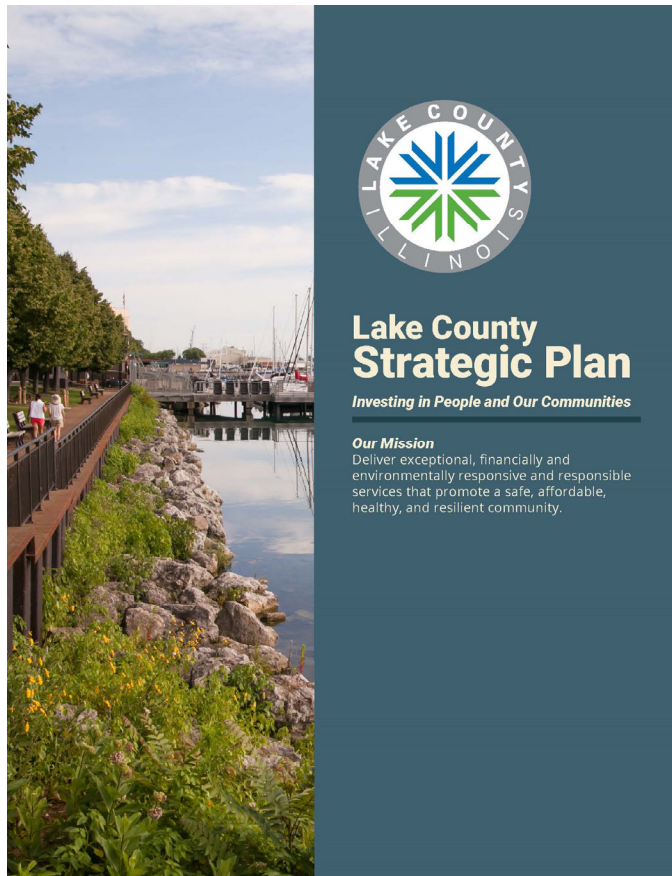
**Department of Public Works
September 7, 2022**

Presentation Outline

- **Strategic Alignment**
- **Department Overview**
- **Financial Information**
- **Capital Improvement Program (CIP) Development**
- **FY2022 CIP**
- **Proposed FY2023-FY2027 CIP**

Strategic Alignment

2019 Strategic Plan



County's Mission:
Deliver exceptional, financially and environmentally responsive / responsible services that promote a safe, affordable, healthy, and resilient community.

Strategic Alignment

2019 Strategic Plan and Public Works

✓ GOAL: IMPROVE INFRASTRUCTURE

STRATEGIC STATEMENT:
Develop and implement solutions that support modern, equitable, comprehensive, safe, and sustainable transportation, water, wastewater, and stormwater infrastructure systems.



Strategic Alignment

2019 Strategic Plan and Public Works



✓ GOAL: PROMOTE A SUSTAINABLE ENVIRONMENT

STRATEGIC STATEMENT: Preserve the health of our natural resources, air, and drinking water through the widespread use of environmentally sustainable management practices, effective stormwater management, carbon footprint reduction, and the enhancement and rehabilitation of lakes and other ecological systems.

Department Overview

- Created by County Board Resolution on October 9, 1962
- Provide drinking water and sanitary sewer services
- Administer testing, inspections, water & sewer permits
- Perform other government services

Department Mission: provide drinking water and wastewater treatment services in an efficient, reliable and safe manner that meet or exceed the expectations of our customers and satisfy all local, state and federal requirements.

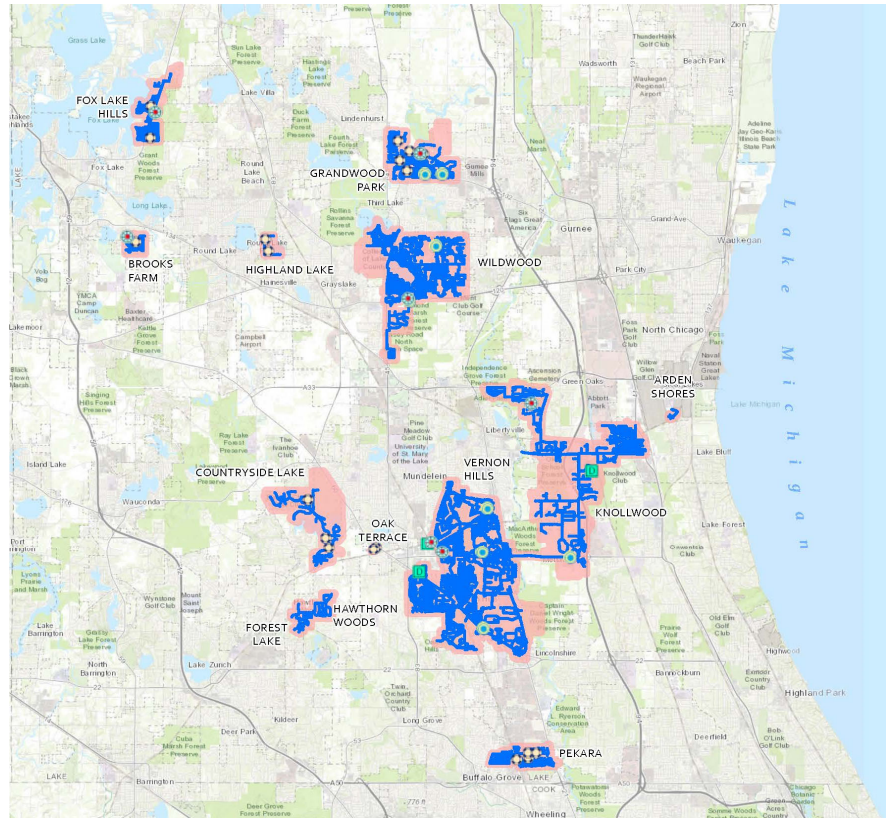


Department Overview

Our Systems

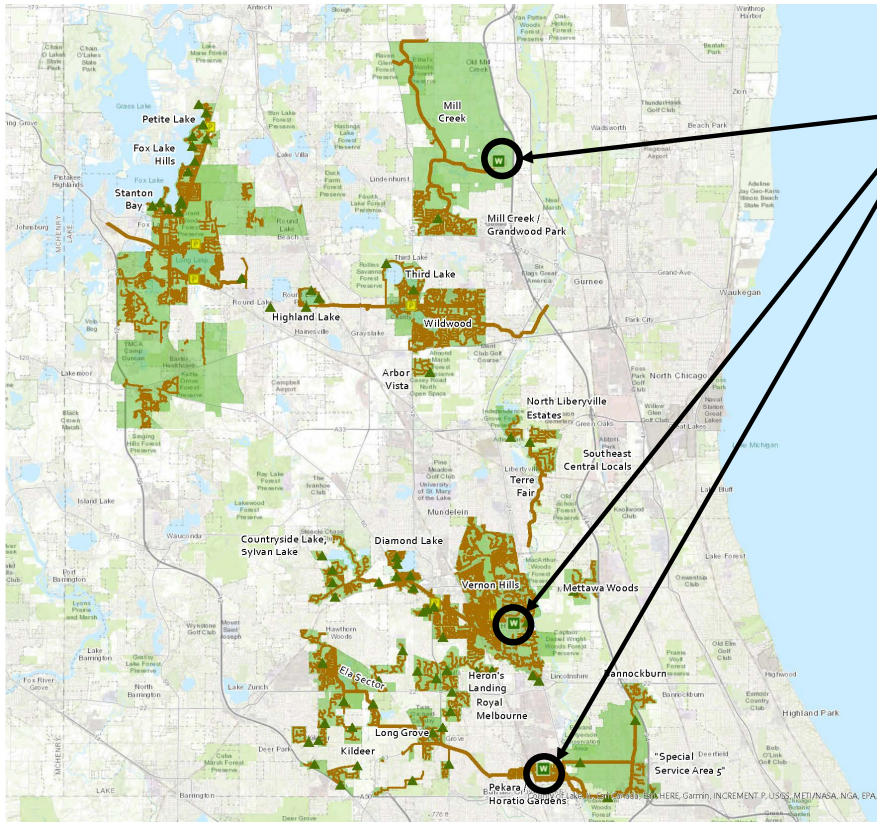
Water Systems

- 12 public water systems
- 290+ miles of water main
- 25 wells
- 10 water reservoirs
- 8 water towers



Department Overview

Our Systems



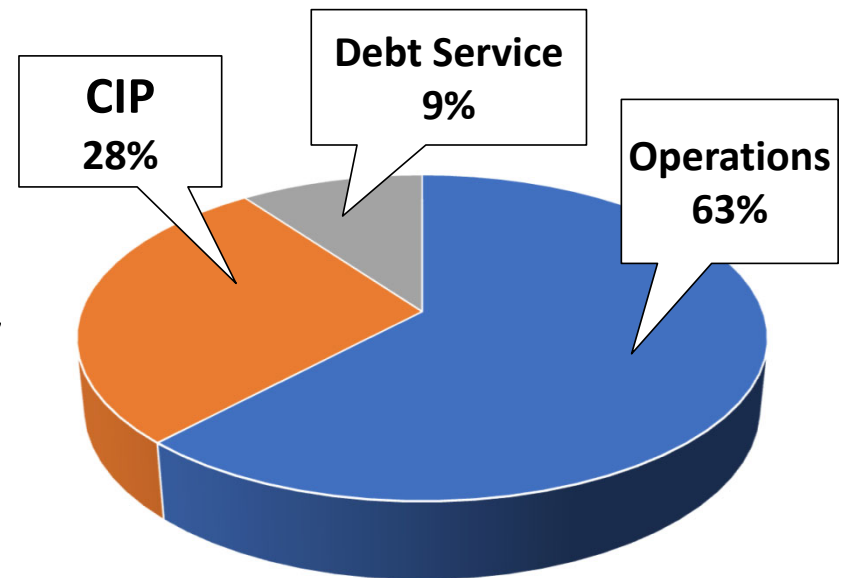
Wastewater Systems

- 3 water reclamation facilities
- 7 sewer systems
- 470+ miles of sanitary sewer pipe
- 7 regional interceptor sewers
- 107 sanitary lift stations
- 5 major pump stations
- 1 excess flow facility
- 1 mile levee maintenance

Financial Information

Budget and Funding

- County's sole Enterprise Fund
- Not property tax based
- Connection fees
- User fees from water and sewer used by property owners
- \$64.4M FY2022 Department Budget
- Exploring grant funding opportunities



FY2022 Adopted Budget

Financial Information

ARPA Funding



\$18.6M in ARPA funds

- Oak Terrace/West Oak Middle School Water System Upgrade
- Pekara Water System Lake Michigan Interconnect
- Highland Lake Water System Upgrade
- Mill Creek WRF UV Disinfection Treatment
- Des Plaines River WRF High Efficiency Blowers Installation
- Des Plaines River WRF Disc Filter Installation
- Des Plaines River WRF UV Disinfection Treatment

WRF = Water Reclamation Facility, UV = Ultraviolet



American Rescue Plan Act

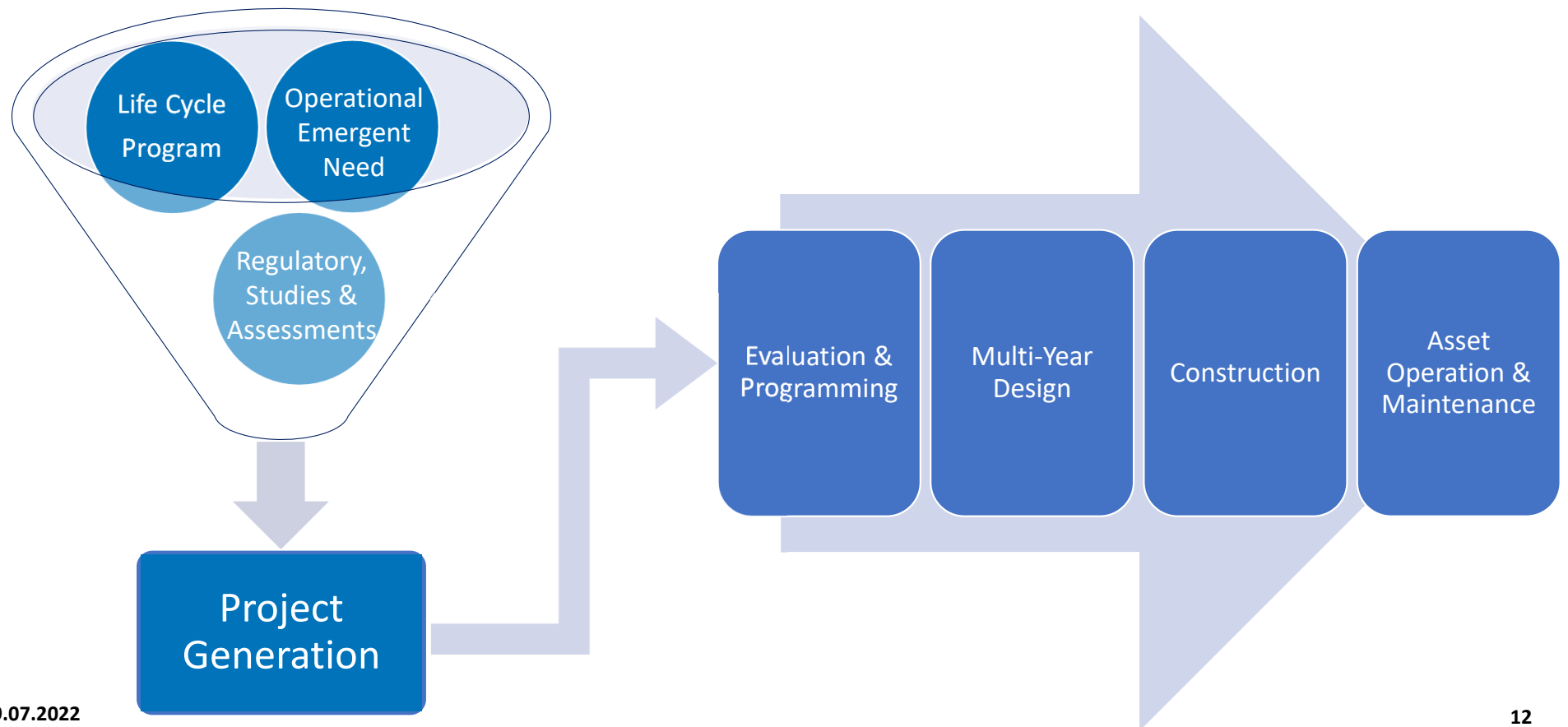
CIP Development

Program Priorities

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



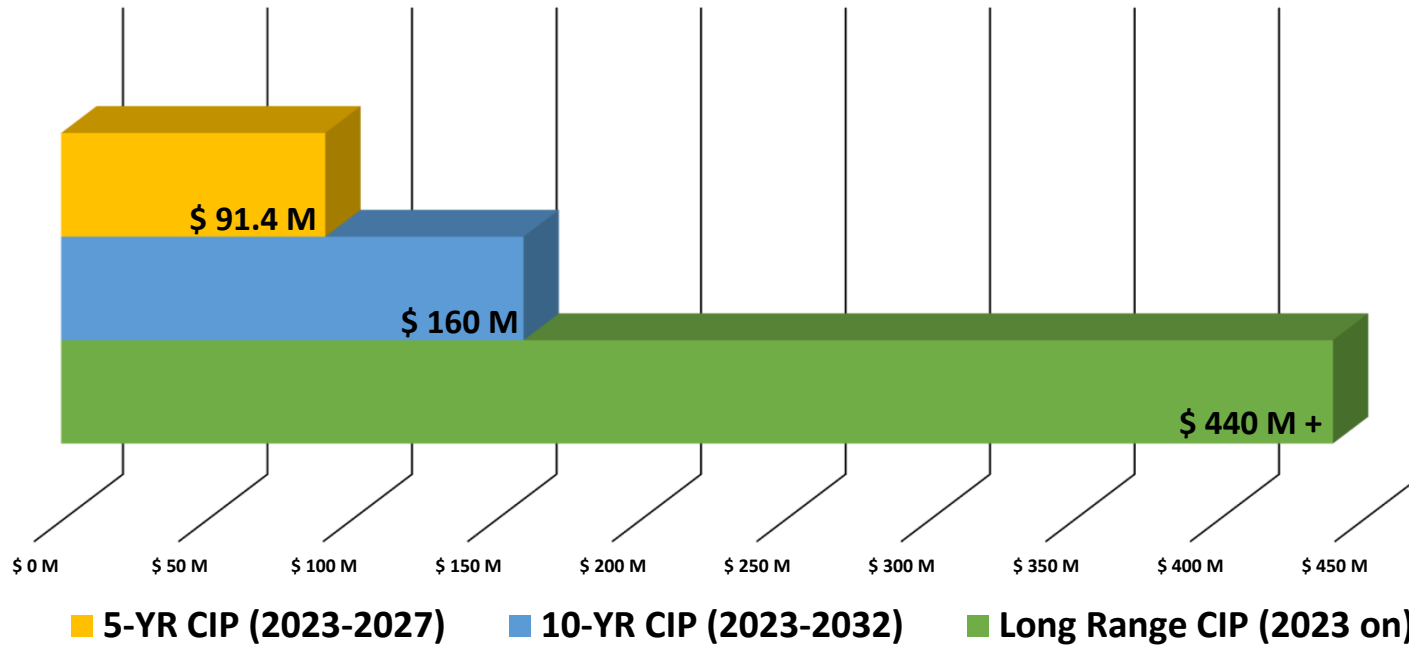
CIP Development Programming Process



CIP Development

Identified Needs

Extent of Identified CIP Needs



CIP Development

Project Types

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



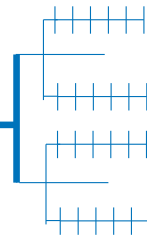
CIP Development

Program Investment Categories

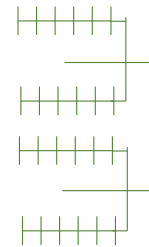
Water
Production &
Storage



Water
Distribution



Wastewater
Collection



Water
Reclamation
Facilities



Other Support Facilities &
Equipment



FY2022 CIP

Investments From Budget



- Water Production & Storage - \$6.2 M
- Water Distribution - \$3.7 M
- Wastewater Collection - \$3.8 M
- Water Reclamation Facilities - \$4.5 M
- Other Support Facilities & Equipment - \$0 M

FY2022 CIP Adopted Budget Total = \$18.2 M

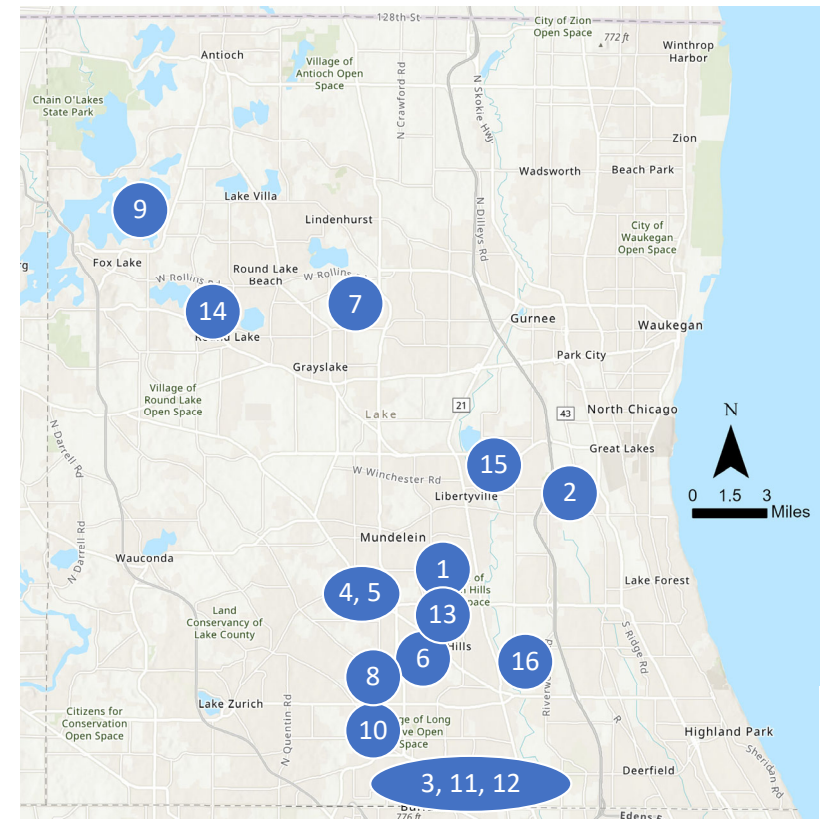
FY2022 CIP

Construction Projects



1. Vernon Hills Water System White Deer Run Reservoir
2. Baker Road Water Main Replacement
3. Park West Townhome (Pekara System) Water Main Separation
4. Oak Terrace Water System Test Well #2
5. Oak Terrace Water System Replacement
6. Vernon Hills Oakwood Rd Water Main Replacement
7. Linden Ave Sewer Replacement
8. Wellington Dr Force Main Rehabilitation
9. S Cedar Crest Dr Force Main Rehabilitation
10. Three Lakes Dr Force Main Rehabilitation
11. DPR WRF Dewatering Improvements
12. DPR WRF Bar Screens Replacement
13. NCT Bar Screens Replacement
14. Sunset Dr Gravity Sewer Replacement
15. North Libertyville Estates Levee Drainage Improvement
16. Vernon Hills Lincolnshire Emergency Interconnect

WRF = Water Reclamation Facility



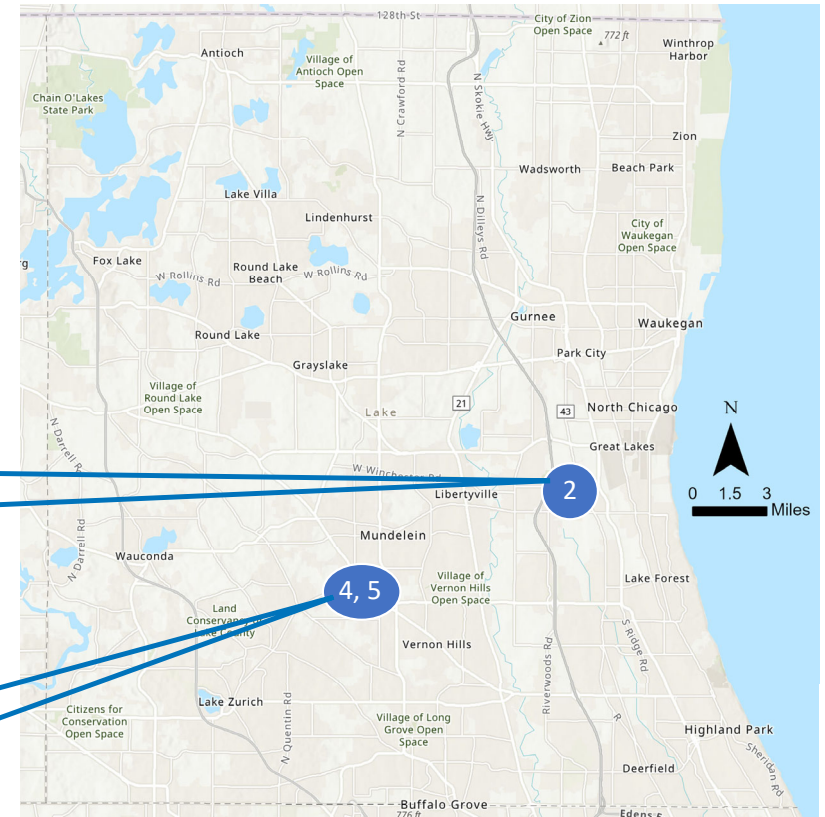
FY2022 CIP

Construction Project Highlights – Water Distribution



Baker Road Water Main Replacement

Oak Terrace Water Main Replacement & Test Well



FY2022 CIP

Construction Project Highlights – Wastewater Collection

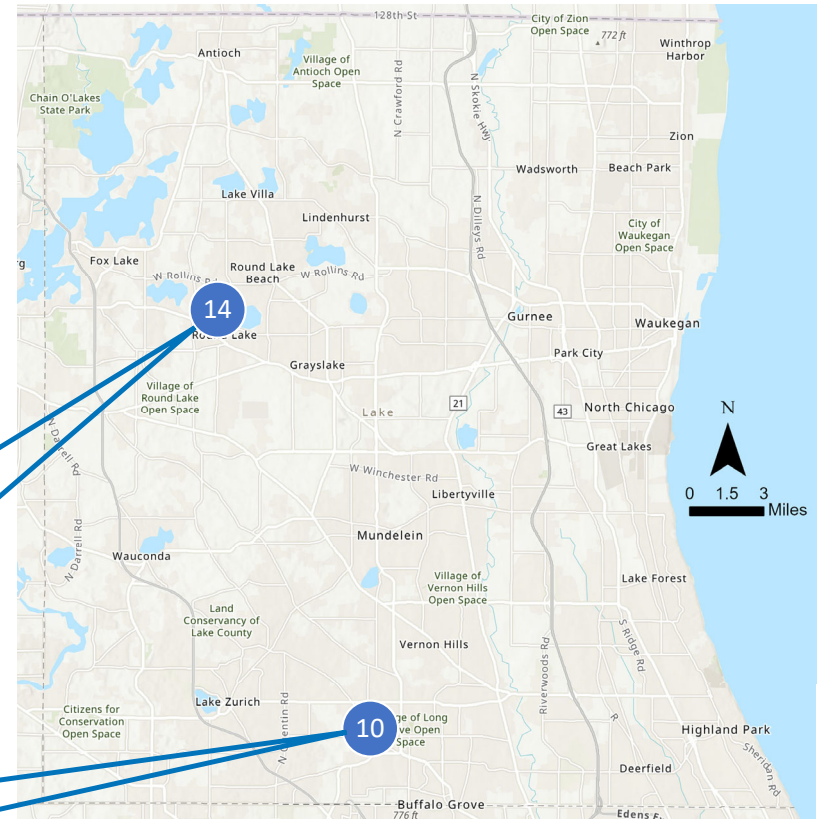


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Sunset Dr Gravity Sewer Replacement

Three Lakes Dr Force Main Rehabilitation



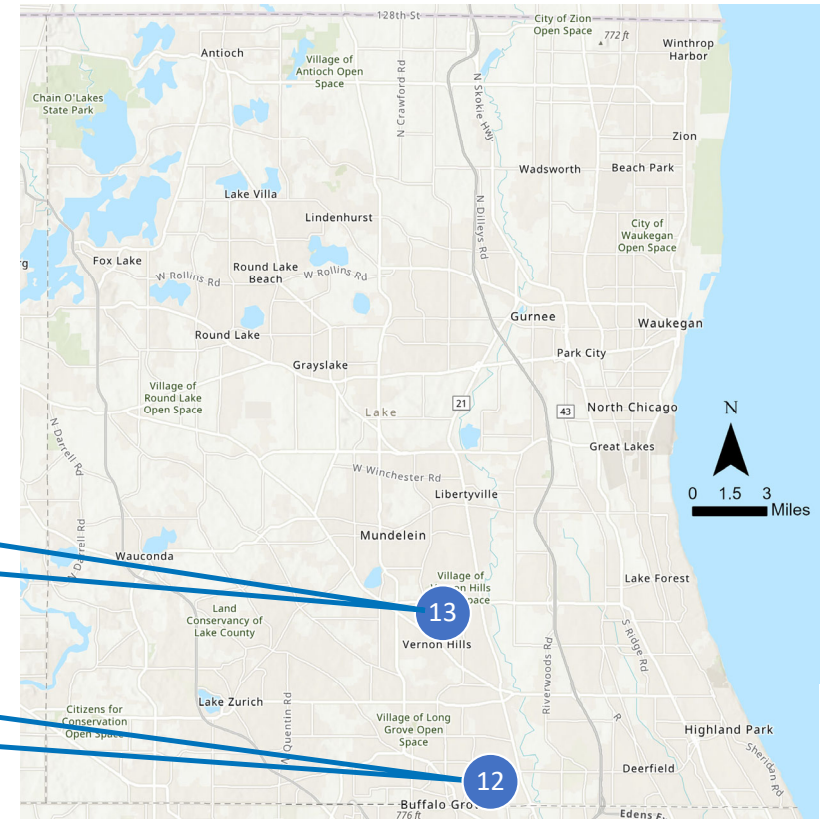
FY2022 CIP

Construction Project Highlights – Water Reclamation



NCT WRF Bar Screens Replacement

DPR WRF Bar Screens Replacement



Proposed FY2023-FY2027 CIP



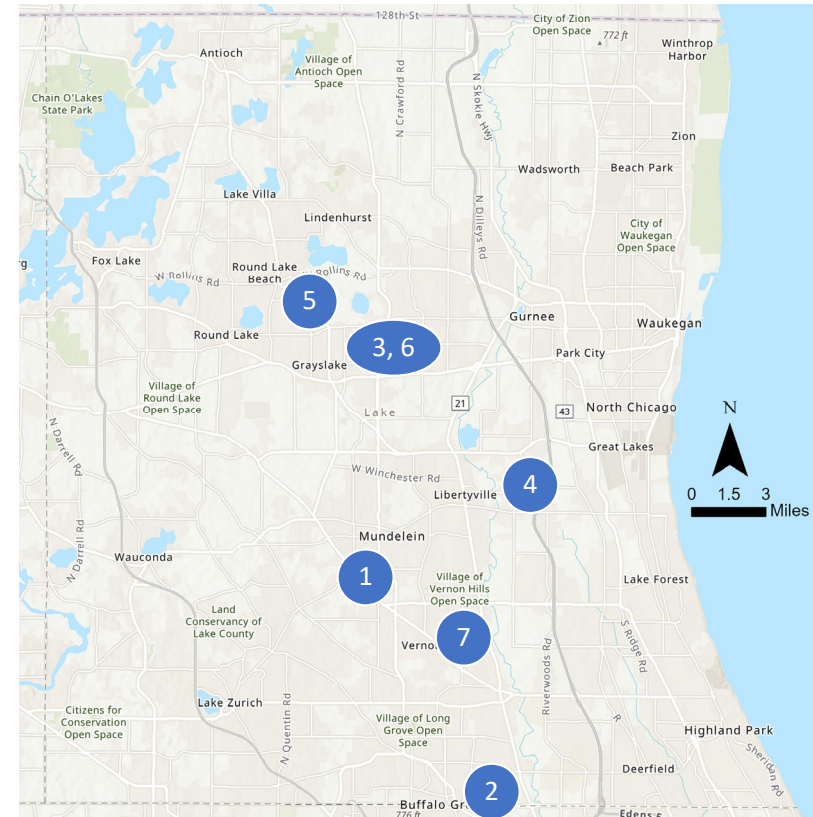
- **Water Production & Storage**
- **Water Distribution**
- **Wastewater Collection**
- **Water Reclamation Facilities**
- **Other Support Facilities & Equipment**

Proposed FY2023-FY2027 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	2023
3	Wildwood Water System Water Tower	Modernization & Expansion	2023
4	Vernon Hills Water System - Green Oaks / Waukegan Water Interconnect	Preservation	2023
5	Highland Lake Water System Upgrade (ARPA)	Modernization	2024
6	John Mogg Tower Demolition	Modernization	2024
7	Corporate Woods Reservoir Improvements	Preservation	2025
8**	Annual Tower & Reservoir Painting & Maintenance Projects – Various Locations	Preservation	2023-2027



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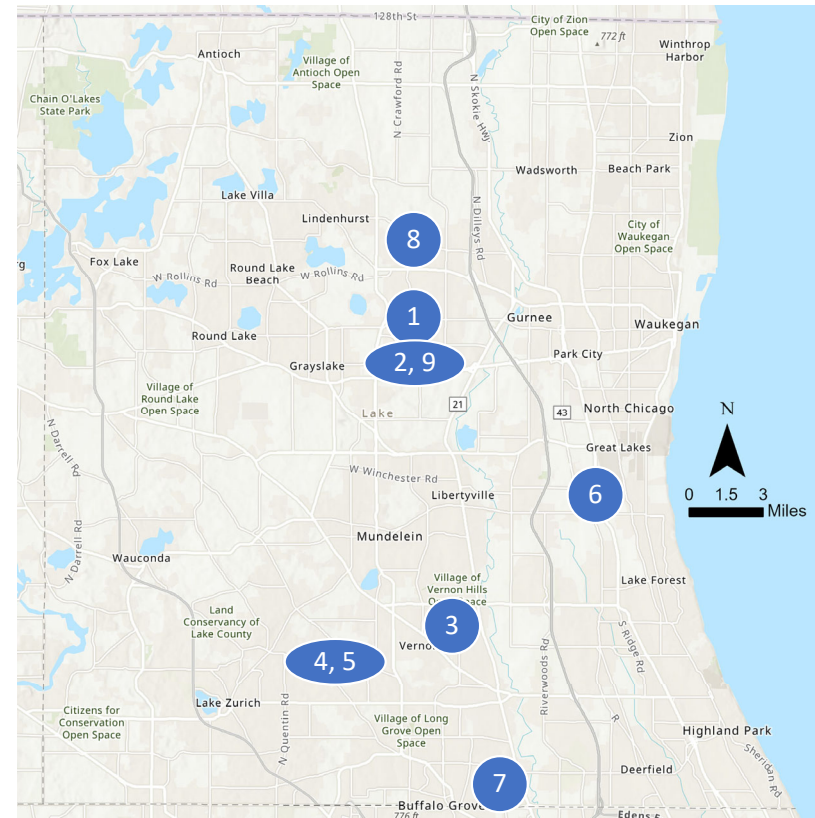
*Dependent upon project readiness and availability of funding

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

Proposed FY2023-FY2027 CIP Water Distribution



Map Key	Project Description	Project Type	Anticipated Construction Year*
1	Washington St Water Main Relocation	Preservation	2023 (LCDOT Dependent)
2	2023 Water Main Replacement (Wildwood)	Preservation	2023
3	Lakeview Parkway Water Asset Relocation	Preservation	2023 (Vernon Hills Dependent)
4	Water Meter Pit Rehabilitation (Forest Lake)	Modernization	2023
5	Water Meter Pit Rehabilitation (Hawthorn Woods)	Modernization	2023
6	Water Meter Pit Rehabilitation (US 41 in North Chicago)	Modernization	2024
7	Pekara Water Main Resiliency	Modernization	2023
8	Grandwood Park Water Main Replacement (Grandwood Dr & Woodland Ter)	Preservation	2024
9	Gages Lake Rd Water Main Improvement	Preservation	2024



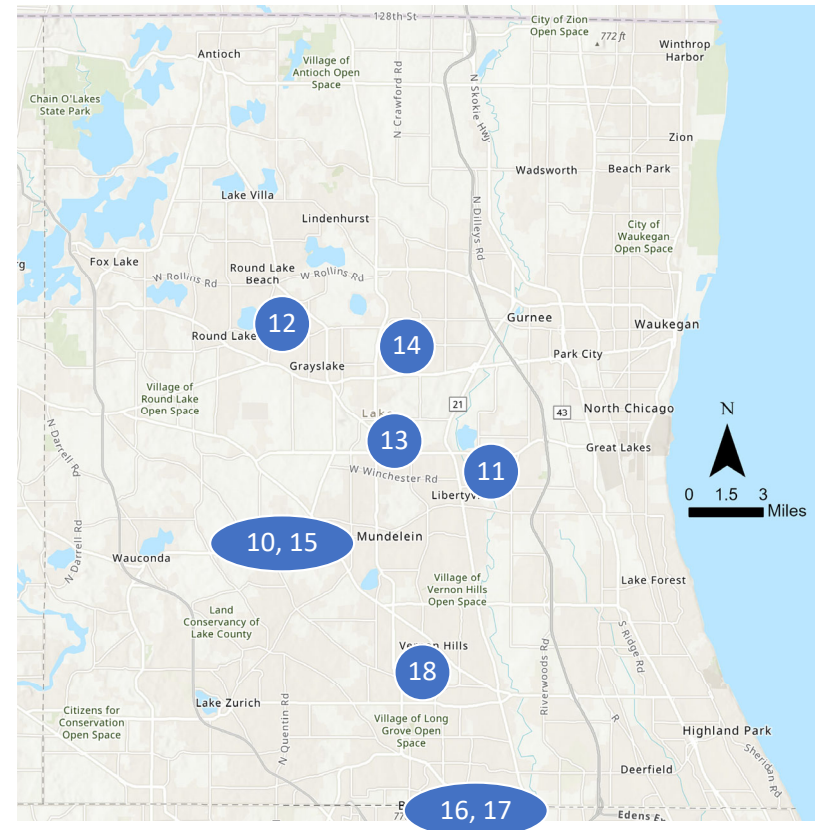
*Dependent upon project readiness and availability of funding

Proposed FY2023-FY2027 CIP

Water Distribution Continued



Map Key	Project Description	Project Type	Anticipated Construction Year*
10	Indian Creek Club Water Main Rehabilitation	Preservation	2024
11	Countryside Manor Water Main Replacement	Preservation	2024
12	Highland Lake Water System Modernization	Modernization	2024
13	Liberty Acres Water Main Replacement (Wildwood)	Preservation	2024
14	Wildwood Water Main Replacement (Idlewild/Daddy Decker area)	Preservation	2026
15	Countryside Lake Water System Improvement	Preservation	2027
16	Pekara Water System Rehabilitation Phase 2	Preservation	2027
17	Pekara Water System Rehabilitation Phase 3	Preservation	2027
18	Westmoreland Dr Water Main Replacement	Preservation	2027

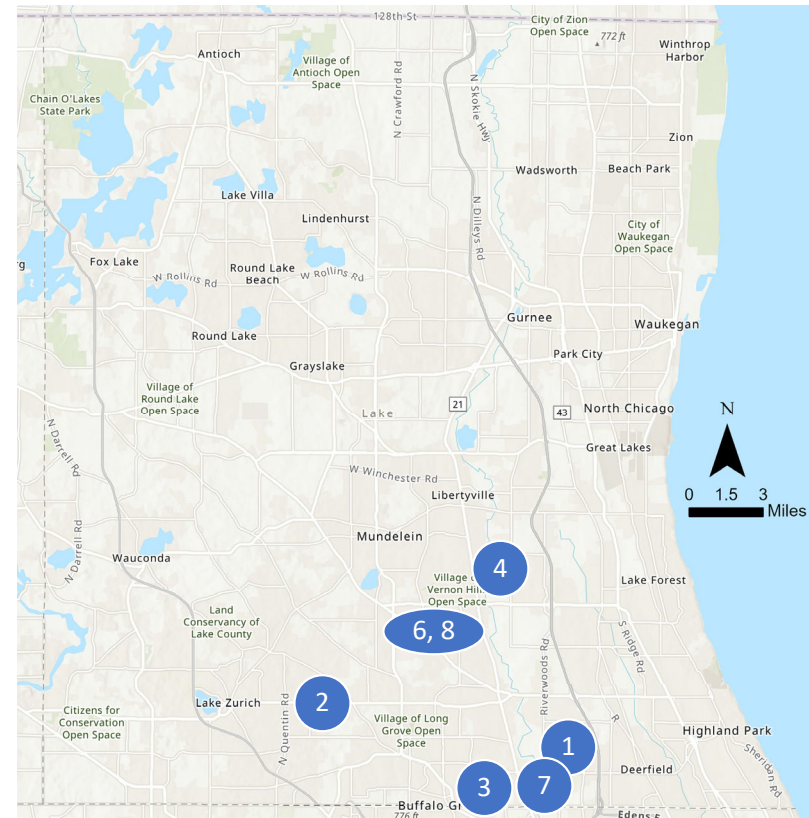


*Dependent upon project readiness and availability of funding

Proposed FY2023-FY2027 CIP Wastewater Collection



Map Key	Project Description	Project Type	Anticipated Construction Year*
1	Saunders Rd Lift Station & Sewer Improvements	Preservation & Expansion	2023-2024
2	IL Route 22 Sewer Relocation	Preservation	2023 (IDOT Dependent)
3	Inverrary Trunk Sewer Replacement	Preservation	2024
4	SEC Interceptor Sewer End Point Structure Lining	Preservation	2024
5**	Interceptor Sewer Lining (Various Locations)	Preservation	2025-2026
6	VH West Pump Station Force Main Rehabilitation	Preservation	2025
7	Deerfield Rd Lift Station Relocation	Modernization	2025 (LCDOT Dependent)
8	Westmoreland Dr Sewer Replacement	Preservation	2027



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*Dependent upon project readiness and availability of funding

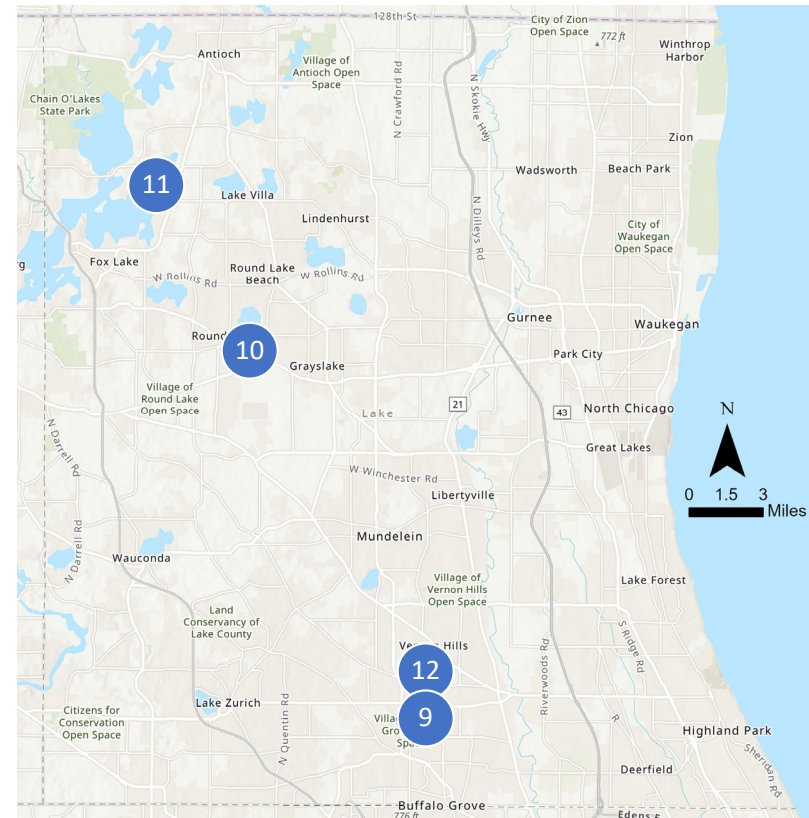
**Interceptor Sewer Lining not mapped

Proposed FY2023-FY2027 CIP

Wastewater Collection Continued



Map Key	Project Description	Project Type	Anticipated Construction Year*
9	Hilltop Force Main Replacement	Preservation	2027
10	Midland Force Main Replacement Part 2	Preservation	2027
11	Columbia Bay Rd Force Main Replacement	Preservation	2027
12	Teal Ln Sewer Interconnection	Modernization	2027
13**	Annual Painting & Repair Maintenance Projects – Various Locations	Preservation	2023-2027



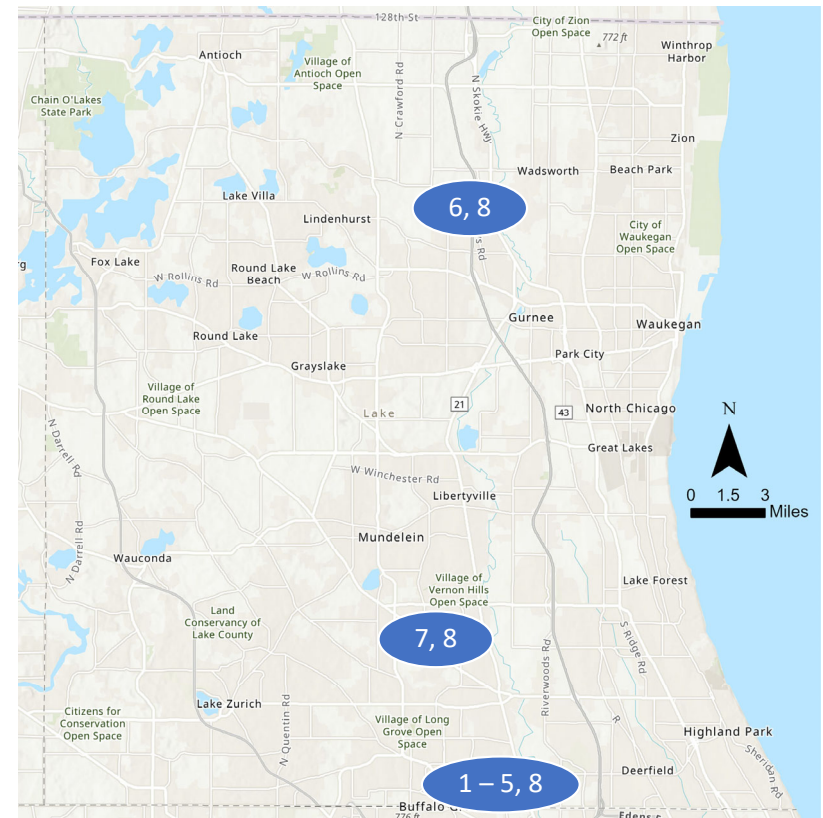
*Dependent upon project readiness and availability of funding

**Annual Painting & Repair Maintenance Projects not mapped

Proposed FY2023-FY2027 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 (ARPA)	Modernization	2024
3	DPR WRF UV Disinfection Treatment (ARPA)	Modernization	2024
4	DPR WRF Upsizing Denitrification Pumps	Modernization	2025
5	DPR WRF Dewatering Improvement Phase 2	Preservation	2026
6	Mill Creek UV Disinfection Treatment Replacement (ARPA)	Preservation	2024
7	NCT WRF Dewatering Improvement	Modernization	2025
8	Clarifier Covers (MC, NCT & DPR WRFs)	Modernization	2027

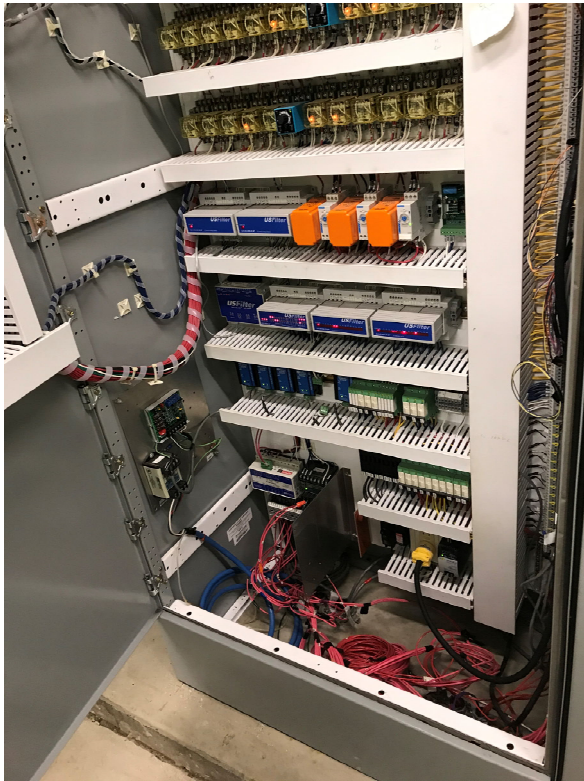


*Dependent upon project readiness and availability of funding

DPR = Des Plaines River NCT = New Century Town MC = Mill Creek

Proposed FY2023-FY2027 CIP

Other Support Facilities and Equipment



**SCADA Phase 3 Implementation
continues into 2023 (various locations)**

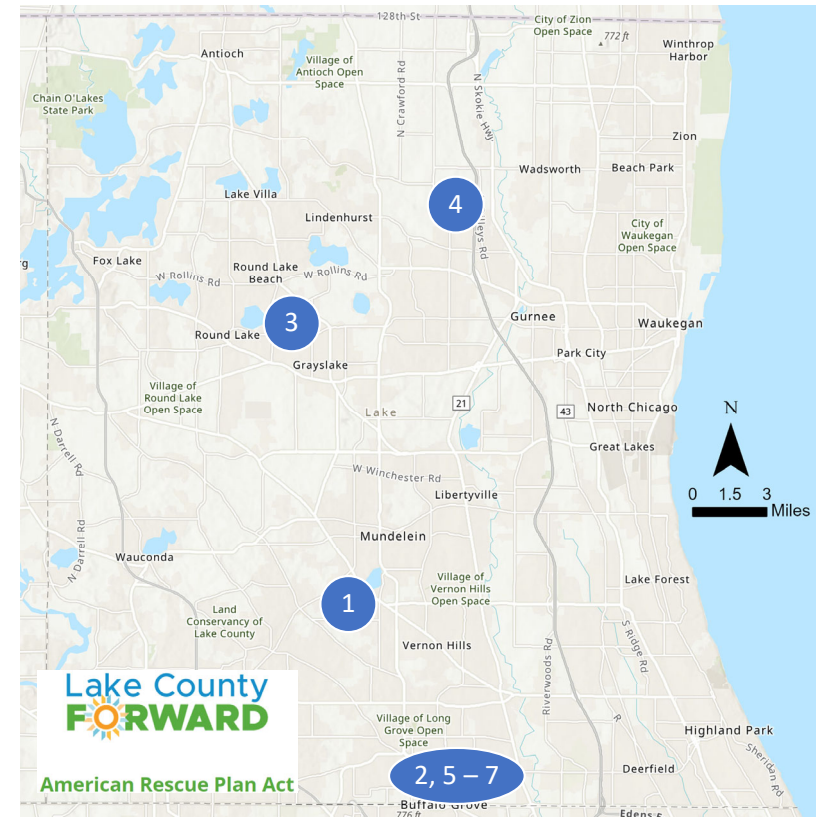
Proposed FY2023-FY2027 CIP

ARPA Funding



\$18.6M in ARPA Funding

1. Oak Terrace / West Oak Middle School Water System Upgrade
2. Pekara Water System Lake Michigan Interconnect
3. Highland Lake Water System Upgrade
4. Mill Creek WRF - UV Disinfection
5. Des Plaines River WRF - High Efficiency Blowers Installation
6. Des Plaines River WRF - Disc Filter Installation
7. Des Plaines River WRF - UV Disinfection Treatment



Proposed FY2023 CIP Investments



- **Water Production & Storage - \$7.4 M**
- **Water Distribution - \$4.2 M**
- **Wastewater Collection - \$3.9 M**
- **Water Reclamation Facilities - \$0 M**
- **Other Support Facilities & Equipment - \$0.5 M**

FY 2023 CIP Proposed Total = \$16.0 M

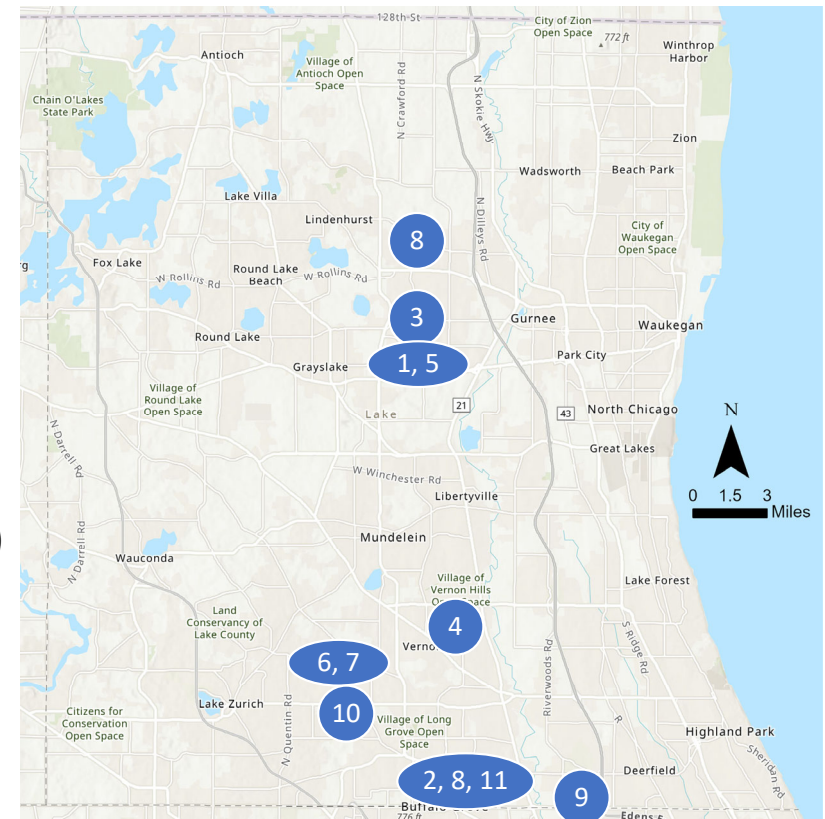
Proposed FY2023 CIP

Anticipated Construction Projects



1. Wildwood Water System Water Tower
2. Pekara Water System Lake Michigan Water Connection
3. Washington Street Water Main Relocation (LCDOT Dependent)
4. Lakeview Parkway Water Asset Relocation (Vernon Hills Dependent)
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 Lift Station & Sewer Improvements (Part 1)
10. IL Route 22 Sewer Relocation (IDOT Dependent)
11. DPR WRF - Building 60 Conveyor Replacement
12. SCADA Phase 3 Implementation*
13. Annual Tower & Reservoir Painting & Maintenance Projects *

*Various Locations – Not Mapped



Proposed FY2023-FY2027 CIP

Anticipated Program Costs



Investment Category	FY2023	FY2024	FY2025	FY2026	FY2027
Water Production & Storage	\$7.4M	\$3.0M	\$1.2M	\$0.2M	\$0.2M
Water Distribution	\$4.2M	\$12.0M	\$0.5M	\$2.5M	\$7.4M
Wastewater Collection	\$3.9M	\$5.1M	\$6.4M	\$3.1M	\$2.2M
Water Reclamation Facilities	\$0M	\$13.6M	\$6.0M	\$7.7M	\$2.3M
Other Support Facilities & Equipment	\$0.5M	\$0.5M	\$0.5M	\$0.5M	\$0.5M
Programmed Total	\$16.0M*	\$34.2M*	\$14.6M	\$14.0M	\$12.6M

*Includes ARPA funding

Thank you!

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Questions