

# SECTION V

## CAPITAL BUDGET

The Capital Improvement Program is the District's plan for the construction, rehabilitation, and modernization of District-owned and operated infrastructure. It includes plans to protect Lake Michigan from pollution, to clean up approximately 532 miles of rivers and streams within the District's jurisdiction to meet federal and state standards, and to reduce the level of flooding which has persistently plagued many municipalities within the District's jurisdiction.

The Capital Budget includes the Construction Fund and the Capital Improvements Bond Fund. To understand the Capital Budget, it is necessary to visualize existing facilities as well as the program for the next year and the long-term plan.

The type of funding for each fund corresponds to the estimated useful life of the project and statutory restrictions on bond sales. The Tax Cap Law imposes restrictions on the non-referendum bonding authority of the District. There are exceptions in the Tax Cap Law to allow non-referendum bonds to be sold to finance certain District projects. Bonds or long-term debt are only utilized to finance projects with useful lives beyond 20 years. Capital projects not eligible for bond financing, or with shorter useful lives, are funded on a pay-as-you-go basis and financed primarily by property taxes. The Capital Improvements Bond Fund receives most of its resources from bond sales, State Revolving Fund loans, and federal and state grants. It provides for major plant and sewer construction, flood control facilities, and land acquisition. The Construction Fund is financed primarily through a property tax levy and provides for much of the District's infrastructure rehabilitation and modernization.

The narrative discussion of the District's 2024 Capital Improvement Program places the 2024 program within the context of our long-range plan. Information is provided on the levels of funding in 2024 and in the future. The graphs, charts, figures, and descriptions of the Construction Fund and Capital Improvements Bond Fund Program within this section aid the reader in understanding this component of the Budget. The impact on operating costs associated with capital projects scheduled for award in 2024 is presented in the Capital Improvement Program narrative.

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Metropolitan Water Reclamation District of Greater Chicago

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September 5, 2023

Mr. Brian A. Perkovich  
Executive Director  
OFFICE

Dear Sir:

Subject: 2024 Program for the Capital Funds

The Capital Funds' program for 2024, as prepared in detail, is transmitted herewith. The budget presentation supports the request for funding of the District's 2024 Capital Plan initiatives in alignment with and in support of the Strategic Plan. The budget requests include all amendments as directed by you during the Executive Director Budget Hearings in August of this year.

The narrative by fund provides a summary of the 2024 major initiatives and challenges and 2023 accomplishments. Supporting schedules of objectives and performance present three years of detailed budgetary information.

Thank you for the opportunity to present the proposed Capital Funds budget for 2024.

Respectfully submitted,

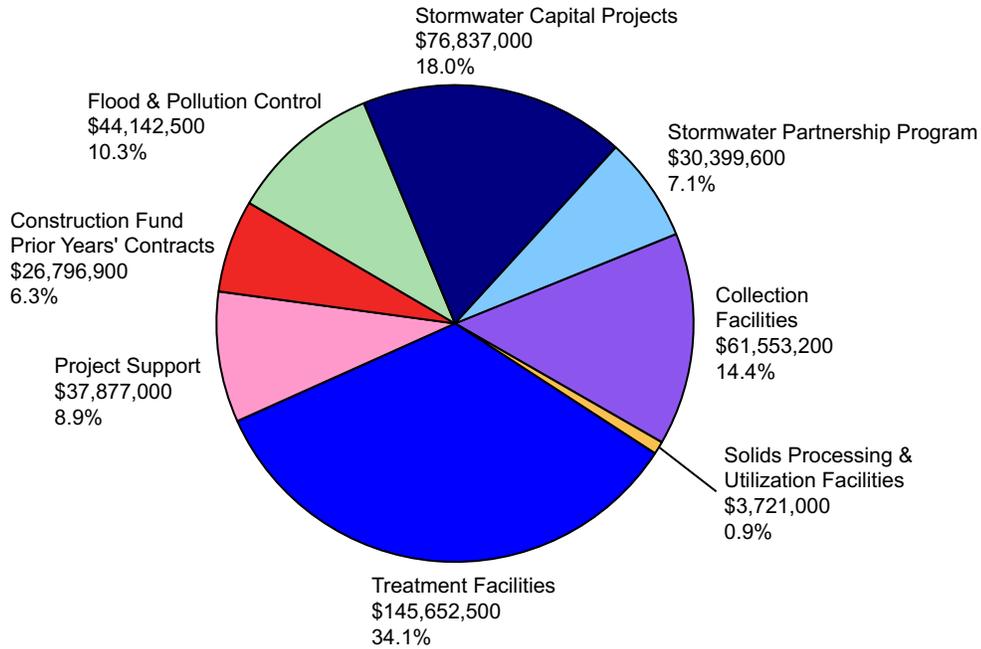
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## CAPITAL IMPROVEMENT PROGRAM PROGRAMS

2024	\$426,979,700
2023	\$536,289,800
Decrease	(\$109,310,100)



The District utilizes the Construction, Stormwater Management, and Capital Improvements Bond Funds for the Capital Improvement Program. Capital improvements comprise all new facilities and projects that preserve the useful life of District facilities or increase the capacity or efficiency of these facilities. The project support activities of the Construction, Stormwater Management, and Capital Improvements Bond Funds consist of planning, designing, and constructing District infrastructure, acting as a liaison to the United States Environmental Protection Agency and the Illinois Environmental Protection Agency. Funding for capital projects includes pay-as-you-go funding in the Construction and Stormwater Management Funds, federal and state grants, state revolving loan programs for wastewater and stormwater, and alternate revenue and general obligation bonds.

### Budget Highlights

The 2024 appropriation for the Capital Improvement Program is \$426,979,700, a decrease of \$109,310,100, or 20.4 percent, from 2023 due to the timing of project awards scheduled for 2024. A total of 147 projects funded by the Construction, Stormwater Management, or Capital Improvements Bond Funds will be under planning, design, or construction in 2024.

**The mission of the Capital Improvement Program is to plan, develop, and implement projects for new facilities, preserve the useful life of facilities, or increase the capacity or efficiency of facilities to ensure that the District complies with our statutory responsibilities in the areas of sewage treatment and pollution control.**

**Capital Improvement Program Policy**

The District’s Capital Improvement Program consists of those projects identified as necessary to ensure safe and uninterrupted operation of our facilities, meet existing and new statutory and regulatory requirements, and maintain efficiency in a cost-effective manner. Projects are identified based on asset management audits, Governmental Accounting Standards Board Statement 34 inspections, and need, such as regulatory requirements or long-term strategic planning. Following identification, projects must be justified and vetted by an interdepartmental review panel. Projects are prioritized using an evaluation and scoring system that values preservation of infrastructure, improvements to environmental quality, and commitment to community. Projects are added to the Capital Improvement Program and scheduled for award according to priority and resource availability after they have been through the review panel.

Governmental Accounting Standards Board Statement 34 became effective in 2003. By adopting the modified approach for reporting infrastructure assets, the District agrees to perform condition assessments of our facilities, establish service levels for our infrastructure, and appropriate funds to maintain these high standards, thus protecting the environment and avoiding the detrimental impacts of deferred maintenance. The results of these assessments are reported in the Annual Comprehensive Financial Report.

**Beneficial Impacts of Capital Projects**

Through proper operation, maintenance, rehabilitation, and replacement of equipment and facilities, the District ensures continuous efficient and reliable service, protects our investment and infrastructure, and meets National Pollutant Discharge Elimination System permit requirements. The Capital Improvement Program identifies and prioritizes projects to upgrade and modernize obsolete equipment and facilities.

**Program Funding**

Sources of funding for the Capital Improvement Program consist of capital improvements bond sales, general property tax revenues, State Revolving Fund (SRF) loans, and federal grants and reimbursements. The District is also exploring other financing possibilities including financing from federal Water Infrastructure Finance and Innovation Act loans. The table below shows the anticipated method of financing for projects scheduled to be awarded in fiscal years 2024-2028.

**Method of Financing for Projects Scheduled to be Awarded in Fiscal Years 2024-2028 (in thousands)**

	State Revolving Fund Loans	General Obligation Bonds	Army Corps of Engineers	Grants & Reimbursements	Pay-As-You-Go	Total
Tunnel and Reservoir Plan	\$ 25,000	\$ 50,287	\$ 17,109	\$ —	\$ 1,300	\$ 93,696
Water Reclamation Plant Expansion and Improvements	36,500	292,000	—	—	8,438	336,938
Solids Management	45,000	—	—	—	5,650	50,650
Collection Facilities	9,000	113,450	—	—	10,400	132,850
Replacement of Facilities	54,200	110,100	—	—	59,174	223,474
Stormwater	—	—	—	17,025	79,397	96,422
<b>Total</b>	<b>\$ 169,700</b>	<b>\$ 565,837</b>	<b>\$ 17,109</b>	<b>\$ 17,025</b>	<b>\$ 164,359</b>	<b>\$ 934,030</b>

**Construction Fund**

The Construction Fund is a property tax supported, pay-as-you-go capital fund authorized by State Statute, which provides for the acquisition of infrastructure assets or the rehabilitation of existing structures that increase the efficiency or extend the useful life of the structure. The useful life of the improvement is at least 15 years and project values are generally less than \$3.0 million. Section 12 of “An act to create sanitary districts and to remove obstructions in the Des Plaines and Illinois Rivers,” approved May 29, 1889, as amended, provides that the Board of Commissioners of the District can levy and collect taxes for construction purposes for the year 1985 and each year thereafter, which shall be at a rate not to exceed 0.10 percent of the assessed valuation of all taxable property within the District as equalized and determined for state and local taxes. In 2024, the Construction Fund has 31 projects scheduled for award and 12 projects under construction.

## **Stormwater Management Fund**

The Stormwater Management Fund is utilized to plan, implement, and finance stormwater management activities throughout Cook County, including stream maintenance in areas that currently lie outside the District's boundaries. The fund consolidates the District's stormwater management activities and supports the activities outlined in the Cook County Stormwater Management Plan, which serves as a framework for the District's countywide Stormwater Management Program. One of the initial goals of the Stormwater Management Program was to develop detailed watershed plans for each of the watersheds in Cook County. The detailed watershed plans identified and prioritized "regional" stormwater projects based on a benefit to cost ratio. These include streambank stabilization projects, which involve addressing critical active streambank erosion threatening public safety, structures, and/or infrastructure, or flood control projects. The Board of Commissioners has approved over 30 regional projects for design and construction.

## **Capital Improvements Bond Fund**

Section 9.6(a) of "An act to create sanitary districts and to remove obstructions in the Des Plaines and Illinois Rivers," approved May 29, 1889, as amended, provides that the Board of Commissioners of the District is authorized to issue bonds for District purposes. The District issues bonds to provide funds to replace, remodel, complete, alter, construct, and enlarge sewage treatment or flood control facilities, to acquire air pollution control equipment, and to build or acquire sewers. The total allowable bond debt at any given time cannot exceed 3.35 percent of the last known equalized assessed valuation of all taxable property within the District. The ordinance authorizing the issuance of the bonds provides for the levy of a tax on all taxable property within the District adequate to pay principal and interest on the bonds when due, including a provision for loss in the collection of taxes.

Tax Cap laws enacted in Illinois have a significant impact on the funding of the District's Capital Improvement Program through bond sales. Under Public Act 89-0001, the District's non-referendum bond authority is restricted to fund only projects initiated prior to October 1, 1991, which generally covers only Tunnel and Reservoir Plan (TARP) projects. However, Public Act 89-0385 provided additional non-referendum authority to the District by authorizing the issuance of "limited bonds." These "limited bonds" allow the District to issue non-referendum debt for projects initiated after October 1, 1991. "Limited bonds" can be issued up to the debt service extension base established by the Act. This "limited bond" authority was expanded for the District by passage of Public Act 90-0485 in the 1997 legislative session. This Act excludes debt associated with the TARP program from the "limited bond" limitation. The use of general obligation and alternate revenue bonds comprises only a portion of the District's capital project financing.

## **Loans Programs**

For many years, the major sources of funding for District projects were federal grants and the Build Illinois Compliance Grants, both of which were discontinued. Under the grant program, the District received approximately \$1.9 billion between 1973 and 1993, leaving 25 percent of the project cost to be borne by the District. The District continues to aggressively pursue federal and state funding to minimize the impact on our constituency. Low-interest SRF loans are an integral part of the District's capital improvements financing. SRF revenues are based on the award and construction schedule of specific projects. Funding is contingent upon how active other communities are in the program. In recent years, incentives such as principal forgiveness and reduced interest rates for disadvantaged and small communities have expanded participation in the program. It is estimated the District will receive approximately \$50 million annually in SRF loans for the next several years, which is consistent with previous years. The District is also planning to apply for Water Infrastructure Finance and Innovation Act loans through the United States Environmental Protection Agency to maximize taxpayer value.

## **Operating Cost Impacts of Capital Improvement Projects**

The annual maintenance and/or operating costs associated with new capital projects provide an important part of the decision-making process for the selection of capital projects. The operating cost impacts of proposed capital projects are analyzed by design personnel, as well as operating staff, in order to implement a Capital Improvement Program that meets operating needs in the most cost-effective manner. For example, the Mainstream TARP pump rehabilitation project will increase energy efficiency. This project includes the rehabilitation of Mainstream TARP Pumps 1, 3, and 5, initially placed into service in 1985, including the rehabilitation of associated motors and discharge cone valves and actuators. Capital projects also serve as opportunities to evaluate new technology at one location and assess whether implementing that technology will reduce operating costs at other locations throughout the District. For example, the District is currently installing a biogas combined heat and power (CHP) system at the Egan Water Reclamation Plant (WRP), which will maximize the utilization of biogas throughout the year. Currently, the District uses biogas for heating, but during warmer months biogas is not fully utilized. The CHP project will provide an opportunity for assessment of the technology and its viability for production of electricity, analysis of options for pre-digestion treatment to increase biogas production, and a review of the financial return on investment, carbon offsets, and market risks. Although this is only a trial project, the technology could potentially be installed at other WRPs. It is anticipated that running one CHP unit will save approximately \$44,000 annually and running two CHP units will save approximately \$100,000 annually. Operating impacts for each project are included on the individual project fact sheets.

**Phosphorus Removal Projects**

In the coming years, the District will be required to comply with more stringent phosphorus effluent limits prescribed by the National Pollutant Discharge Elimination System permits for each of the water reclamation plants. Table 1 below provides planned project awards for the fiscal years 2023-2028 which will be necessary to comply with the phosphorus effluent limits as shown in Table 3. There are currently no projects scheduled for award in 2026 and 2027. Table 2 below provides planned project awards which will also be necessary to comply with the phosphorus effluent limits, but are planned for award beyond the five-year forecast period. There are currently no projects scheduled for award in 2030, 2032, and 2034.

The District’s approach to compliance with phosphorus effluent limits has been to maximize phosphorus uptake in the biological process and, where appropriate, within the existing plant footprint. The District’s commitment to pursuing the biological process first provides environmental benefits - the phosphorus remains biologically available for future use as a fertilizer and in biosolids, which would not occur with chemical precipitation where the phosphorus is not readily available.

**Table 1: Planned Phosphorus Removal Project Awards for the Fiscal Years 2023-2028 (in thousands)**

Project Name	Project Number	2023	2024	2025	2026	2027	2028
Phosphorus Removal Modifications to Battery D, OWRP	21-091-3P	\$ 14,850					
Battery A Improvements and Battery B Installation of Mechanical Mixers, SWRP	08-174-3D		\$ 46,000				
Phosphorus Removal, KWRP	19-375-3P		6,500				
Chemical Phosphorus Removal, OWRP	20-087-3P		14,000				
Overburden Removal at Location of Battery E, OWRP	23-098-3P		30,000				
Battery E Activated Sludge Facility, OWRP	21-092-3P			\$ 260,000			
Plant Improvements, HPWRP	18-540-3P						\$ 20,000
	<b>Total</b>	<b>\$ 14,850</b>	<b>\$ 96,500</b>	<b>\$ 260,000</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 20,000</b>

**Table 2: Planned Phosphorus Removal Project Awards Beyond the Five-Year Forecast (in thousands)**

Project Name	Project Number	2029	2030	2031	2032	2033	2034
Phosphorus Removal, EWRP	19-415-3P	\$ 30,000					
Fermentation and Ancillary Facilities for Biological Phosphorus Removal Phase I, OWRP	20-085-3P	30,000					
Fermentation and Ancillary Facilities for Biological Phosphorus Removal Phase II, OWRP	20-086-3P			\$ 30,000			
Fermentation and Ancillary Facilities for Biological Phosphorus Removal, CWRP	12-245-3P					\$ 6,000	
	<b>Total</b>	<b>\$ 60,000</b>	<b>\$ —</b>	<b>\$ 30,000</b>	<b>\$ —</b>	<b>\$ 6,000</b>	<b>\$ —</b>

Phosphorus removal efforts at the Stickney WRP have been underway since 2011 with research, pilot testing, and subsequent infrastructure improvements. With past construction projects and favorable influent conditions, biological efforts to remove phosphorus have been extremely successful using existing infrastructure. No plant expansion was necessary to meet the effluent limits for phosphorus. To manage occasional biological phosphorus removal challenges, a temporary chemical dosing system was constructed and placed in service in 2021. Mechanical mixers were installed in Batteries A, C, and D, and a construction project to install mechanical mixers in Battery B will begin in 2024. The Ostara® Nutrient Recovery Facility produces a phosphorus and nitrogen-rich fertilizer. This process, while returning a limited resource to the economy, also helps to stabilize the biological process to remove phosphorus, thereby contributing to WRP compliance. However, in order to ensure permit compliance under all foreseeable conditions, a permanent chemical addition backup system is also being installed. Construction on this backup system began in 2022 and is scheduled to be completed by 2024.

Phosphorus removal efforts at the Calumet WRP have shown that either additional carbon to supplement the biological process or chemical addition is necessary. The construction of a chemical phosphorus removal facility began in 2022 and is scheduled to be operational in 2023 in order to meet the Calumet WRP’s effluent phosphorus limit of 1.0 mg/L in January 2024. The chemical cost to remove phosphorus at the Calumet WRP is estimated to be \$13.0 million to \$15.0 million annually. The District remains committed to pursuing biological means to remove phosphorus. The District completed a successful pilot of sidestream enhanced biological phosphorus removal in January 2022 and is now performing an engineering evaluation based on the data collected to determine what modifications can be installed to most sustainably remove phosphorus from the effluent flows. We anticipate a project for fermentation and ancillary facilities for biological phosphorus removal will be awarded in 2033.

At the O’Brien WRP, there are several projects in planning and/or design necessary to meet the upcoming phosphorus limits, as well as upgrades to the aeration batteries that originally commenced service in 1928. The first scheduled project, Phosphorus Removal Modifications to Battery D, OWRP, will install infrastructure and reconfigure flow through the battery to implement sidestream enhanced biological phosphorus removal, and began construction in 2023. The results of this project will help to inform the design of biological phosphorus removal in the remaining batteries. In simultaneous, phased projects, the remaining aeration batteries will be upgraded to support biological phosphorus removal beginning in 2029. Phase I upgrades to Battery C includes similar biological phosphorus removal infrastructure, as well as influent gate replacement, removal of the center walls, installation of a new aeration system and improved sludge returning to increase efficiency, and replacement of deteriorating century old concrete. Phase II of this project will mimic the Battery C improvements in either Battery A or B. In addition to modernizing the existing batteries, design on a new aeration battery, Battery E, with biological phosphorus removal capability has also begun, with construction scheduled to begin in 2025 under project 21-092-3P. This additional battery will replace treatment capacity for the plant at the times the existing batteries are retrofitted with the implementation of the biological phosphorus removal processes. To prepare for the construction of Battery E, a project has been scheduled to begin in 2024 to remove the overburden from the site, which should shorten the construction time for Battery E. The phase I and II battery upgrade projects will begin after the construction of Battery E has been completed, to minimize disruptions at the plant and maintain treatment capacity, with construction anticipated to begin in 2029 and 2031, respectively. Finally, the installation of a chemical backup system, scheduled to begin construction in 2024, will ensure permit compliance when the phosphorus level of the effluent will be 1.0 mg/L or lower by August 2027 and 0.5 mg/L by January 2030.

**Table 3: Effluent Phosphorus Permit Schedule**

<b>Water Reclamation Plant</b>	<b>Effluent Phosphorus Limit</b>	<b>Permit Timeframe</b>
Stickney WRP	1.0 mg/L 0.5 mg/L	2021 (Permit active) January 2030
Calumet WRP	1.0 mg/L 0.5 mg/L	January 2024 January 2030
O'Brien WRP	1.0 mg/L 0.5 mg/L	August 2027 January 2030
Kirie WRP	1.0 mg/L 0.5 mg/L	August 2026 January 2030
Egan WRP	1.0 mg/L	January 2031 or 2032 depending on method
Hanover Park WRP	1.0 mg/L	May 2031 or 2032 depending on method
Lemont WRP	1.0 mg/L 0.5 mg/L	To be determined

The Kirie WRP has successfully implemented biological phosphorus removal through the use of existing infrastructure and temporary measures such as baffle walls and return sludge pumps. While the Kirie WRP is currently removing phosphorus, a more permanent system is still required in order to ensure continued permit compliance, and is scheduled for construction in 2024. This project will install large bubble mixers and baffles to enhance the stability of the biological phosphorus removal process and also install a backup chemical system. As a participant in the DuPage River Salt Creek Watershed workgroup, the new phosphorus permit limit for the Egan and Hanover Park WRPs is further in the future. The District, however, is prepared to construct the necessary phosphorus removal facilities for the Egan and Hanover Park WRPs and complete the modernization and reconfiguration of the last aeration battery at the O’Brien WRP in the coming years. Small scale pilots are currently underway at the Egan and Hanover Park WRPs to assist with determining the best methods to achieve permit required phosphorus reductions. Depending on the outcome of these pilots, a temporary configuration may be constructed at one or both WRPs and information learned from these studies will guide decisions on the required modifications to the facilities. Projects for phosphorus removal modifications at the Hanover Park and Egan WRPs are anticipated to begin in 2028 and 2029, respectively.

### Overall Capital Improvement Program Costs

The District's 2024 Capital Improvement Program includes 2024 project awards, program support, and projects under construction at award value with a total estimated cost of approximately \$936.5 million. A breakdown of these projects (in millions of dollars) is as follows:

2024 project awards	\$ 372.8
2024 program support (project support and land)	37.9
Projects currently under construction (award value)	<u>525.8</u>
Total	\$ 936.5

- ◆ A breakdown of projects scheduled for 2024 award by fund is as follows:

Construction Fund projects	\$ 85.0
Capital Improvements Bond Fund projects	224.2
Stormwater Management Fund projects	<u>63.6</u>
Total	\$ 372.8

- ◆ A breakdown of projects under construction (award value) by fund is as follows:

Construction Fund projects	\$ 50.7
Capital Improvements Bond Fund projects	379.7
Stormwater Management Fund projects	<u>95.4</u>
Total	\$ 525.8

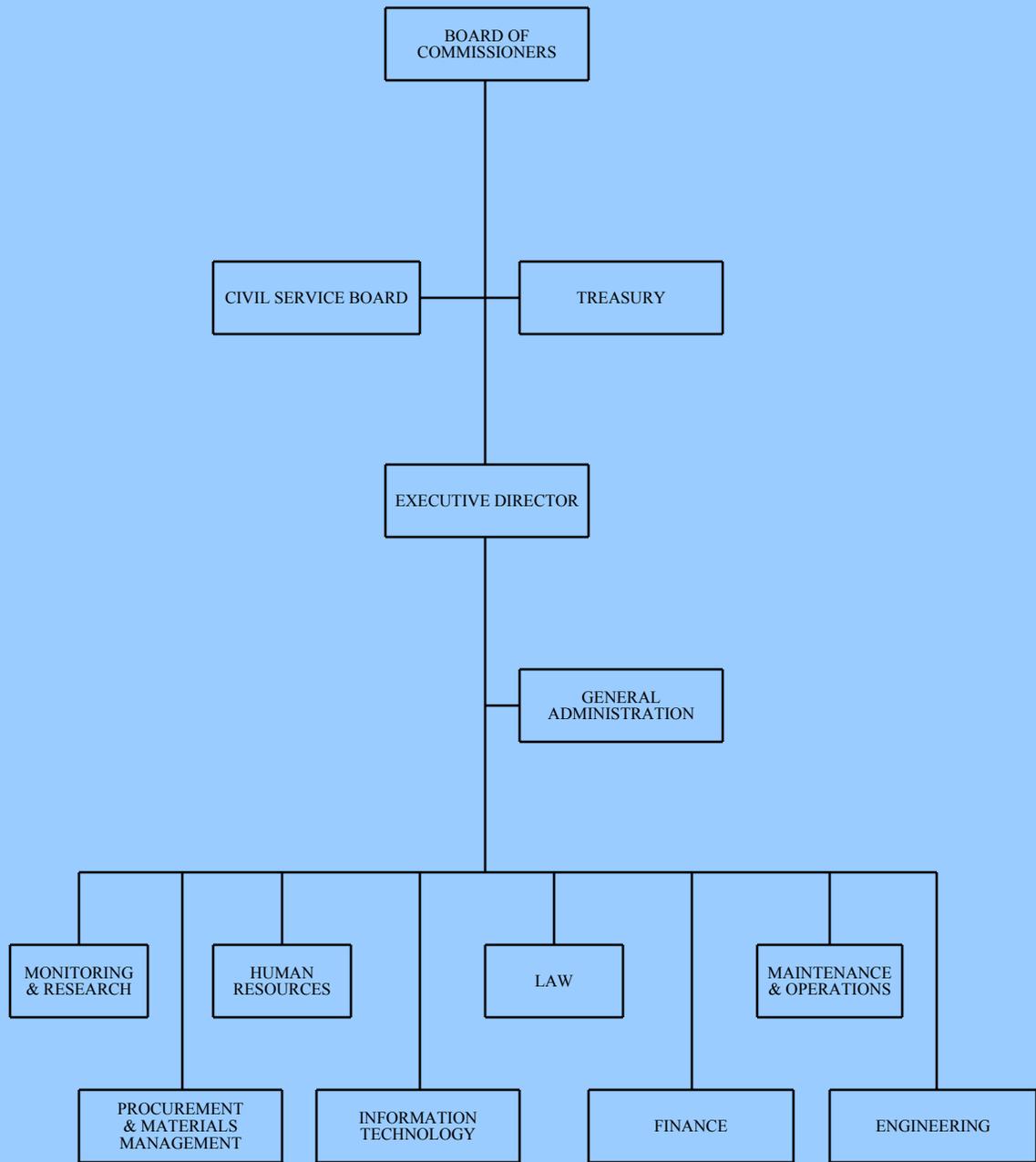
The table on the next page shows the 10-year construction cost projections for the Capital Improvement Program, including Stormwater Management capital projects.

**10-YEAR CAPITAL IMPROVEMENT PROGRAM SUMMARY  
2019 - 2028 CAPITAL PROJECT CONSTRUCTION COST**

	ACTUAL CASH DISBURSEMENTS					ESTIMATED CASH DISBURSEMENTS					TOTAL
	2019	2020	2021	2022	2023*	2024	2025	2026	2027	2028	2019-2028
<b>BY CATEGORY</b>											
Water Reclamation Plants and Solids Management	\$ 22.3	\$ 52.8	\$ 46.2	\$ 27.5	\$ 108.6	\$ 113.4	\$ 152.9	\$ 192.2	\$ 157.6	\$ 48.8	\$ 922.4
Replacement of Facilities	\$ 10.7	\$ 5.3	\$ 2.4	\$ 4.4	\$ 12.3	\$ 79.3	\$ 65.4	\$ 25.3	\$ 16.1	\$ 8.5	\$ 229.6
Collection Facilities	\$ 5.9	\$ 3.8	\$ 0.1	\$ 0.2	\$ 9.9	\$ 69.1	\$ 78.6	\$ 39.0	\$ 28.0	\$ 27.0	\$ 261.7
Stormwater Management	\$ 52.5	\$ 47.2	\$ 41.7	\$ 30.0	\$ 51.8	\$ 105.8	\$ 74.5	\$ 54.5	\$ 52.1	\$ 50.5	\$ 560.5
Tunnel and Reservoir Plan	\$ 4.9	\$ 15.8	\$ 7.2	\$ 31.3	\$ 29.1	\$ 6.5	\$ 30.2	\$ 6.5	\$ 1.0	\$ 23.5	\$ 155.9
<b>TOTAL</b>	<b>\$ 96.2</b>	<b>\$ 124.9</b>	<b>\$ 97.5</b>	<b>\$ 93.4</b>	<b>\$ 211.8</b>	<b>\$ 374.0</b>	<b>\$ 401.7</b>	<b>\$ 317.6</b>	<b>\$ 254.9</b>	<b>\$ 158.2</b>	<b>\$ 2,130.2</b>
<b>BY FUND</b>											
Stormwater Management Fund	\$ 16.7	\$ 25.8	\$ 21.9	\$ 23.6	\$ 45.1	\$ 97.7	\$ 74.0	\$ 54.3	\$ 51.9	\$ 50.0	\$ 461.1
Construction Fund	\$ 9.5	\$ 7.7	\$ 7.2	\$ 6.5	\$ 42.6	\$ 68.2	\$ 47.1	\$ 38.6	\$ 32.9	\$ 30.0	\$ 290.3
Capital Improvements Bond Fund	\$ 70.1	\$ 91.5	\$ 68.3	\$ 63.3	\$ 124.0	\$ 208.1	\$ 280.6	\$ 224.7	\$ 170.0	\$ 78.3	\$ 1,378.9
<b>TOTAL</b>	<b>\$ 96.2</b>	<b>\$ 124.9</b>	<b>\$ 97.5</b>	<b>\$ 93.4</b>	<b>\$ 211.8</b>	<b>\$ 374.0</b>	<b>\$ 401.7</b>	<b>\$ 317.6</b>	<b>\$ 254.9</b>	<b>\$ 158.2</b>	<b>\$ 2,130.2</b>

- Notes:
1. All project costs are in millions of dollars.
  2. Summary includes project construction costs.
  3. Information regarding the distribution of funds between the sub-items in the Construction and Capital Improvements Bond Funds can be found in the Five-Year Financial Forecast.
  4. Amounts are rounded.

\* PROJECTED CASH DISBURSEMENTS



## CONSTRUCTION FUND

### Fund Summary

The Construction Fund provides for the acquisition of infrastructure assets or the rehabilitation of existing structures that increase the efficiency or extend the useful life of the structure. The useful life of the improvement is at least 15 years and the values are generally less than \$3.0 million. The Construction Fund is a pay-as-you-go capital fund and is funded primarily by property taxes. Recognizing the need to invest in modernizing aging infrastructure, the District plans to allocate \$25.0 million in Personal Property Replacement Tax (PPRT) revenue to the Construction Fund each year from 2023-2028. PPRT disbursements from the State of Illinois continue to return favorable results, allowing the District to allocate a portion of the funding to the Construction Fund to finance smaller capital projects on a pay-as-you-go basis.

### Summary of 2023 Major Accomplishments

- Substantially completed the installation of a new aeration diffuser system in the North Aeration Battery at the Egan WRP. The aeration system will be tested to determine if the new layout will provide operational and maintenance improvements;
- Substantially completed a two-year study that entailed formulating conceptual plans aimed at achieving energy neutrality at one WRP by 2030 and District-wide by 2035. The project is consistent with the District's Strategic Plan Goal of Enterprise Resilience which emphasizes the proactive expansion of plans to embed resiliency throughout the organization;
- Substantially completed the construction of a phosphorus removal facility at the Calumet WRP. The facility will enable the WRP to meet the more stringent permit limit for phosphorus removal (1.0 mg/L), which becomes effective in 2024. Achieving 100 percent permit compliance is a key element of the Strategic Plan Goal of Resource Management;
- Completed a machine learning study and statistical evaluation to inform a conceptual plan to reduce odors and organic solids in the Thornton Composite Reservoir;
- Upgraded fire detection systems at various locations, which included removing obsolete equipment and installing new programmable field devices. Fire safety is a fundamental mandate for all District facilities;
- Installed an access road network around the primary and final tanks at the Hanover Park, WRP for improved convenience and efficiency. The expanded access will make it easier to collect samples, maintain and repair the tanks, and transport equipment;
- Rehabilitated an overhead air main at the Calumet WRP to improve efficiency and eliminate any safety concerns related to the prior use of lead paint;
- Substantially completed the installation of upgraded HVAC control panels at the Stickney WRP. The precise control of the ventilation system is important for staff safety, especially for those who operate heavy machinery and work with welding, cutting, and torching equipment;
- Replaced a concrete air vent cap at Tunnel and Reservoir Plan Drop Shaft M84 with steel grating. During acute rain events, the access manhole in the concrete vent cap could become unsecured due to accumulated pressure in the system. The grating will allow adequate venting, provide air pressure relief, and eliminate potential hazards;
- Replaced failing roof systems in the Calumet Service Area to protect the structures themselves and the assets they contain. Funding is provided in the 2024 Budget for additional replacements.

### 2024 Appropriation

The 2024 appropriation for the Construction Fund is \$59,966,100, an increase of \$8,465,700, or 16.4 percent, from 2023. For the 2024 budget, in addition to the tax levy and existing assets appropriable, which are generally the primary sources of funding, an additional \$25.0 million will be allocated from the Personal Property Replacement Tax, which continues to outperform expectations and return positive results. The 2024 value of the Construction Fund Program includes \$26,796,900 for projects under construction and \$28,559,900 for projects scheduled for award in 2024. An additional \$4,609,300 is appropriated for purposes not specifically associated with listed project costs, such as professional engineering services for capital project design and programs and initiatives in connection with biosolids management, energy conservation and neutrality, and process master planning. There are no staff positions budgeted in the Construction Fund.

### 2024 Budget Highlights

The following budget highlights support the District's Strategic Plan Goal of Resource Management, defined as maintaining a high level of performance while fulfilling the District's core mission of protecting the public health and area waterways and pursuing opportunities to recover and reuse resources. The initiatives described below exemplify the District's goal of maintaining and operating its facilities and assets to provide that high level of service.

#### **Design and maintain a Capital Improvement Program that emphasizes preserving and improving assets for optimal performance, long-term sustainability, and equitable and consistent service delivery**

- Design and implement projects with the purpose of providing valuable equipment redundancies, preventing system failures, and maximizing equipment uptime for permit compliance;
- Carefully assess outside forces and influences, such as stakeholder concerns and perceptions and environmental and economic forecasts and conditions, when planning for capital infrastructure needs;

- Continue to build an Asset Management Program, which is sustainable, optimizes the life cycle of critical assets, and considers the long-term environmental and financial implications of all plans and activities;
- Allocate resources to ensure that the operating capacity of the District's assets is maintained at a high level. In 2024, the District will oversee 31 new and 12 existing Construction Fund projects related to the core programs and functions of collection, treatment, solids processing and utilization, and flood and pollution control;
- Award a contract to assist the District with modernizing the biosolids management facilities for the Stickney WRP. The contract will explore opportunities to recover, reuse, and monetize resources from the District's biosolids operations;
- Upgrade the building automation system infrastructure in the Main Office Building. The system controls the energy consumption of the building with the purpose of lowering operating costs through decreased usage and providing better building temperature and air quality control. Implementation of an improved and expanded system will increase the sustainability of available resources and reduce the risk of larger long-term capital expenses due to a lack of integration with new technologies;
- Continue to pursue research programs focused on addressing impending or anticipated future regulatory actions, achieving energy savings and resource recovery, and driving innovation, all of which are success measures of Resource Management.

The following budget highlight supports the District's Strategic Plan Goal of Community Engagement. The initiative described below illustrates the District's determination to serve as a critical community asset, a responsive neighbor, and an inclusive business partner.

**Collaborate with similarly motivated agencies and organizations to advance the mission and goals of the District and improve the communities in which they operate**

- Maintain membership in the DuPage River Salt Creek Workgroup, which is a non-profit organization formed by local communities, water reclamation plants, and environmental organizations to address water quality issues at the watershed level. Working with the group to improve the water quality of the Salt Creek, the District will fund and manage a project to remove the Graue Mill Dam to stabilize banks and enhance habitat. This project fulfills the District's commitment to support capital improvement projects along the waterway and complies with the Egan and Hanover Park WRPs' National Pollutant Discharge Elimination System provisions to support such waterway improvements in lieu of establishing additional nutrient removal facilities at the WRPs. The estimated project cost is \$9,376,000, of which the District will pay \$6,010,000 with the remainder to be paid by the DRSCW as a reimbursement to the District;
- Act as an accountable and responsive neighbor. In 2024, the District will continue the rehabilitation of the Nicholas J. Melas Centennial Fountain, a Chicago landmark, that was built in 1989 to commemorate the 100th anniversary of the District. The fountain serves as a reminder of the District's early and enduring environmental advocacy;
- Continue to support smaller scale projects that nonetheless benefit the District's stakeholders and generate goodwill. Funding is provided in the budget for a project to replace the fence that borders the Hanover Park WRP and the adjacent elementary school with one that is more secure, durable, and aesthetically pleasing.

The following budget highlight supports the District's Strategic Plan Goal of Resource Management. The initiative described below reflects the District's dedication to establishing resource management practices that strengthen the District's operational position, resulting in reliable and cost-effective services.

**Pursue resource recovery opportunities to increase sustainability, recover costs, and improve functionality in the face of a changing environment**

- Install a biogas combined heat and power system at the Egan WRP, which will provide a first-hand opportunity to assess and examine the technology and its potential for electricity generation, analyze options for pre-digestion treatment to increase biogas production, and evaluate the return on investment, carbon offsets, and market risks. The biogas-to-energy system is an efficient approach to generating electricity from biogas (a byproduct of the wastewater treatment process) at the point of use. Instead of flaring the biogas and wasting its energy potential, it will be used to recover heat and produce electricity. Extracting the value from biogas is a prime example of what can be recovered and ultimately achieved with a wastewater treatment process that incorporates smart designs and systems.

**Construction Fund Program**

<u>Awards in 2024</u>						
Project Name	Project Number	Est. Construction Cost	2024 Appropriation	Duration (days)	Est. Award Date	
Motor Control Center Replacement at Upper DuPage Reservoir, NSA	19-543-2E	\$ 250	\$ 250	253	Jan 2024	
Replacement of Telemetry, Various Locations	20-861-2E	1,300	1,188	353	Jan 2024	
Fox River Water Reclamation District (FRWRD) Albin D. Pagorski WRP Bar Screens	23-IGA-35	2,172	362	874	Jan 2024	
Fox River Water Reclamation District (FRWRD) 4160 Automatic Throw Over and Electrical Distribution System	23-IGA-36	2,172	362	875	Jan 2024	
Low Voltage Pump and Blower Switchgear and Aerated Grit MCC Replacement, SWRP	19-156-2E	6,750	4,007	493	Feb 2024	
Fox River Water Reclamation District (FRWRD) Biosolids Gas Utilization	21-IGA-20	887	425	577	Feb 2024	
HVAC System Replacement, Various Locations	21-611-21	22,000	4,000	1,216	Mar 2024	
Replace Gas Monitoring Systems, Various Locations	23-635-21	1,700	1,000	1,035	Mar 2024	
TARP Mechanical Equipment Improvements, CWRP	23-801-21	8,750	2,500	1,400	Mar 2024	
Truck Scale Replacements, Various Locations	24-695-21	950	600	670	Mar 2024	
Aeration Blower Improvements, SWRP	24-901-21	5,100	1,000	1,766	Mar 2024	
Expand Building Automation System, Main Office Building	J15090-082	750	750	305	Mar 2024	
Modify Air Vent Elevation, DS-M13, SSA	J66679-XX2.A	350	350	305	Mar 2024	
Construct Arc Flash Blast Wall, OWRP	J67722-XX2.A	300	300	305	Mar 2024	
HVAC Improvements to UV Building and Switchgear Building, OWRP	22-093-2M	1,250	1,125	700	Apr 2024	
Roof Rehabilitation, Various Locations	24-612-21	2,000	2,000	243	Apr 2024	
Fence Installation, HPWRP	J67754-XX2.A	250	250	29	Apr 2024	
Furnish, Deliver, and Install Automatic Transfer Switches, LWRP	J68823-002.A	300	300	274	Apr 2024	
Lagoon Slope Regrade, CALSMA	J68850-002.A	900	900	121	Apr 2024	
Exhaust Fan System Replacements, NSA	J67795-XX1.A	300	300	122	May 2024	
Roof Replacements, Various Locations, NSA	J67795-XX2.A	250	250	122	May 2024	
Fox River Water Reclamation District (FRWRD) Operations and Maintenance Building Replacement	21-IGA-21	1,557	290	582	Jun 2024	
Remove and Replace Pavement, Various Locations	24-651-21	1,300	1,300	152	Jun 2024	
Centrifuge Rehabilitation, SWRP	24-902-21	3,700	855	1,308	Jun 2024	
Higgins Creek Bank Stabilization, Touhy Avenue Reservoir, NSA	24-IGA-XX	750	750	365	Jun 2024	
Furnish, Deliver, and Install Air Handler for TPO Lab, HPWRP	J67754-XX1.A	300	300	213	Jun 2024	

**Awards in 2024 (continued)**

Project Name	Project Number	Est. Construction Cost	2024 Appropriation	Duration (days)	Est. Award Date
Rehabilitate Gravel Road at the Gloria Alitto Majewski Reservoir, KWRP	J67783-XX1.A	\$ 300	\$ 300	91	Jun 2024
Roof Replacements, CWRP	J68843-XX1.A	774	774	91	Jun 2024
Mechanical Process Improvements, Various Locations	24-601-21	13,000	622	882	Aug 2024
Railroad Track Improvements, SSA	20-907-21	3,800	1,000	456	Oct 2024
Underground Storage Tank Improvements, Various Locations	22-602-21	800	150	456	Oct 2024
Total 2024 Awards		\$ 84,962	\$ 28,560		

**Projects Under Construction**

Project Name	Project Number	Est. Construction Cost	2024 Appropriation	Duration (days)	Award Date
Rehabilitate Aeration Blowers, SWRP	20-908-21	\$ 3,385	\$ 2,000	1,699	May 2020
Chemical Phosphorus Removal Facility, CWRP	18-254-3P	15,675	3,165	562	Aug 2022
Centennial Fountain Rehabilitation, SSA	J69922-024	3,980	3,122	905	Jul 2023
Refrigeration Improvements, CWRP and EWRP	23-106-22	239	239	417	Aug 2023
Rehabilitate City Water Tanks, Various Locations	23-684-21B	1,878	1,878	365	Aug 2023
Fullersburg Woods Master Plan, DRSCW	21-863-2C	9,376	8,000	481	Sep 2023
Influent Gate Demolition, SWRP	22-902-23	1,373	873	467	Sep 2023
Biogas Combined Heat and Power System, EWRP	20-415-2S	8,340	4,170	509	Oct 2023
Furnish, Deliver, and Install Primary Bag Filters, CWRP	22-601-21	350	350	411	Nov 2023
Remove and Replace One 23XL Chiller, Main Office Building	22-404-21	700	350	516	Dec 2023
Centrifuge Improvements at Post-Digestion Centrifuge Facility, SWRP	22-903-21	4,500	2,000	831	Dec 2023
Rehabilitate Digester Covers, Various Locations	23-684-22A	882	650	761	Dec 2023
Total Projects Under Construction		\$ 50,678	\$ 26,797		
Cumulative 2024 Awards and Projects Under Construction		\$ 135,640	\$ 55,357		

**Note: All cost figures are in thousands of dollars.**

**CAPITAL PROJECTS LISTED BY SERVICE AREA - CONSTRUCTION FUND**

The following is a list of capital projects within the District’s three major service areas. They are presented by their association with a water reclamation plant (WRP) and by their completion status: projects for 2024 award or under construction.

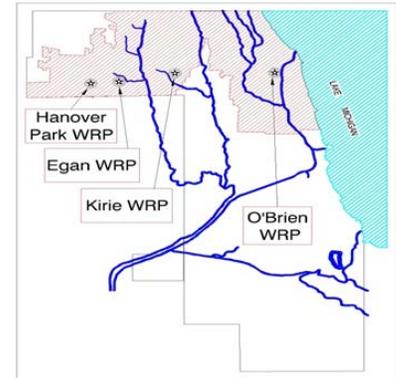
**STICKNEY  
SERVICE  
AREA (SSA)**



**Stickney Water Reclamation Plant (SWRP)**

		<b>Estimated Substantial Completion Date</b>	<b>Estimated Construction Cost</b>
<b>Projects for 2024 Award</b>			
19-156-2E	Low Voltage Pump and Blower Switchgear and Aerated Grit MCC Replacement, SWRP		\$ 6,750,000
20-907-21	Railroad Track Improvements, SSA		3,800,000
21-611-21	HVAC System Replacement, Various Locations		22,000,000
22-602-21	Underground Storage Tank Improvements, Various Locations		800,000
24-612-21	Roof Rehabilitation, Various Locations		2,000,000
24-651-21	Remove and Replace Pavement, Various Locations		1,300,000
24-695-21	Truck Scale Replacements, Various Locations		950,000
24-901-21	Aeration Blower Improvements, SWRP		5,100,000
24-902-21	Centrifuge Rehabilitation, SWRP		3,700,000
J15090-082	Expand Building Automation System, Main Office Building		750,000
J66679-XX2.A	Modify Air Vent Elevation, DS-M13, SSA		350,000
		<b>Total</b>	<b>\$ 47,500,000</b>
<b>Projects Under Construction</b>			
20-908-21	Rehabilitate Aeration Blowers, SWRP	12/24	\$ 3,385,000
22-404-21	Remove and Replace One 23XL Chiller, Main Office Building	4/25	700,000
22-902-23	Influent Gate Demolition, SWRP	12/24	1,373,000
22-903-21	Centrifuge Improvements at Post-Digestion Centrifuge Facility, SWRP	3/26	4,500,000
23-684-21B	Rehabilitate City Water Tanks, Various Locations	7/24	1,878,000
J69922-024	Centennial Fountain Rehabilitation, SSA	12/25	3,980,000
		<b>Total</b>	<b>\$ 15,816,000</b>
		<b>Stickney Service Area Grand Total</b>	<b>\$ 63,316,000</b>

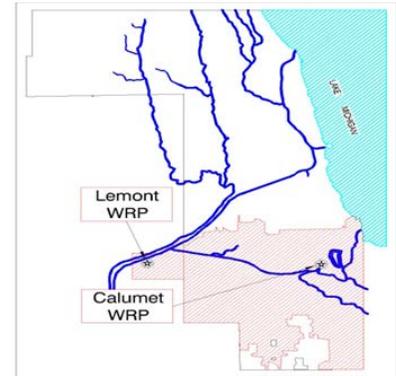
**NORTH  
SERVICE  
AREA (NSA)**



**Terrence J. O'Brien Water Reclamation Plant (OWRP)  
John E. Egan Water Reclamation Plant (EWRP)  
James C. Kirie Water Reclamation Plant (KWRP)  
Hanover Park Water Reclamation Plant (HPWRP)**

<b>Projects for 2024 Award</b>		<b>Estimated Substantial Completion Date</b>	<b>Estimated Construction Cost</b>
19-543-2E	Motor Control Center Replacement at Upper DuPage Reservoir, NSA		\$ 250,000
21-IGA-20	Fox River Water Reclamation District (FRWRD) Biosolids Gas Utilization		887,000
21-IGA-21	Fox River Water Reclamation District (FRWRD) Operations and Maintenance Building Replacement		1,557,000
22-093-2M	HVAC Improvements to UV Building and Switchgear Building, OWRP		1,250,000
23-635-21	Replace Gas Monitoring Systems, Various Locations		1,700,000
23-IGA-35	Fox River Water Reclamation District (FRWRD) Albin D. Pagorski WRP Bar Screens		2,172,000
23-IGA-36	Fox River Water Reclamation District (FRWRD) 4160 Automatic Throw Over and Electrical Distribution System		2,172,000
24-601-21	Mechanical Process Improvements, Various Locations		13,000,000
24-IGA-XX	Higgins Creek Bank Stabilization, Touhy Avenue Reservoir, NSA		750,000
J67722-XX2.A	Construct Arc Flash Blast Wall, OWRP		300,000
J67754-XX1.A	Furnish, Deliver, and Install Air Handler for TPO Lab, HPWRP		300,000
J67754-XX2.A	Fence Installation, HPWRP		250,000
J67783-XX1.A	Rehabilitate Gravel Road at the Gloria Alitto Majewski Reservoir, KWRP		300,000
J67795-XX1.A	Exhaust Fan System Replacements, NSA		300,000
J67795-XX2.A	Roof Replacements, Various Locations, NSA		250,000
<b>Total</b>			<b>\$ 25,438,000</b>
<b>Projects Under Construction</b>			
20-415-2S	Biogas Combined Heat and Power System, EWRP	3/25	\$ 8,340,000
21-863-2C	Fullersburg Woods Master Plan, DRSCW	12/24	9,376,000
23-106-22	Refrigeration Improvements, CWRP and EWRP	9/24	239,000
<b>Total</b>			<b>\$ 17,955,000</b>
<b>North Service Area Grand Total</b>			<b>\$ 43,393,000</b>

**CALUMET  
SERVICE  
AREA (CSA)**



**Calumet Water Reclamation Plant (CWRP)  
Lemont Water Reclamation Plant (LWRP)**

		<b>Estimated Substantial Completion Date</b>	<b>Estimated Construction Cost</b>
<b>Projects for 2024 Award</b>			
20-861-2E	Replacement of Telemetry, Various Locations		\$ 1,300,000
23-801-21	TARP Mechanical Equipment Improvements, CWRP		8,750,000
J68823-002.A	Furnish, Deliver, and Install Automatic Transfer Switches, LWRP		300,000
J68843-XX1.A	Roof Replacements, CWRP		774,000
J68850-002.A	Lagoon Slope Regrade, CALSMA		900,000
		<b>Total</b>	<b>\$ 12,024,000</b>
<b>Projects Under Construction</b>			
18-254-3P	Chemical Phosphorus Removal Facility, CWRP	2/24	\$ 15,675,000
22-601-21	Furnish, Deliver, and Install Primary Bag Filters, CWRP	12/24	350,000
23-684-22A	Rehabilitate Digester Covers, Various Locations	12/25	882,000
		<b>Total</b>	<b>\$ 16,907,000</b>
		<b>Calumet Service Area Grand Total</b>	<b>\$ 28,931,000</b>
		<b>Capital Projects Grand Total - All Service Areas</b>	<b>\$ 135,640,000</b>

## Chemical Phosphorus Removal Facility, CWRP

**Project Number** 18-254-3P

**Service Area** Calumet

**Location** Calumet WRP

**Engineering Consultant** In-house design

**Engineering Contractor** IHC Construction Companies, LLC



**Estimated Construction Cost** \$15,675,000

**Contract Award Date** August 2022

**Substantial Completion Date** February 2024

**Project Description** This project will provide a chemical phosphorus removal system at the Calumet WRP. This will allow the treatment plant to achieve compliance with the National Pollutant Discharge Elimination System permit phosphorus effluent limit.

**Project Justification** Through the development of this project, staff explored a number of options to help meet the upcoming phosphorous effluent permit limits (in place in 2024) at the Calumet WRP. Chemical phosphorus removal or polishing, while incurring a high operating cost due to the purchase of chemicals, is a certain technology. If biological phosphorus removal is not implemented or adequately able to meet the effluent permit limit, chemical phosphorus removal will be necessary. The facility will be designed to remove all of the phosphorus from the mainstream or serve as a polishing step to remove peak concentrations of phosphorus from the effluent.

**Project Status** Construction

## Low Voltage Pump and Blower Switchgear and Aerated Grit MCC Replacement, SWRP

**Project Number** 19-156-2E

**Service Area** Stickney

**Location** Stickney WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$6,750,000

**Contract Award Date** February 2024

**Substantial Completion Date** June 2025

**Project Description** This project is for the replacement of low voltage switchgear and the motor control center at the Stickney WRP.

**Project Justification** The electrical equipment is over 30 years old and is in poor condition. To avoid failure and ensure the appropriate level of service, the equipment must be replaced.

**Project Status** Planning



## Motor Control Center Replacement at Upper DuPage Reservoir, NSA

**Project Number** 19-543-2E

**Service Area** North

**Location** Upper DuPage Reservoir

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$250,000

**Contract Award Date** January 2024

**Substantial Completion Date** September 2024

**Project Description** This project will replace the motor control center at the Upper DuPage Reservoir.

**Project Justification** The electrical equipment is over 30 years old and is in poor condition. In order to avoid failure and ensure the appropriate level of service, the equipment must be replaced.

**Project Status** Planning



### Biogas Combined Heat and Power System, EWRP

<b>Project Number</b>	20-415-2S
<b>Service Area</b>	North
<b>Location</b>	Egan WRP
<b>Engineering Consultant</b>	To be determined
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$8,340,000
<b>Contract Award Date</b>	October 2023
<b>Substantial Completion Date</b>	March 2025
<b>Project Description</b>	This project entails the installation of a biogas combined heat and power (CHP) system.
<b>Project Justification</b>	This project will utilize biogas from the CHP system, which is typically flared, to produce electricity and recover the heat from the engine for beneficial reuse (hot water heat recovery). The biogas, a byproduct of wastewater treatment, will be beneficially reused. It is anticipated that running one CHP unit will save approximately \$44,000 annually and running two CHP units will save approximately \$100,000 annually.
<b>Project Status</b>	Planning



### Replacement of Telemetry, Various Locations

**Project Number** 20-861-2E

**Service Area** Calumet, North, and Stickney

**Location** District-wide

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$1,300,000

**Contract Award Date** January 2024

**Substantial Completion Date** January 2025



**Project Description** This project is to furnish, deliver, and install replacement communications equipment and services for the existing copper phone lines that provide visibility and control of various District remote sites from their respective supervisory plants. The equipment selected will provide secure, bidirectional, periodic commands and readings over cellular radio link to the telecommunications provider's network, as well as the ability to retrieve diagnostic data of the networking equipment itself. The contractor will provide turnkey installation from the Supervisory Control and Data Acquisition interface to the complete field installation.

**Project Justification** The existing point-to-point copper telemetry lines have been labeled as obsolete by AT&T, which is the District's current service provider. Through this project, these obsolete telemetry lines will be replaced with AT&T fiber connection as the primary interface and cellular as the secondary fail-over service that will communicate between the field and their supervisory plants. It is expected that the new communication system and its associated operating costs will realize actual savings of more than 30 percent.

**Project Status** Planning

### Railroad Track Improvements, SSA

<b>Project Number</b>	20-907-21
<b>Service Area</b>	Stickney
<b>Location</b>	Stickney Service Area
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$3,800,000
<b>Contract Award Date</b>	October 2024
<b>Substantial Completion Date</b>	December 2025



**Project Description** This project entails removing and replacing two railroad grade crossings, providing for track drainage improvements, and rehabilitating eight retaining walls. The grade crossings are located outside and to the west of the Stickney WRP.

**Project Justification** Improvements are necessary to ensure the integrity of the track gauge and prevent derailments. The existing grade crossing under Interstate 55 has noticeably degraded. At other locations outside the Stickney WRP, heavy traffic loads have degraded the crossing and it must be replaced to restore its integrity. There are numerous locations along the track system where poor track drainage causes the track ballast to become fouled with dirt and sediments. Rainwater carries ballast away from the track bed, and existing underdrain piping has been damaged or is no longer at an elevation sufficient to provide effective drainage. At certain locations, the surrounding terrain drains onto the track bed instead of away from it. These conditions keep the wood crossties saturated for extended periods of time and deposit significant amounts of dirt onto the ballast, which in turn impairs the ability of the ballast to retain the rail in place and results in increased maintenance. During more extreme wet weather events at the most susceptible locations, track flooding can reach the top of the rail, forcing the shutdown of the railroad until the floodwaters subside. Retaining walls in the area are in various stages of dilapidation, and some have completely failed, allowing the previously retained material to gradually migrate onto the track bed and interfere with the wheel flanges of the locomotives and dump cars.

**Project Status** Planning

### Rehabilitate Aeration Blowers, SWRP

**Project Number** 20-908-21

**Service Area** Stickney

**Location** Stickney WRP

**Engineering Consultant** In-house design

**Engineering Contractor** Siemens Energy, Inc.

**Estimated Construction Cost** \$3,385,000

**Contract Award Date** May 2020

**Substantial Completion Date** December 2024



**Project Description** This project entails inspecting, rehabilitating, and overhauling four blowers at the Stickney WRP.

**Project Justification** Four axial flow blowers (Nos. 4 through 7) at the Stickney WRP are used to provide air to the aeration tanks and airlifts. Blower No. 7's guide vane stator has sustained damage, preventing it from moving. The stator is critical as it is used to adjust the air flow based on the WRP's need. The stator on blower No. 4 also needs to be replaced. The blowers are due for an overhaul (every eight years is recommended). The project will include the inspection, rehabilitation, balancing, and replacement of worn parts. In addition, blowers Nos. 5 and 7 have obsolete pneumatic actuators which will be replaced with electro-hydraulic actuators.

**Project Status** Construction

### HVAC System Replacement, Various Locations

<b>Project Number</b>	21-611-21
<b>Service Area</b>	Calumet, North, and Stickney
<b>Location</b>	Calumet, North, and Stickney Service Areas
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$22,000,000
<b>Contract Award Date</b>	March 2024
<b>Substantial Completion Date</b>	June 2027



**Project Description** This project entails replacing and improving heating, ventilation, and air conditioning (HVAC) systems at various locations. At the Calumet WRP, a cross-connection between cooling towers will be installed for the Tunnel and Reservoir Plan, the old chiller and cooling towers will be removed at the Pump and Blower Building, and gas and water lines will be installed in the Heavy Equipment Building. At the 95th Street Pumping Station, ventilation improvements will be made in the Screenings Room. At the Egan WRP, two digester gas systems with appurtenances will be replaced in the Digester Complex, three absorption chillers will be replaced, and the building management system controls will be upgraded in the Administration Building. At the Kirie WRP, the air handling system will be replaced to improve ventilation in the Influent Pumping Station. At the O'Brien WRP, four air handling units will be replaced in the Pump and Blower Building. At the Racine Avenue Pumping Station, the air handling system will be updated to improve ventilation. At the Stickney WRP, the HVAC system and two chillers will be replaced, the building management system controls will be upgraded in the Engineering Building, two heat exchangers will be replaced in the Monitoring and Research Building, and a high-pressure steam line will be installed in the Digester Facility

**Project Justification** The need for replacement is based on age, life expectancy, and reliability. The equipment being replaced has experienced chronic failures due to equipment corrosion and leaking coils and piping. The project will minimize future maintenance costs and ensure increased reliability to protect District assets, improve air quality, and provide a safe working environment.

**Project Status** Planning

### Fullersburg Woods Master Plan, DRSCW

<b>Project Number</b>	21-863-2C
<b>Service Area</b>	North
<b>Location</b>	Graue Mill along Salt Creek, near Ogden Avenue and York Road in Oak Brook, DuPage County, IL
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	V3 Construction Group, LTD.
<b>Estimated Construction Cost</b>	\$9,376,000
<b>Contract Award Date</b>	September 2023
<b>Substantial Completion Date</b>	December 2024



<b>Project Description</b>	The project entails removing the Graue Mill Dam and improving a segment of the Salt Creek to stabilize banks and enhance habitat. It will also return flow into the mill to power the waterwheel and rehabilitate a floodwall.
<b>Project Justification</b>	The project will fulfill the District's commitment under its agreement with the DuPage River Salt Creek Workgroup (DRSCW) to support projects along the waterway. It will also comply with the Egan and Hanover Park WRPs' National Pollutant Discharge Elimination System Permit provisions to support waterway projects in lieu of near-term, additional nutrient removal solutions at the WRPs.
<b>Project Status</b>	Construction

**The District is responsible for \$6,010,000 of the project cost. The remainder will be paid by the DRSCW as a reimbursement to the District.**

### Fox River Water Reclamation District (FRWRD) Biosolids Gas Utilization

**Project Number** 21-IGA-20

**Service Area** North

**Location** Albin D. Pagorski WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$887,000

**Contract Award Date** February 2024

**Substantial Completion Date** August 2025



**Project Description** This project entails the utilization of biogas produced at the Albin D. Pagorski WRP, which is part of the Fox River Water Reclamation District, for plant building and process heating and/or electrical generation to save utility costs. Additionally, it will produce energy products that will be available for sale to offset plant operating costs.

**Project Justification** The Fox River Water Reclamation District treats flow from the District's Poplar Creek Basin. The District shares the cost of capital projects and pays for treatment costs based on flow. This project will utilize biogas produced at the water reclamation plant, saving plant operating costs and/or providing additional revenue. This will also result in environmental benefits.

**Project Status** Negotiation / Evaluation

## Fox River Water Reclamation District (FRWRD) Operations and Maintenance Building Replacement

**Project Number** 21-IGA-21

**Service Area** North

**Location** Albin D. Pagorski WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$1,557,000

**Contract Award Date** June 2024

**Substantial Completion Date** January 2026

**Project Description** This project will replace the operations and maintenance facility with new construction. All the current facilities will be replaced and updated, and new processes incorporated as needed.

**Project Justification** This project will replace the operations and maintenance facility, which is past its useful life. A modern facility is needed to support updated and new processes at the facility.

**Project Status** Negotiation / Evaluation



## HVAC Improvements to UV Building and Switchgear Building, OWRP

**Project Number** 22-093-2M

**Service Area** North

**Location** O'Brien WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$1,250,000

**Contract Award Date** April 2024

**Substantial Completion Date** March 2026

**Project Description** The project entails installing new heating, ventilation, and air conditioning rooftop units in the ultraviolet building and new air handling rooftop units in the switchgear building. The existing equipment is unreliable and ineffective.

**Project Justification** The existing heat exchangers are not functioning as intended and the dehumidifiers are not necessary.

**Project Status** Design



## Remove and Replace One 23XL Chiller, Main Office Building

<b>Project Number</b>	22-404-21
<b>Service Area</b>	Stickney
<b>Location</b>	Main Office Building
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$700,000
<b>Contract Award Date</b>	December 2023
<b>Substantial Completion Date</b>	April 2025



**Project Description** The project entails removing and replacing one 23XL Carrier chiller unit at the Main Office Building. The new unit must be energy efficient, use less harmful refrigerant, and be tied into the building automation system.

**Project Justification** The chiller was installed in 1997. The American Society of Heating, Refrigerating, and Air-Conditioning Engineers' standard for useful life of centrifugal chillers is 23 years. This chiller has now been operational for 24 years. Failure of either existing chiller could have adverse effects on the working conditions of all employees in the Main Office Building due to the inability to regulate the temperature during the summer months. The current unit is also expensive to recharge and uses R-22 refrigerant, an ozone-depleting chemical. Water and electrical energy usage levels are expected to decrease significantly due to the new model's higher efficiency and the automated controls.

**Project Status** Planning

### Furnish, Deliver, and Install Primary Bag Filters, CWRP

**Project Number** 22-601-21

**Service Area** Calumet

**Location** Calumet WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$350,000

**Contract Award Date** November 2023

**Substantial Completion Date** December 2024



**Project Description** Furnish, deliver, and install primary filter bags in the pump and blower baghouses at the Calumet WRP. The contractor shall install new primary filter bags in 20 baghouses at the Calumet WRP.

**Project Justification** Filter bags, which remove debris and contaminants from the pump and blower areas, need to be replaced every ten years due to wear and excessive clogging, which can no longer be alleviated with mechanical shaking.

**Project Status** Planning

## Underground Storage Tank Improvements, Various Locations

**Project Number** 22-602-21

**Service Area** North and Stickney

**Location** North and Stickney Service Areas

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$800,000

**Contract Award Date** October 2024

**Substantial Completion Date** December 2025

**Project Description** This project entails improving the District's underground storage tanks, which are used for fleet fueling operations, by installing containment sumps on the submersible turbine pumps and fuel dispensers.

**Project Justification** By 2028, regulations issued by the Illinois Office of the State Fire Marshal will require that all submersible turbine pumps and fuel dispensers have containment sumps installed.

**Project Status** Planning



### Influent Gate Demolition, SWRP

<b>Project Number</b>	22-902-23
<b>Service Area</b>	Stickney
<b>Location</b>	Stickney WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	John Burns Construction Company, LLC
<b>Estimated Construction Cost</b>	\$1,373,000
<b>Contract Award Date</b>	September 2023
<b>Substantial Completion Date</b>	December 2024
<b>Project Description</b>	This project entails removing hydraulic gates at the Stickney WRP. Influent control structures M-13-1 and M-14-1 have hydraulic-operated gates in series with motor-operated gates. Hydraulic-operated gates E and F in structure M-13-1 have failed in the closed position, thus reducing operational flexibility during a wet-weather event.
<b>Project Justification</b>	This project will improve the ability to control the influent flow to the Stickney and Westside WRPs and the Stickney Tunnel and Reservoir Plan.
<b>Project Status</b>	Construction



## Centrifuge Improvements at Post-Digestion Centrifuge Facility, SWRP

<b>Project Number</b>	22-903-21
<b>Service Area</b>	Stickney
<b>Location</b>	Post-Digestion Centrifuge Facility, Stickney WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$4,500,000
<b>Contract Award Date</b>	December 2023
<b>Substantial Completion Date</b>	March 2026



**Project Description** The Post-Digestion Centrifuge Facility at the Stickney WRP is currently operated by obsolete equipment. This project entails upgrading and replacing the old equipment. A fiber optic network/backbone will also be installed to enable the new equipment to communicate seamlessly with the existing network.

**Project Justification** The current controllers and input/output modules are part of a line of hardware that was discontinued in 2017. Procuring hardware, software, and technical support has become increasingly difficult and costly due to the equipment's obsolescence. The project upgrading to a new system will make the facility's network more reliable and sustainable.

**Project Status** Planning

## Refrigeration Improvements, CWRP and EWRP

<b>Project Number</b>	23-106-22
<b>Service Area</b>	Calumet and North
<b>Location</b>	Calumet and Egan WRPs
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	Autumn Construction Services, Inc.
<b>Estimated Construction Cost</b>	\$239,000
<b>Contract Award Date</b>	August 2023
<b>Substantial Completion Date</b>	September 2024
<b>Project Description</b>	This project is to furnish, deliver, and install new condensing units, evaporators, and controls for six environmental rooms, two at the Calumet WRP and four at the Egan WRP.
<b>Project Justification</b>	The refrigeration equipment is at the end of its service life and routinely requires repair. These environmental rooms are used for storing samples critical for meeting the National Pollutant Discharge Elimination System permit requirements.
<b>Project Status</b>	Construction



## Replace Gas Monitoring Systems, Various Locations

<b>Project Number</b>	23-635-21	
<b>Service Area</b>	North and South	
<b>Location</b>	North Service Area and Stickney WRP	
<b>Engineering Consultant</b>	In-house design	
<b>Engineering Contractor</b>	To be determined	
<b>Estimated Construction Cost</b>	\$1,700,000	
<b>Contract Award Date</b>	March 2024	
<b>Substantial Completion Date</b>	December 2026	
<b>Project Description</b>	This project will replace gas monitoring systems at the Egan, Hanover Park, O'Brien, and Stickney WRPs and the North Branch Pumping Station.	
<b>Project Justification</b>	The current gas monitoring systems are aging and becoming unreliable due to the obsolescence and unavailability of repair parts. The new systems will provide reliable service and provide more efficient communication technology, which will result in a safer work environment.	
<b>Project Status</b>	Planning	

## Rehabilitate City Water Tanks, Various Locations

<b>Project Number</b>	23-684-21B
<b>Service Area</b>	North and Stickney
<b>Location</b>	O'Brien and Stickney WRPs
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	Era Valdivia Contractors, Inc.
<b>Estimated Construction Cost</b>	\$1,878,000
<b>Contract Award Date</b>	August 2023
<b>Substantial Completion Date</b>	July 2024
<b>Project Description</b>	The city water tank at the O'Brien Water Reclamation Plant has sustained corrosion and is only equipped with a temporary cover. Under this project, the tank will be re-coated inside and out, and a permanent cover will be installed. The Stickney city water tank, erected in 1958, was last rehabilitated in 1996. Rehabilitation of the water tower will include all necessary structural improvements.
<b>Project Justification</b>	The city water tank at the O'Brien WRP has sustained corrosion and is equipped with only a temporary cover. The city water tank at the Stickney WRP has not been painted in over 25 years and re-coating is necessary to maintain the integrity of the structure.
<b>Project Status</b>	Construction



## Rehabilitate Digester Covers, Various Locations

**Project Number** 23-684-22A

**Service Area** Calumet and North

**Location** Calumet and Hanover Park WRPs

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$882,000

**Contract Award Date** December 2023

**Substantial Completion Date** December 2025

**Project Description** The rehabilitation of six digester covers each at the Calumet and Hanover Park WRPs will be achieved through surface restoration and the application of a protective coating to reverse the deterioration that occurs in the harsh environment of a wastewater treatment plant. The project will result in the extension of the equipment life cycle.

**Project Justification** The current condition of the digester covers includes surface deterioration, rust, and foaming sludge buildup. These factors compound the rate of corrosion over time and must be mitigated to prolong the life of the digesters.

**Project Status** Planning



## TARP Mechanical Equipment Improvements, CWRP

**Project Number** 23-801-21

**Service Area** Calumet

**Location** Calumet WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$8,750,000

**Contract Award Date** March 2024

**Substantial Completion Date** December 2027



**Project Description** The project entails rehabilitating the suction and discharge valves in the main sewage pumps at the Calumet Tunnel and Reservoir Plan (TARP), integrating the medium voltage drive auxiliary chillers into the house-chilled water system, balancing and aligning rotating assemblies, and upgrading obsolete prime-mover vibration and temperature monitoring systems. Improvements will also be made to the West TARP seal water and compressed air feed systems.

**Project Justification** The suction and discharge valves are original to the pump station (circa 1985). The valves leak and do not hold a seal which requires the entire pump house to be dewatered and taken out of service to isolate the pumps for routine service. The medium voltage drive auxiliary chillers have proven to be a reliability risk, thus reducing the availability of the pumps.

**Project Status** Planning

### Fox River Water Reclamation District (FRWRD) Albin D. Pagorski WRP Bar Screens

**Project Number** 23-IGA-35

**Service Area** North

**Location** Albin D. Pagorski WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$2,172,000

**Contract Award Date** January 2024

**Substantial Completion Date** June 2026

**Project Description** This project is for the replacement of outdated bar screens at the Fox River Water Reclamation District's Albin D. Pagorski WRP. The new screens will be selected for their improved ability to capture debris. A preliminary design will be performed to determine the hydraulic profile.

**Project Justification** New screens are required to capture more debris to protect the process facilities.

**Project Status** Design



## Fox River Water Reclamation District (FRWRD) 4160 Automatic Throw Over and Electrical Distribution System

**Project Number** 23-IGA-36

**Service Area** North

**Location** Albin D. Pagorski, WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$2,172,000

**Contract Award Date** January 2024

**Substantial Completion Date** June 2026

**Project Description** This project is for the replacement of the automatic throw over and electrical distribution system at the Fox River Water Reclamation District's Albin D. Pagorski WRP.

**Project Justification** The electrical system needs to be replaced to support new facilities and to ensure safety.

**Project Status** Design



## Mechanical Process Improvements, Various Locations

**Project Number** 24-601-21

**Service Area** North and Stickney

**Location** North and Stickney Service Areas

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$13,000,000

**Contract Award Date** August 2024

**Substantial Completion Date** December 2026



**Project Description** This project entails the improvement and rehabilitation of various mechanical systems and assets in the North and Stickney Service Areas. At the O'Brien and Hanover Park WRPs, launder covers will be installed to prevent undesirable algae growth. Additional improvements to the mechanical systems at the O'Brien WRP include the installation of 18 slide gates with actuators for final settling tanks 15-18 located in Batteries A, B, and C, the installation of a second sodium hypochlorite tank in the grit building, the installation of fabricated drives with precision bearings on primary tanks 9-16, the installation of underground piping, which runs from the final tanks to the scum concentration building, the installation of a rotating slotted pipe system made of non-corrosive materials to remove scum from the primary tank, and the rehabilitation of eight primary tank influent gate actuators and three splitter gate actuators. Additional improvements at the Hanover Park WRP include the rehabilitation of the actuators and valves on the aeration tanks. Other improvements to the mechanical systems in the North Service Area include the installation of upgraded drive shafts made of carbon fiber and reinforced polymer on raw sewage pumps 2 and 4 at the Kirie WRP, the installation of new dewatering pumps at the O'Hare Reservoir, the installation of an insulated heating blanket on the bisulfite tank at the Egan WRP, and the replacement of the seal water break tank and piping at the North Branch Pumping Station. At the Stickney WRP, two final tank drives will be replaced, and six final tank drives will have torque limiters installed to reduce damage in case of rake arm jamming. In all cases, the new equipment is superior to the existing equipment and will improve process performance and reduce equipment failures, downtime, and maintenance costs.

**Project Justification** The project will result in mechanical systems and assets that perform better due to process modifications and improvements and require less maintenance due to their new or like-new condition.

**Project Status** Planning

### Roof Rehabilitation, Various Locations

<b>Project Number</b>	24-612-21
<b>Service Area</b>	Calumet, North, and Stickney Service Areas
<b>Location</b>	Calumet, North, and Stickney Areas
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$2,000,000
<b>Contract Award Date</b>	April 2024
<b>Substantial Completion Date</b>	November 2024



**Project Description** This project entails the rehabilitation of existing roofs at various locations, which are showing signs of significant wear. The scope of work covers localized roof deck restoration including slope remediation, full roofing membrane and insulation replacement, full masonry, and flashing repairs at roof parapets to eliminate water infiltration.

**Project Justification** Rehabilitation of roofs extends the overall life of the roofs and prevents damage or further degradation to building structures. The need for rehabilitation is based on age, life expectancy, and reliability. The project will minimize future maintenance costs and protect the District's assets. Failure of existing roofs could have adverse effects on vulnerable and sensitive equipment housed in various buildings, which would be extremely costly to replace or repair and could adversely affect District operations. Many roofs have exceeded their expected useful life of 20 years and are no longer under warranty. Rehabilitation of District roofs also ensures a safe working environment for District employees.

**Project Status** Planning

## Remove and Replace Pavement, Various Locations

<b>Project Number</b>	24-651-21
<b>Service Area</b>	Calumet, North, and Stickney
<b>Location</b>	Calumet, North, and Stickney Service Areas
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$1,300,000
<b>Contract Award Date</b>	June 2024
<b>Substantial Completion Date</b>	October 2024



**Project Description** This project entails the removal and replacement of deteriorating pavement. The scope of work includes clearing and excavating existing pavement, saw cutting, installing Illinois Department of Transportation type B patch, replacing curbs and gutters, cleaning and sealing cracks, incorporating proper sloping and grading, and resurfacing asphalt pavement in the North, Stickney, and Calumet Service Areas.

**Project Justification** Roadway and parking lot pavements in the Calumet, North, and Stickney Service Areas show signs of significant deterioration, which create potential driving and pedestrian hazards. Cracks as wide as six inches and potholes are noted at various facilities at numerous locations. Asphalt cold patch has been applied every year in the past but will not last. The poor condition of the pavement has a negative impact on District vehicles as well as employees' and visitors' vehicles. This project will extend the useful life of the roadways and parking lots and provide safe driving conditions in the WRPs.

**Project Status** Planning

### Truck Scale Replacements, Various Locations

**Project Number** 24-695-21

**Service Area** Calumet and Stickney

**Location** Calumet and Stickney Service Areas

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$950,000

**Contract Award Date** March 2024

**Substantial Completion Date** December 2025

**Project Description** This project is for the installation of new truck scales and all appurtenances at the Stickney WRP and the Calumet East, Calumet West, Marathon, and Vulcan biosolids management sites.

**Project Justification** The existing truck scales are more than 25 years old and in need of replacement.

**Project Status** Planning



### Aeration Blower Improvements, SWRP

**Project Number** 24-901-21

**Service Area** Stickney

**Location** Stickney WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$5,100,000

**Contract Award Date** March 2024

**Substantial Completion Date** December 2028

**Project Description** The Aeration Blower Facility at the Stickney WRP is currently operated by obsolete equipment. This project entails upgrading and replacing the old equipment.

**Project Justification** The current controllers and input/output modules are part of a line of hardware that was discontinued in 2017. Procuring hardware, software, and technical support has become increasingly difficult and costly due to the equipment's obsolescence. Upgrading to a new system will make the facility's equipment more reliable and sustainable. In addition to the upgraded temperature and vibration monitor system field devices, the aeration blowers will be outfitted with enhanced fast acting blower blow-off valves and actuators.

**Project Status** Planning



## Centrifuge Rehabilitation, SWRP

<b>Project Number</b>	24-902-21
<b>Service Area</b>	Stickney
<b>Location</b>	Stickney WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	Alfa Laval, Inc.
<b>Estimated Construction Cost</b>	\$3,700,000
<b>Contract Award Date</b>	June 2024
<b>Substantial Completion Date</b>	December 2027
<b>Project Description</b>	This project entails inspecting, rehabilitating, and overhauling 16 thickening (pre-digestion) and 21 dewatering (post-digestion) centrifuges at the Stickney WRP.
<b>Project Justification</b>	The current configuration of the Stickney WRP includes 16 pre-digestion centrifuges and 21 post-digestion centrifuges. The project will provide for the full rehabilitation of both styles of centrifuges to ensure that there is adequate machine capacity available to dewater biosolids for processing and eventual beneficial reuse at the Pelletizer Facility and at other outlets, such as farms, golf courses, and public works projects.
<b>Project Status</b>	Planning



### Higgins Creek Bank Stabilization, Touhy Avenue Reservoir, NSA

**Project Number** 24-IGA-XX

**Service Area** North

**Location** Kirie WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$750,000

**Contract Award Date** June 2024

**Substantial Completion Date** June 2025

**Project Description** This is an intergovernmental agreement between the Illinois Tollway Authority, the City of Chicago, and the District to stabilize the banks of Higgins Creek.

**Project Justification** Stabilization of Higgins Creek is necessary to preserve water retention capability. This is an intergovernmental pursuit prompted by the erosion of the creek that has the potential to undermine the structural integrity of the highway and bridge if not restored.

**Project Status** Negotiation / Evaluation



## Expand Building Automation System, Main Office Building

**Project Number** J15090-082

**Service Area** Stickney

**Location** Main Office Building

**Engineering Consultant** In-house design

**Engineering Contractor** Anchor Mechanical, Inc.

**Estimated Construction Cost** \$750,000

**Contract Award Date** March 2024

**Substantial Completion Date** December 2024

**Project Description** This project will add more functionality to the current Building Automation System (BAS) infrastructure in place at the Main Office Building, which will allow the building to operate more efficiently. The external contracted staff will be responsible for running the equipment with extended BAS capability.

**Project Justification** The BAS offers many appliances and applications that control the energy consumption of the building, resulting in lower operating costs and better building temperature and air quality control. According to the American Council for an Energy-Efficient Economy, the average primary energy use intensity (EUI) of the current U.S. commercial building could be reduced by 46 percent by using the best available cost-effective energy efficient technologies. Implementation of a BAS will increase the sustainability of available resources in facilities and will reduce the risk of larger long-term capital expenses due to the lack of integration with new and emerging technologies. Maintaining low usage of energy through efficiency would benefit the economy and the environment.

**Project Status** Planning



### Modify Air Vent Elevation, DS-M13, SSA

<b>Project Number</b>	J66679-XX2.A
<b>Service Area</b>	Stickney
<b>Location</b>	Drop Shaft M13
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	Anchor Mechanical, Inc.
<b>Estimated Construction Cost</b>	\$350,000
<b>Contract Award Date</b>	March 2024
<b>Substantial Completion Date</b>	December 2024
<b>Project Description</b>	This project will raise the elevation of Tunnel and Reservoir Plan (TARP) Drop Shaft M13 air vent by eight feet. The work will include removing the existing steel grating and beams, extending the existing air vent shaft core with reinforced concrete, and installing new steel girders and new 72-inch diameter grating.
<b>Project Justification</b>	During severe rain events, the drop shaft air vent experiences stormwater geysering, causing the steel grating to lift and shift from the structure. The air vent is the first point of pressure relief. Extending the structure eight feet above the current ground elevation and above the drop shaft will safely contain the geysering effect. This solution was implemented within the Mainstream TARP system and has proven to be reliable.
<b>Project Status</b>	Planning



### Construct Arc Flash Blast Wall, OWRP

<b>Project Number</b>	J67722-XX2.A
<b>Service Area</b>	North
<b>Location</b>	O'Brien WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	McDonagh Demolition, Inc.
<b>Estimated Construction Cost</b>	\$300,000
<b>Contract Award Date</b>	March 2024
<b>Substantial Completion Date</b>	December 2024
<b>Project Description</b>	Furnish, deliver, and install an arc flash blast wall for geographic information system switchgear at the O'Brien WRP.
<b>Project Justification</b>	There are two lines from ComEd that feed into the switchgear. To work safely on either line, both lines must be shut down, which takes the entire WRP offline, causing disruptions to operations. The arc flash blast wall will provide an insulation barrier between the two incoming power lines, eliminating the safety hazard and the need to shut down both lines at once when working on the equipment.
<b>Project Status</b>	Planning



### Furnish, Deliver, and Install Air Handler for TPO Lab, HPWRP

<b>Project Number</b>	J67754-XX1.A
<b>Service Area</b>	North
<b>Location</b>	Hanover Park WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	McDonagh Demolition, Inc.
<b>Estimated Construction Cost</b>	\$300,000
<b>Contract Award Date</b>	June 2024
<b>Substantial Completion Date</b>	December 2024
<b>Project Description</b>	This project is for the installation of an air handler system for the newly designed Treatment Plant Operator laboratory at the Hanover Park WRP. Existing exhaust, heating and cooling systems will be removed in-house in preparation for the installation.
<b>Project Justification</b>	The conversion of existing space in the Tertiary Building into a laboratory was budgeted for and completed in 2023. The laboratory has specific exhaust needs that differ from the surrounding areas in the building. The air handler unit will meet safety requirements, as well as improve energy efficiency in the newly designed space.
<b>Project Status</b>	Planning



### Fence Installation, HPWRP

<b>Project Number</b>	J67754-XX2.A
<b>Service Area</b>	North
<b>Location</b>	Hanover Park WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	McDonagh Demolition, Inc.
<b>Estimated Construction Cost</b>	\$250,000
<b>Contract Award Date</b>	April 2024
<b>Substantial Completion Date</b>	April 2024
<b>Project Description</b>	The project includes removing the barbed-wire, chain-link fence, which is adjacent to an elementary school, and replacing it with an eight-foot vinyl fence to create a 1,500- to 2,000-foot border between the treatment facilities and school walkway.
<b>Project Justification</b>	The original barbed-wire and chain-link fencing is functional but visually unappealing. The area of the Hanover Park WRP that contains the digesters borders an elementary school property, along which runs a narrow 2000-foot-long walkway. An upgrade to vinyl fencing will provide better screening and improve the overall aesthetics of the area.
<b>Project Status</b>	Planning



## Rehabilitate Gravel Road at the Gloria Alitto Majewski Reservoir, KWRP

<b>Project Number</b>	J67783-XX1.A
<b>Service Area</b>	North
<b>Location</b>	The Gloria Alitto Majewski Reservoir
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	McDonagh Demolition, Inc.
<b>Estimated Construction Cost</b>	\$300,000
<b>Contract Award Date</b>	June 2024
<b>Substantial Completion Date</b>	August 2024
<b>Project Description</b>	The project entails replacing the upper access road to the gatehouse of the Gloria Alitto Majewski Reservoir.
<b>Project Justification</b>	The access road, which runs along the inside rim of the reservoir and leads to the gatehouse, is original to the facility and has degraded over time. Having safe and reliable access to the gatehouse is critical to Tunnel and Reservoir Plan operations as the sluice gates that dewater the reservoir are controlled from there. The road is regularly used by construction vehicles, which also require a safe and reliable means of passage.
<b>Project Status</b>	Planning



## Exhaust Fan System Replacements, NSA

<b>Project Number</b>	J67795-XX1.A
<b>Service Area</b>	North
<b>Location</b>	Egan, Hanover Park, Kirie, and O'Brien WRPs
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	McDonagh Demolition, Inc.
<b>Estimated Construction Cost</b>	\$300,000
<b>Contract Award Date</b>	May 2024
<b>Substantial Completion Date</b>	August 2024
<b>Project Description</b>	The project entails removing and replacing existing exhaust fan networks in various areas of the Egan, Hanover Park, Kirie, and O'Brien WRPs. Many of the existing exhaust systems are more than 40 years old and original to the buildings.
<b>Project Justification</b>	Exhaust systems are crucial to the safety and design of these facilities. Fumes from processing sludge, if allowed to concentrate, are combustible and hazardous when inhaled. The prioritized replacement of exhaust systems ensures the safety of District employees and the protection of its facilities. Newer systems also provide an energy efficiency over models produced when these systems were first installed.
<b>Project Status</b>	Planning



### Roof Replacements, Various Locations, NSA

**Project Number** J67795-XX2.A

**Service Area** North

**Location** North Service Area

**Engineering Consultant** In-house design

**Engineering Contractor** McDonagh Demolition, Inc.

**Estimated Construction Cost** \$250,000

**Contract Award Date** May 2024

**Substantial Completion Date** August 2024

**Project Description** Perform full roof replacements at various locations throughout the North Service Area. These locations include outlying stations and process facilities that have been damaged by storm or have become significantly deteriorated due to environmental conditions, and if left unaddressed pose a threat to the structural integrity of the buildings.

**Project Justification** The process and collections buildings located throughout the North Service Area house infrastructure and costly equipment that is not easily replaced. Maintaining the sound structure of the buildings is important to preserving these valuable assets.

**Project Status** Planning



## Furnish, Deliver, and Install Automatic Transfer Switches, LWRP

**Project Number** J68823-002.A

**Service Area** Calumet

**Location** Lemont WRP

**Engineering Consultant** In-house design

**Engineering Contractor** McDonagh Demolition, Inc.

**Estimated Construction Cost** \$300,000

**Contract Award Date** April 2024

**Substantial Completion Date** December 2024



**Project Description** This project entails furnishing, delivering, and installing automatic transfer switches at the Lemont WRP.

**Project Justification** Power at the Lemont WRP is sourced by two Commonwealth Edison feeds. As this WRP is not staffed around the clock, it is essential that the automatic transfer switches are fully functioning so power is continuously maintained. In the event power is lost to one feed, the automatic transfer switch will sense the loss and transfer to the available source. Recently, the existing automatic transfer switch failed, resulting in the loss of sewage conveyance. This project will replace and upgrade the automatic transfer switches.

**Project Status** Planning

### Roof Replacements, CWRP

<b>Project Number</b>	J68843-XX1.A
<b>Service Area</b>	Calumet
<b>Location</b>	Calumet WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	McDonagh Demolition, Inc.
<b>Estimated Construction Cost</b>	\$774,000
<b>Contract Award Date</b>	June 2024
<b>Substantial Completion Date</b>	August 2024
<b>Project Description</b>	This project provides for full roof replacement and includes the removal of roofing materials and debris from the existing roof, replacement of damaged decking, and installation of new underlayment, ice and water shield, roof vents, roof coverings, flashing, and additional materials as needed. Three sections, 11, 10, and 9 of Building 29, have been prioritized for replacement due to their high-traffic, multi-purpose nature.
<b>Project Justification</b>	The existing roofs are leaking and have damaged the interior walls and ceiling. A full replacement for each area is necessary to prevent structural and additional interior damage.
<b>Project Status</b>	Planning



## Lagoon Slope Regrade, CALSMA

<b>Project Number</b>	J68850-002.A
<b>Service Area</b>	Calumet
<b>Location</b>	Calumet Solids Management Area
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	McDonagh Demolition, Inc.
<b>Estimated Construction Cost</b>	\$900,000
<b>Contract Award Date</b>	April 2024
<b>Substantial Completion Date</b>	July 2024



**Project Description** Many of the biosolids lagoons at the Calumet WRP still have the original clay-lined bottoms that over time have been compromised due to the use of heavy equipment to remove and process the biosolids for beneficial reuse. Services are required to restore the lagoons to their original slope. This project will provide restoration that includes regrading and adding material.

**Project Justification** The lagoons cannot be emptied in their entirety due to the compromised state of the slope, which, when properly graded allows solids to drain to draw off boxes at the low end of the lagoons. The project will provide restoration that will add to the useful life of the lagoons and ensure all space is efficiently emptied and available for future operations.

**Project Status** Planning

## Centennial Fountain Rehabilitation, SSA

**Project Number** J69922-024

**Service Area** Stickney

**Location** Centennial Fountain

**Engineering Consultant** G&H and Stanley Consultants

**Engineering Contractor** Anchor Mechanical, Inc.

**Estimated Construction Cost** \$3,980,000

**Contract Award Date** July 2023

**Substantial Completion Date** December 2025



**Project Description** This project entails replacing flood damaged mechanical, electrical, power distribution, control, and remote monitoring equipment to restore Centennial Fountain to full service. Civil design enhancements to mitigate the flooding of the underground control chamber will also be incorporated in the project's design specifications.

**Project Justification** The fountain sustained a catastrophic flood event damaging all underground control chamber equipment.

**Project Status** Construction

**50000 CONSTRUCTION FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

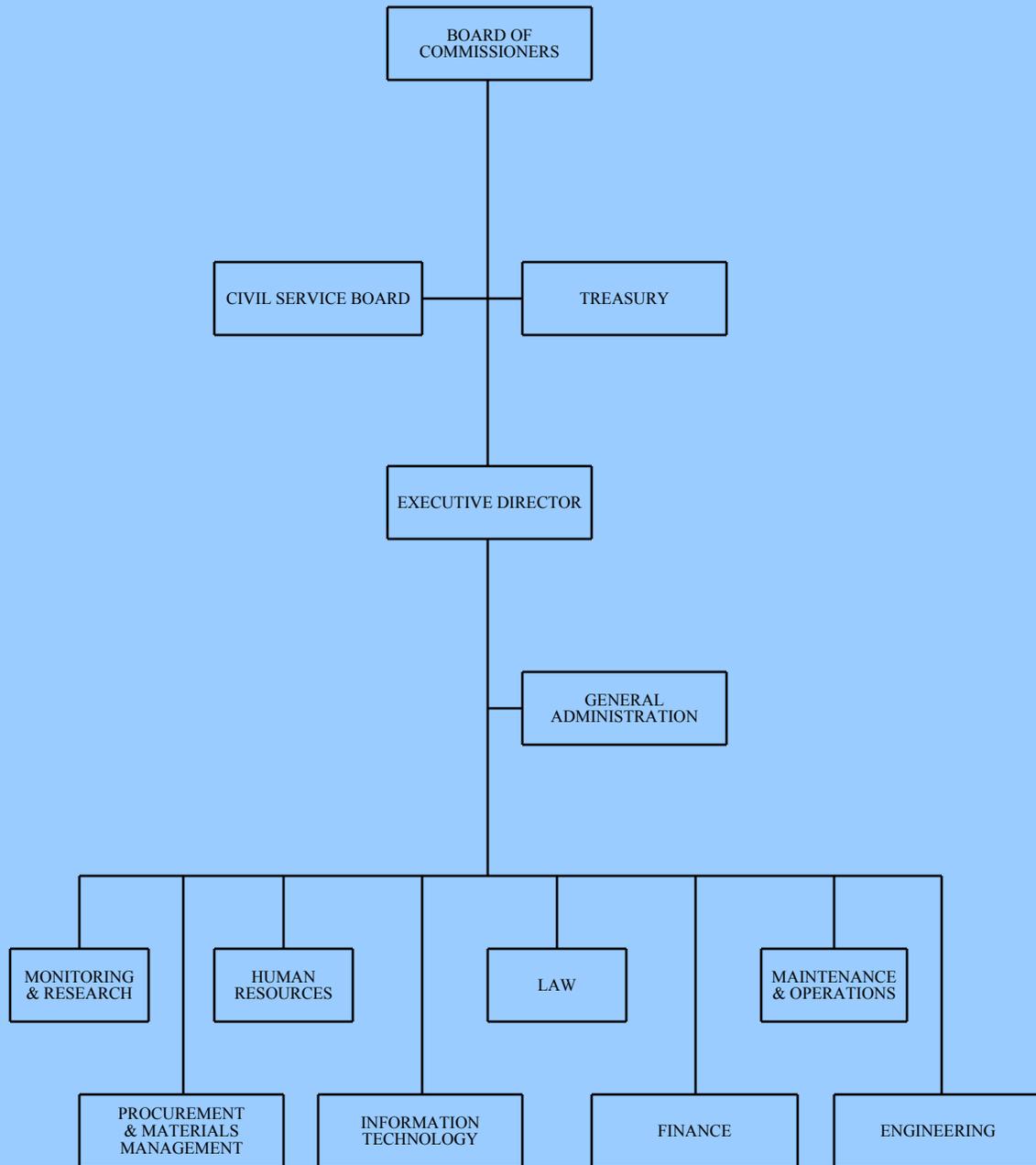
OBJECTIVES BY PRIORITY:		Cost	Percent
1.	COLLECTION FACILITIES: Pursue projects, such as the replacement of Tunnel and Reservoir Plan equipment at the Calumet WRP, which will reduce operation and maintenance costs and/or provide facility improvements.	\$ 4,103,200	6.8 %
2.	TREATMENT FACILITIES: Pursue projects, such as the replacement of heating, ventilation, and air conditioning systems, District-wide and the rehabilitation of centrifuges at the Stickney WRP, which will reduce operation and maintenance costs and/or provide facility improvements.	\$ 21,552,500	35.9 %
3.	SOLIDS PROCESSING AND UTILIZATION FACILITIES: Pursue projects, such as railroad track improvements in the Stickney Service Area used to transport biosolids to the solids management areas, which will reduce costs and/or provide facility improvements.	\$ 3,721,000	6.2 %
4.	FLOOD AND POLLUTION CONTROL: Provide funding for construction projects addressing flood control.	\$ 1,542,500	2.6 %
5.	CONSTRUCTION FUND PROJECT COST: Provide funding for contracts awarded prior to 2024.	\$ 26,796,900	44.7 %
6.	PROJECT SUPPORT: Development, design, and administration of current and future contracts, funding support, construction materials, and utility support services.	\$ 2,250,000	3.8 %
Totals		<u>\$ 59,966,100</u>	<u>100.0 %</u>

PROGRAMS BY PRIORITY:		2022	Budgeted		Change	
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent
1800	Collection Construction	\$ 969,054	2024	— \$ 4,976,200	\$ 3,036,100	156.5
			2023	— \$ 1,940,100		
2800	Treatment Construction	\$ 3,467,036	2024	— \$ 29,595,300	\$ 242,500	0.8
			2023	— \$ 29,352,800		
3700	Solids Processing Design	\$ —	2024	— \$ 504,000	\$ —	—
			2023	— \$ 504,000		
3800	Solids Processing Construction	\$ 98,474	2024	— \$ 6,887,000	\$(2,420,000)	(26.0)
			2023	— \$ 9,307,000		
4207	Centennial Fountain	\$ —	2024	— \$ 3,122,300	\$ 1,872,300	149.8
			2023	— \$ 1,250,000		
4600	Monitoring	\$ 915,688	2024	— \$ 1,500,000	\$(1,934,000)	(56.3)
			2023	— \$ 3,434,000		
4800	Flood and Pollution Control Construction	\$ 176,538	2024	— \$ 9,781,300	\$ 5,418,800	124.2
			2023	— \$ 4,362,500		
5800	Solids Utilization Construction	\$ 812,322	2024	— \$ 2,500,000	\$ 1,500,000	150.0
			2023	— \$ 1,000,000		
7460	Main Office Building Complex Services	\$ 20,000	2024	— \$ 1,100,000	\$ 750,000	214.3
			2023	— \$ 350,000		
Totals		\$ 6,459,112	2024	— \$ 59,966,100	\$ 8,465,700	16.4 %
			2023	— \$ 51,500,400		

Projects budgeted in the Construction Fund, a pay-as-you-go capital fund, are prioritized based on operational needs, design time frames, and available funding. Year-over-year variances in program area budgets are the result of project timing within the five-year capital planning cycle.

201 50000	Fund: Construction Department: Engineering	LINE ITEM ANALYSIS						
		2022	2023			2024		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 09/30/23	Expenditure (Committed Budget plus Disbursement) 09/30/23	Estimated Expenditure 12/31/23	Proposed by Executive Director	Recommended by Committee on Budget and Employment
612240	Testing and Inspection Services	\$ 139,620	\$ 250,000	\$ 406,000	\$ 405,859	\$ 336,000	\$ 366,000	\$ —
612400	Intergovernmental Agreements	—	4,938,700	4,142,700	428,552	428,600	10,657,700	—
612430	Payments for Professional Services	441,038	950,000	950,000	828,671	769,100	800,000	—
612450	Professional Engineering Services for Construction Projects	471,291	1,404,000	1,404,000	931,000	700,000	904,000	—
200	TOTAL CONTRACTUAL SERVICES	1,051,949	7,542,700	6,902,700	2,594,082	2,233,700	12,727,700	—
645650	Process Facilities Structures	474,650	27,136,900	27,536,900	27,408,396	17,172,600	8,666,600	—
645680	Buildings	576,876	1,835,000	1,485,000	933,187	653,500	2,450,000	—
645700	Preservation of Collection Facility Structures	1,145,592	1,943,300	2,243,300	1,164,419	1,351,300	5,276,200	—
645720	Preservation of Waterway Facility Structures	—	1,512,500	2,152,500	1,889,778	1,430,000	3,384,800	—
645750	Preservation of Process Facility Structures	920,910	4,905,000	4,640,300	3,786,999	2,067,800	14,321,300	—
645780	Preservation of Buildings	1,475,064	5,625,000	5,255,000	3,386,953	1,588,300	11,089,500	—
645790	Preservation of Capital Projects, N.O.C.	814,072	1,000,000	1,264,700	455,000	955,000	2,050,000	—
500	TOTAL CAPITAL PROJECTS	5,407,164	43,957,700	44,577,700	39,024,732	25,218,500	47,238,400	—
656010	Land	—	—	20,000	—	20,000	—	—
600	TOTAL LAND	—	—	20,000	—	20,000	—	—
TOTAL CONSTRUCTION FUND		\$ 6,459,113	\$ 51,500,400	\$ 51,500,400	\$ 41,618,814	\$ 27,472,200	\$ 59,966,100	\$ —

NOTES: 1. Amounts may not add up due to rounding.  
 2. Estimated Expenditure may either exceed Adjusted Appropriation when transfers of funds are anticipated or be less than Expenditure (Committed Budget plus Disbursement) when not all commitments are anticipated to be completed by year-end.



# CAPITAL IMPROVEMENTS BOND FUND

## Fund Summary

The Capital Improvements Bond Fund is used when acquiring an asset that meets the definition of a capital asset: the cost typically exceeds \$500,000 and generally, the useful life will be at least 20 years. Capital projects pursued by the Engineering Department are: (a) preservation/rehabilitation of existing infrastructure to maintain service levels, (b) improvement of environmental quality, or (c) commitment to community through process optimization. The Capital Improvements Bond Fund is funded by the sale of bonds and receipt of loans from the Illinois Environmental Protection Agency and State Revolving Loan Fund. The use of these funds is governed by state statutes and federal guidelines.

## Summary of 2023 Major Accomplishments

- In support of the Strategic Plan initiative of maintaining a high level of permit compliance as requirements evolve, the District awarded contract 21-091-3P, Phosphorus Removal Modifications to Battery D, OWRP;
- In support of the Strategic Plan initiative of monitoring and continuing to reduce combined sewer overflows into area waterways, the District awarded contract 21-168-3S, Westchester Pumping Station Relief Sewer, SSA, which is related to completion of the Tunnel and Reservoir Plan (TARP);
- In support of the Strategic Plan initiative of managing assets to maintain optimal performance and long-term sustainability, the District awarded contracts for the rehabilitation of intercepting sewers and other collection system improvements, including:
  - 06-360-3SR, Upper Des Plaines Intercepting Sewer 14B Rehabilitation, NSA, Rebid;
  - 10-047-3S, North Shore 1 Rehabilitation, NSA;
  - 11-404-3S, Upper Des Plaines Intercepting Sewer 11D, Ext. C Rehabilitation, NSA;
- Continuing its efforts to perform condition assessments of roofs, pumping stations, roads, and concrete structures located at treatment plants and to prepare contracts for rehabilitation as required, the District awarded contracts including:
  - 16-127-3DR, A/B and C/D Service Tunnel Rehabilitation - Phase III, SWRP, Rebid;
  - 23-902-31, Pavement Rehabilitation, LASMA.

## 2024 Appropriation

The 2024 appropriation for the Capital Improvements Bond Fund is \$255,991,200, a decrease of \$118,619,700, or 31.7 percent, from 2023. There are no staff positions budgeted in the Capital Improvements Bond Fund. The 2024 appropriation includes construction costs for capital projects to be awarded in 2024 in the amount of \$224.2 million. The remaining \$31.8 million includes funding for the acquisition of easements, bond issuance costs, allowances for contract change orders, and legal and other support services relating to capital projects.

## 2024 Budget Highlights

The following budget highlights support the District's Strategic Plan Goal of Resource Management. The initiatives highlighted below illustrate how the District is maintaining a high level of performance on the core mission of protecting the public health and area waterways while pursuing opportunities to recover, reuse, and monetize resources.

### Maintain a high level of permit compliance as requirements evolve

- To comply with the requirements of the National Pollutant Discharge Elimination System permit for the Stickney, O'Brien, and Kirie WRPs, the District will award four contracts with an estimated construction cost of \$96.5 million:
  - 08-174-3D, Battery A Improvements and Battery B Installation of Mechanical Mixers, SWRP to rehabilitate concrete and install railings at Battery A and to install mixers in Battery B to aid in phosphorus removal;
  - 19-375-3P, Phosphorus Removal, KWRP for modifications to convert Battery A to enhanced biological phosphorus removal and install a back-up chemical system;
  - 20-087-3P, Chemical Phosphorus Removal, OWRP to install a chemical dosing system while biological modifications are under design;
  - 23-098-3P, Overburden Removal at Location of Battery E, OWRP to shorten the construction time of Battery E.

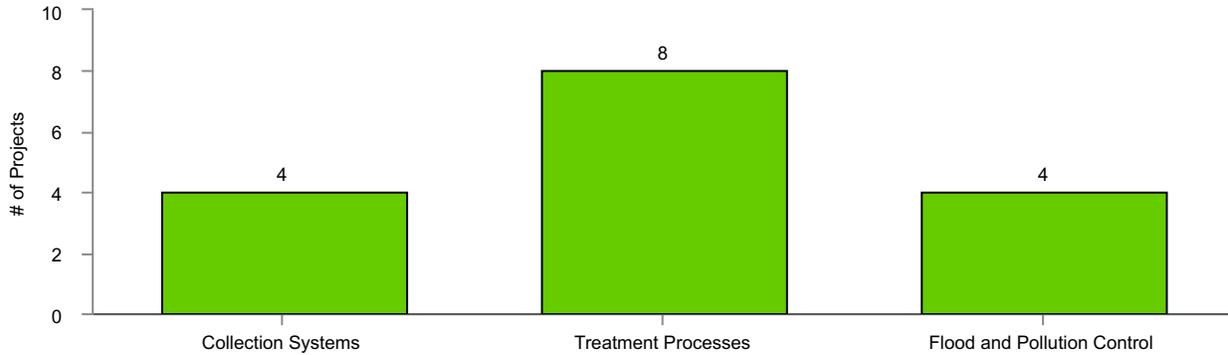
### Manage assets to maintain optimal performance and long-term sustainability

- Award four contracts for the rehabilitation of intercepting sewers, with an estimated construction cost of \$57.5 million:
  - 01-103-AS, 39th Street Conduit Rehabilitation - Phase II, SSA;
  - 12-369-3S, Upper Des Plaines Intercepting Sewer 11D Rehabilitation, NSA;
  - 20-161-3S, Salt Creek 3 Intercepting Sewer Rehabilitation, SSA;
  - 23-378-3S, Upper Des Plaines Drop Shafts 1/1A & 5 Rehabilitation, NSA;
- Award two contracts for improvements to process facilities and mechanical equipment, with an estimated construction cost of \$21.5 million:
  - 19-255-3D, Rehabilitation of Pump and Blower House, CWRP;
  - 23-416-3S, Kirie - Egan Solids Pipeline Rehabilitation Section No. 1, NSA;

- Award two contracts for the modernization of control systems, with an estimated construction cost of \$28.0 million:
  - 06-358-3M, Gate Control Equipment Upgrade at TARP Control Structures, KWRP, NSA;
  - 19-856-3E, TARP Control System Replacement, CSA, NSA, SSA;
- Continue the Engineering Department’s 30-year program to rehabilitate concrete structures, roofs, pumps, roads, and outlying stations to ensure the continued reliability and longevity of its facilities for the next 100 years. One contract is to be awarded in support of this program, with an estimated construction cost of \$4.1 million:
  - 17-843-3D, Utility Tunnel Cracks and Expansion Joints Rehabilitation, EWRP, HPWRP, KWRP, OWRP.

In 2024, there are 16 projects scheduled for award in the Capital Improvements Bond Fund. In the exhibit below, the breakdown by program is displayed.

**Capital Improvements Bond Fund Projects Scheduled for 2024 Award**



**Capital Improvements Bond Fund Program**

<b>Awards in 2024</b>				
Project Name	Project Number	Est. Construction Cost	Duration (days)	Est. Award Date
39th Street Conduit Rehabilitation - Phase II, SSA	01-103-AS	\$ 31,000	677	Jan 2024
Battery A Improvements and Battery B Installation of Mechanical Mixers, SWRP	08-174-3D	46,000	693	Feb 2024
Construction Trailer and Modifications of Supports for Raw Sewage Pump Discharge Pipes, KWRP	22-377-3D	2,000	352	Mar 2024
Overburden Removal at Location of Battery E, OWRP	23-098-3P	30,000	443	Apr 2024
<b>Furnish and Install Odor Control System at Thornton Reservoir</b>	<b>17-273-4P</b>	2,000	322	May 2024
Salt Creek 3 Intercepting Sewer Rehabilitation, SSA	20-161-3S	13,350	853	Jun 2024
Upper Des Plaines Drop Shafts 1/1A and 5 Rehabilitation, NSA	23-378-3S	5,350	352	Jun 2024
Upper Des Plaines Intercepting Sewer 11D Rehabilitation, NSA	12-369-3S	7,750	403	Aug 2024
Phosphorus Removal, KWRP	19-375-3P	6,500	293	Sep 2024
Chemical Phosphorus Removal, OWRP	20-087-3P	14,000	609	Sep 2024
TARP Control System Replacement, CSA, NSA, SSA	19-856-3E	25,000	504	Oct 2024
Kirie - Egan Solids Pipeline Rehabilitation Section No. 1, NSA	23-416-3S	3,500	352	Oct 2024
Gate Control Equipment Upgrade at TARP Control Structures, KWRP, NSA	06-358-3M	3,000	554	Nov 2024
Rehabilitation of Pump and Blower House, CWRP	19-255-3D	18,000	503	Nov 2024
<b>TARP Mainstream Dropshaft DS-M73E at Armitage Avenue, SSA</b>	<b>20-160-4H</b>	12,600	347	Nov 2024
Utility Tunnel Cracks and Expansion Joints Rehabilitation, EWRP, HPWRP, KWRP, OWRP	17-843-3D	4,100	683	Dec 2024
Total 2024 Awards		\$ 224,150		

**Projects Under Construction**

Projects under construction in the Capital Improvements Bond Fund were appropriated in prior years using the full encumbrance (obligation) method of budgetary accounting. The construction contract award amount and the full project duration are provided in this table.

Project Name	Project Number	Est. Construction Cost	Duration (days)	Award Date
Odor Control Facilities at Sludge Concentration, Southwest Coarse Screen, Overhead Weir, & Post-Centrifuge Building, SWRP, Rebid	17-134-3MR	\$ 17,231	1,606	Sep 2019
Rehabilitation of TARP Pumps, MSPS	18-144-3M	23,408	1,867	Apr 2021
Furnish, Deliver, and Install Coarse Screens, SWRP	20-903-31	4,188	1,321	May 2021
Central Boiler Facility and Electrical Updates, HPWRP, Rebid	19-542-3MR	13,908	1,172	Nov 2021
Chemical Addition Backup System, SWRP	19-159-3P	8,342	797	Feb 2022
Furnish, Deliver, and Install Disc Filters, EWRP	18-702-31	9,452	1,043	Mar 2022
Rehabilitation of Steel Spandrel Beams of Pump and Blower House, OWRP	15-069-3D	21,776	1,456	Apr 2022
Sludge Pumping Improvements, Various Locations	21-603-31	8,291	1,108	Apr 2022
North Side Sludge Pipeline Replacement - Section 1, NSA, Rebid	07-027-3SR	27,551	1,065	Jun 2022
Drop Shaft Modifications and Collection Facilities Work, NSA, Rebid	20-859-3SR	3,158	473	Nov 2022
Roof Replacement of the Lue-Hing M&R Complex, SWRP	17-135-3V	10,927	675	Dec 2022
Calumet 18E Relief Connecting Structure and Sewer Work, CSA	21-262-3S	2,818	554	Dec 2022
A/B and C/D Service Tunnel Rehabilitation - Phase III, SWRP, Rebid	16-127-3DR	28,855	1,097	Feb 2023
Furnish, Deliver, and Install Replacement Gearboxes at SEPA Stations Phase II, CSA	23-801-31	2,890	515	Apr 2023
Boilers 3, 4, 5, and MCC Replacement, SWRP, Rebid	19-155-3MR	21,882	872	May 2023
Upper Des Plaines Intercepting Sewer 14B Rehabilitation, NSA, Rebid	06-360-3SR	36,083	1,015	Jun 2023
Phosphorus Removal Modifications to Battery D, OWRP	21-091-3P	14,850	508	Jun 2023
Pavement Rehabilitation, LASMA	23-902-31	7,417	495	Jun 2023
Upper Des Plaines Intercepting Sewer 11D, Ext. C Rehabilitation, NSA	11-404-3S	8,348	403	Sep 2023
North Shore 1 Rehabilitation, NSA	10-047-3S	43,500	953	Dec 2023
Digester Rehabilitation and Gas Piping Replacement Phase II, SWRP	18-148-3P	35,954	2,113	Dec 2023
Upgrade Wilmette Lift Station, NSA	19-083-3P	1,500	319	Dec 2023
Westchester Pumping Station Relief Sewer, SSA	21-168-3S	6,650	354	Dec 2023
Rehabilitation of Elevated Deck and Boat Dock at North Branch Pumping Station, NSA	22-094-3D	15,000	354	Dec 2023
Total Projects Under Construction		\$ 373,979		

**Projects Under Development**

Project Name	Project Number	Est. Construction Cost	Duration (days)	Est. Award Date
Low Voltage Switchgear Replacement, MSPS	19-154-3E	\$ 9,000	453	Jan 2025
West Side Intercepting Sewer No. 2 Rehabilitation, SSA	20-162-3S	3,000	495	Feb 2025
Installation of Shaftless Screw Conveyors in the Aerated Grit Tanks at the Calumet WRP	22-801-31	8,200	938	Mar 2025
Battery E Activated Sludge Facility, OWRP	21-092-3P	260,000	816	Jun 2025
Southwest Side Intercepting Sewer No. 15, 16, & 17B Rehabilitation, SSA	23-173-3S	12,000	420	Aug 2025
Switchgear and MCC Replacement, CWRP	19-258-3E	23,000	635	Sep 2025
Kirie - Egan Solids Pipeline Rehabilitation Section No. 2, NSA	23-417-3S	12,500	420	Oct 2025
Digester Rehabilitation and Gas Piping Replacement, CWRP	18-253-3P	15,000	783	Dec 2025
Digester Rehabilitation and Gas Piping Replacement Phase II, CWRP	19-256-3P	10,000	673	Jan 2026
Additional Grit Removal Tank and Construction of New Plant Entrance, LWRP	19-717-3P	6,000	553	May 2026
Decommissioning of Battery B and C Imhoff Tanks and Skimming Tanks 9-16, SWRP	19-152-3P	10,000	513	Jul 2026
Calumet Intercepting Sewer No. 13 Rehabilitation, CSA	23-264-3S	14,500	420	Aug 2026
Gravity Belt Thickener Installation and Building Rehabilitation, CWRP	22-263-3P	20,000	352	Sep 2026
Kirie - Egan Solids Pipeline Rehabilitation Section No. 3, NSA	23-418-3S	13,500	419	Oct 2026
Calumet Intercepting Sewer No. 17K, 19C Relief & 18H Ext. B Rehabilitation, CSA	23-265-3S	6,500	419	Aug 2027
Kirie - Egan Solids Pipeline Rehabilitation Section No. 4, NSA	23-419-3S	12,500	419	Aug 2027
Battery C Final Settling Tanks, Rehabilitation of Concrete, SWRP	16-129-3D	3,000	513	Sep 2027
Harms Road Intercepting Sewer Extension No. 1 Rehabilitation, NSA	23-096-3S	9,000	419	Oct 2027
Gloria Alitto Majewski Reservoir Rehabilitation, NSA	22-376-3P	25,000	352	Nov 2027
Plant Improvements, HPWRP	18-540-3P	20,000	683	Jan 2028
<b>McCook Reservoir Stage 2 Final Reservoir Preparation, SSA</b>	<b>17-132-4F</b>	24,796	483	May 2028
Lemont Intercepting Sewer No. 4 Rehabilitation, CSA	23-266-3S	11,000	419	Aug 2028
Total Future Awards		<u>\$ 528,496</u>		
Cumulative 2024 and Future Awards		<u>\$ 752,646</u>		

Note: All cost figures are in thousands of dollars.

**Bold type indicates projects to be financed by "Unlimited Tax Bonds."**

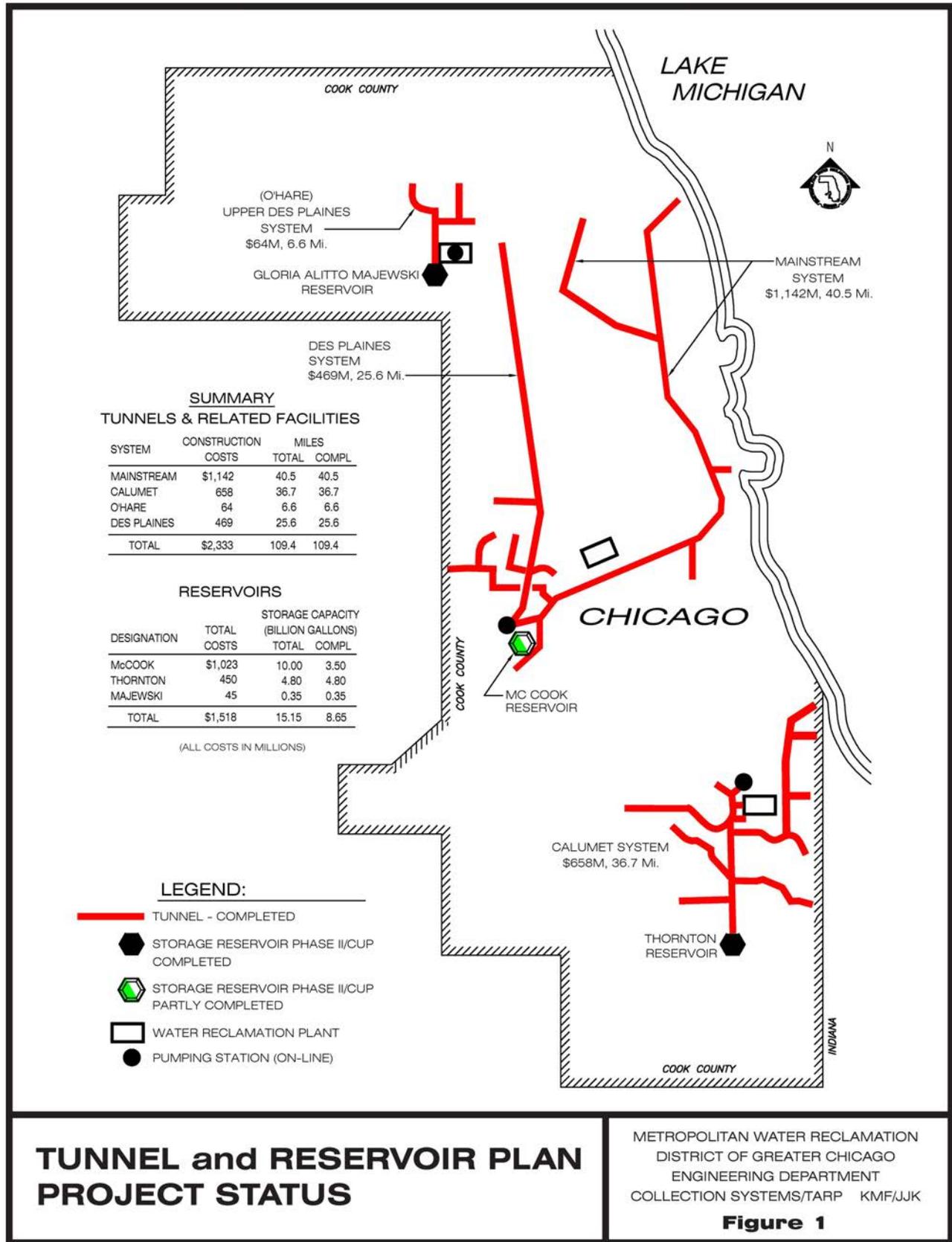
### TARP PHASE II PROJECT COSTS

Phase I of TARP was completed in 2006 and two of the Phase II reservoirs, Majewski and Thornton, are now fully operational. Stage 1 of the McCook Reservoir became operational in December 2017 and Stage 2 will continue to be mined with completion scheduled for 2029. Though only partially complete, TARP has already been effective in reducing pollution and flooding. The Phase II Reservoir project costs are shown in the table below.

Project Name	Project Number	Design/Construction Status	Project Costs (4)	Funded by Army Corps of Engineers
<b>Majewski Reservoir</b>				
I - Army Corps of Engineers Contracts	73-315-2S	Construction completed in 1998	\$40,819,000	75%
II - Betterments (1)	93-339-2F	Construction completed in 1998	\$3,992,000	No
<b>Thornton Reservoir</b>				
I - Vincennes Avenue Relocation	77-235-AF	Construction completed in 2001	\$4,398,000	See Note (3)
II - Transitional Reservoir GW Monitoring Wells	77-235-CF	Construction completed in 2002	\$529,000	
III - Transitional Reservoir (2)	77-235-BF	Construction completed in 2003	\$54,707,000	
IV - Mining, Land, and Corps Costs	77-235-2F	Mining completed in 2013	\$65,210,000	
V - Tollway Dam and Grout Curtain	04-201-4F	Construction completed in 2015	\$80,750,000	
VI - TARP Inlet/Outlet Tunnels and Gates	04-202-4F	Construction completed in 2015	\$147,000,000	
VII - Final Reservoir Preparation	04-203-4F	Construction completed in 2015	\$63,479,000	
VIII - Surface Aeration	04-203-AF	Construction completed in 2017	\$1,921,000	
IX - Decommissioning Thornton Transitional Reservoir	15-266-4H5	Construction to be completed in 2023	\$26,093,000	
X - Rock Dam Treatment	21-260-4H	Construction to be completed in 2023	\$6,079,000	
<b>McCook Reservoir</b>				
I - Stages 1 and 2 - Army Corps of Engineers Contracts	73-161-2H	Reservoir constructed under several contracts	\$615,937,000	75%
II - Site Preparation, Lagoons 1-10	73-161-BH	Construction completed in 2000	\$889,000	\$307,000 Credited
III - 73rd Street Tunnel Relocation	97-156-2H	Construction completed in 2002	\$15,132,000	Credited
IV - Willow Springs Berm	96-249-2P	Construction completed in 2002	\$3,593,000	No
V - Vulcan Primary Crusher Furnish and Deliver	PO3030920	Crusher purchased in 2005	\$1,626,000	No
VI - Conveyance Tunnel	73-161-AH	Construction completed in 2006	\$5,428,000	No
VII - Vulcan Mining Trucks and Loaders	73-161-HH	Vehicles delivered in 2007	\$11,105,000	No
VIII - Vulcan Miscellaneous Mining Vehicles	73-161-GH	Vehicles delivered in 2007 and 2008	\$4,989,000	No
IX - Conveyance System and Maintenance Facilities	73-161-FH	Construction completed in 2008	\$32,381,000	\$1.84M Credited
X - LASMA Overburden Removal	73-161-CH	Construction completed in 2010	\$66,316,000	No
XI - Vulcan Rock Mining Hard Costs Less Royalty	73-161-EH	Mining underway	\$75,065,000	No
XII - Stage 2 Miscellaneous Overburden Removal	73-161-JH	Construction completed in 2012	\$6,510,000	No
XIII - Expanded Stage 2 Overburden Removal	73-161-DH	Construction completed in 2016	\$18,743,000	No
XIV - Des Plaines Inflow Tunnel	13-106-4F	Under Construction	\$109,906,000	No
XV - Expanded Stage 2 Slope Stabilization	16-125-4F	Construction completed in 2019	\$8,897,000	No
XVI - McCook Reservoir Rock Wall Stabilization and Geotechnical Instrumentation	17-131-4FR	Under Construction	\$20,693,000	53%
XVII - McCook Reservoir Stage 2 Final Reservoir Preparation	17-132-4F	Future	\$24,796,000	69%
XVIII - Professional Services for Geotechnical Work with McCook & Thornton Reservoirs	19-151-4C	Underway	\$1,000,000	75%
Total Project Cost			\$1,517,983,000	

Notes:

- (1) Betterment includes a control building, reservoir outflow control gates, and monitoring system.
- (2) Cost shown is the total cost of the Transitional Reservoir. Facilities that will be re-used for the Thornton Composite Reservoir account for \$30,337,000 of the cost.
- (3) The District designed and constructed the Thornton Composite Reservoir in anticipation of receiving reimbursement or credits from the Army Corps of Engineers. To date, the District has received reimbursements totaling \$19,200,000.
- (4) Includes land, engineering, and construction costs.



# TUNNEL and RESERVOIR PLAN PROJECT STATUS

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO  
 ENGINEERING DEPARTMENT  
 COLLECTION SYSTEMS/TARP KMF/JJK

**Figure 1**

**CAPITAL PROJECTS LISTED BY SERVICE AREA - CAPITAL IMPROVEMENTS BOND FUND**

The following is a list of capital projects within the District’s three major service areas. They are presented by their association with a water reclamation plant (WRP) and by their completion status: projects for 2024 award, under construction, or under development.

**Bold type indicates projects to be financed by "Unlimited Tax Bonds."**

**STICKNEY  
SERVICE  
AREA (SSA)**

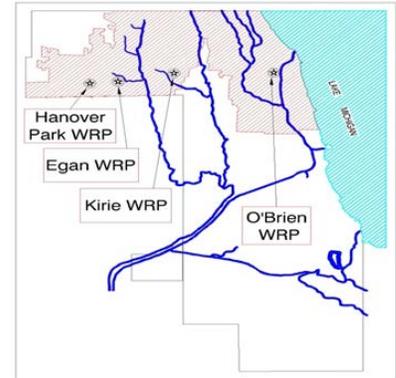


**Stickney Water Reclamation Plant (SWRP)**

		<b>Estimated Substantial Completion Date</b>	<b>Estimated Construction Cost</b>
<b>Projects for 2024 Award</b>			
01-103-AS	39th Street Conduit Rehabilitation - Phase II, SSA		\$ 31,000,000
08-174-3D	Battery A Improvements and Battery B Installation of Mechanical Mixers, SWRP		46,000,000
19-856-3E	TARP Control System Replacement, CSA, NSA, SSA		25,000,000
<b>20-160-4H</b>	<b>TARP Mainstream Dropshaft DS-M73E at Armitage Avenue, SSA</b>		12,600,000
20-161-3S	Salt Creek 3 Intercepting Sewer Rehabilitation, SSA		13,350,000
	<b>Total</b>		<b>\$ 127,950,000</b>
<b>Projects Under Construction</b>			
11-187-3F	^* Addison Creek Channel Improvements, SSA	08/25	\$ 4,357,469
13-199-3F	^* Lyons and McCook Levee Improvements, SSA	12/24	1,358,335
16-127-3DR	A/B and C/D Service Tunnel Rehabilitation - Phase III, SWRP, Rebid	02/26	28,854,783
17-134-3MR	Odor Control Facilities at Sludge Concentration, Southwest Coarse Screen, Overhead Weir, & Post-Centrifuge Building, SWRP, Rebid	01/24	17,231,113
17-135-3V	Roof Replacement of the Lue-Hing M&R Complex, SWRP	10/24	10,926,975
18-144-3M	Rehabilitation of TARP Pumps, MSPS	05/26	23,407,726
18-148-3P	Digester Rehabilitation and Gas Piping Replacement Phase II, SWRP	09/29	35,954,000
19-155-3MR	Boilers 3, 4, 5, and MCC Replacement, SWRP, Rebid	09/25	21,882,000
19-159-3P	Chemical Addition Backup System, SWRP	04/24	8,342,382
20-903-31	Furnish, Deliver, and Install Coarse Screens, SWRP	12/24	4,188,423
21-168-3S	Westchester Pumping Station Relief Sewer, SSA	12/24	6,650,000
21-603-31	Sludge Pumping Improvements, Various Locations	04/25	8,291,115
23-902-31	Pavement Rehabilitation, LASMA	10/24	7,417,413
	<b>Total</b>		<b>\$ 178,861,734</b>
<b>Projects Under Development</b>			
16-129-3D	Battery C Final Settling Tanks, Rehabilitation of Concrete, SWRP		\$ 3,000,000
<b>17-132-4F</b>	<b>McCook Reservoir Stage 2 Final Reservoir Preparation, SSA</b>		24,796,187

<b>Projects Under Development (continued)</b>		<b>Estimated Substantial Completion Date</b>	<b>Estimated Construction Cost</b>
19-152-3P	Decommissioning of Battery B and C Imhoff Tanks and Skimming Tanks 9-16, SWRP		\$ 10,000,000
19-154-3E	Low Voltage Switchgear Replacement, MSPS		9,000,000
20-162-3S	West Side Intercepting Sewer No. 2 Rehabilitation, SSA		3,000,000
23-173-3S	Southwest Side Intercepting Sewer No. 15, 16, & 17B Rehabilitation, SSA		12,000,000
		Total	<u>\$ 61,796,187</u>
		Stickney Service Area Grand Total	<u><u>\$ 368,607,921</u></u>

**NORTH  
SERVICE  
AREA (NSA)**

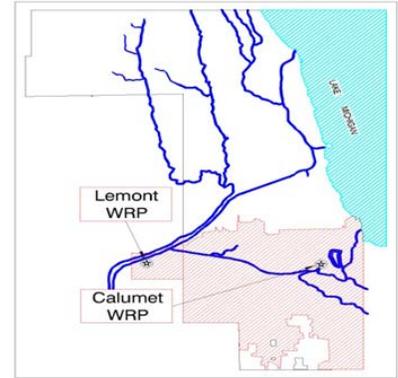


**Terrence J. O'Brien Water Reclamation Plant (OWRP)  
John E. Egan Water Reclamation Plant (EWRP)  
James C. Kirie Water Reclamation Plant (KWRP)  
Hanover Park Water Reclamation Plant (HPWRP)**

		<b>Estimated Substantial Completion Date</b>	<b>Estimated Construction Cost</b>
<b>Projects for 2024 Award</b>			
06-358-3M	Gate Control Equipment Upgrade at TARP Control Structures, KWRP, NSA		\$ 3,000,000
12-369-3S	Upper Des Plaines Intercepting Sewer 11D Rehabilitation, NSA		7,750,000
17-843-3D	Utility Tunnel Cracks and Expansion Joints Rehabilitation, EWRP, HPWRP, KWRP, OWRP		4,100,000
19-375-3P	Phosphorus Removal, KWRP		6,500,000
20-087-3P	Chemical Phosphorus Removal, OWRP		14,000,000
22-377-3D	Construction Trailer and Modifications of Supports for Raw Sewage Pump Discharge Pipes, KWRP		2,000,000
23-098-3P	Overburden Removal at Location of Battery E, OWRP		30,000,000
23-378-3S	Upper Des Plaines Drop Shafts 1/1A and 5 Rehabilitation, NSA		5,350,000
23-416-3S	Kirie - Egan Solids Pipeline Rehabilitation Section No. 1, NSA		3,500,000
		<b>Total</b>	<b>\$ 76,200,000</b>
<b>Projects Under Construction</b>			
06-360-3SR	Upper Des Plaines Intercepting Sewer 14B Rehabilitation, NSA, Rebid	03/26	\$ 36,082,849
07-027-3SR	North Side Sludge Pipeline Replacement - Section 1, NSA, Rebid	05/25	27,550,638
10-047-3S	North Shore 1 Rehabilitation, NSA	07/26	43,500,000
11-404-3S	Upper Des Plaines Intercepting Sewer 11D, Ext. C Rehabilitation, NSA	10/24	8,348,000
15-069-3D	Rehabilitation of Steel Spandrel Beams of Pump and Blower House, OWRP	04/26	21,776,172
18-702-31	Furnish, Deliver, and Install Disc Filters, EWRP	01/25	9,452,316
19-083-3P	Upgrade Wilmette Lift Station, NSA	10/24	1,500,000
19-542-3MR	Central Boiler Facility and Electrical Updates, HPWRP, Rebid	02/25	13,907,921
20-859-3SR	Drop Shaft Modifications and Collection Facilities Work, NSA, Rebid	03/24	3,158,000
21-091-3P	Phosphorus Removal Modifications to Battery D, OWRP	11/24	14,850,000
22-094-3D	Rehabilitation of Elevated Deck and Boat Dock at North Branch Pumping Station, NSA	11/24	15,000,000
		<b>Total</b>	<b>\$ 195,125,896</b>
<b>Projects Under Development</b>			
18-540-3P	Plant Improvements, HPWRP		\$ 20,000,000
21-092-3P	Battery E Activated Sludge Facility, OWRP		260,000,000
22-376-3P	Gloria Alitto Majewski Reservoir Rehabilitation, NSA		25,000,000

<b>Projects Under Development (continued)</b>		<b>Estimated Substantial Completion Date</b>	<b>Estimated Construction Cost</b>
23-096-3S	Harms Road Intercepting Sewer Extension No. 1 Rehabilitation, NSA		\$ 9,000,000
23-417-3S	Kirie - Egan Solids Pipeline Rehabilitation Section No. 2, NSA		12,500,000
23-418-3S	Kirie - Egan Solids Pipeline Rehabilitation Section No. 3, NSA		13,500,000
23-419-3S	Kirie - Egan Solids Pipeline Rehabilitation Section No. 4, NSA		12,500,000
		Total	<b>\$ 352,500,000</b>
		North Service Area Grand Total	<b>\$ 623,825,896</b>

**CALUMET  
SERVICE  
AREA (CSA)**



**Calumet Water Reclamation Plant (CWRP)**

		<b>Estimated Substantial Completion Date</b>	<b>Estimated Construction Cost</b>
<b>Projects for 2024 Award</b>			
17-273-4P	Furnish and Install Odor Control System at Thornton Reservoir		\$ 2,000,000
19-255-3D	Rehabilitation of Pump and Blower House, CWRP		18,000,000
Total			<b>\$ 20,000,000</b>
<b>Projects Under Construction</b>			
21-262-3S	Calumet 18E Relief Connecting Structure and Sewer Work, CSA	06/24	\$ 2,817,700
23-801-31	Furnish, Deliver, and Install Replacement Gearboxes at SEPA Stations Phase II, CSA	09/24	2,889,500
Total			<b>\$ 5,707,200</b>
<b>Projects Under Development</b>			
18-253-3P	Digester Rehabilitation and Gas Piping Replacement, CWRP		\$ 15,000,000
19-256-3P	Digester Rehabilitation and Gas Piping Replacement Phase II, CWRP		10,000,000
19-258-3E	Switchgear and MCC Replacement, CWRP		23,000,000
19-717-3P	Additional Grit Removal Tank and Construction of New Plant Entrance, LWRP		6,000,000
22-263-3P	Gravity Belt Thickener Installation and Building Rehabilitation, CWRP		20,000,000
22-801-31	Installation of Shaftless Screw Conveyors in the Aerated Grit Tanks at the Calumet WRP		8,200,000
23-264-3S	Calumet Intercepting Sewer No. 13 Rehabilitation, CSA		14,500,000
23-265-3S	Calumet Intercepting Sewer No. 17K, 19C Relief & 18H Ext. B Rehabilitation, CSA		6,500,000
23-266-3S	Lemont Intercepting Sewer No. 4 Rehabilitation, CSA		11,000,000
Total			<b>\$ 114,200,000</b>
Calumet Service Area Grand Total			<b>\$ 139,907,200</b>
Capital Projects Grand Total - All Service Areas			<b>\$ 1,132,341,017</b>

^ These projects are part of the Stormwater Management Program. Detailed information about this fund and these project fact sheets appear in Section VI of this budget document.

\* These projects are funded by the Capital Improvements Bond Fund and the Stormwater Management Fund.

### 39th Street Conduit Rehabilitation - Phase II, SSA

**Project Number** 01-103-AS

**Service Area** Stickney

**Location** Chicago, IL

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$31,000,000

**Contract Award Date** January 2024

**Substantial Completion Date** November 2025



**Project Description** This project will rehabilitate a portion of the over 100-year-old conduit lying under 39th Street (Pershing Road), stretching from a former pumping station near Lake Michigan to its discharge at the Racine Avenue Pumping Station (RAPS). The project includes approximately 3,280 feet of concrete intercepting sewer rehabilitation from Halsted Street to RAPS, as well as associated manholes and connecting structures.

The 39th Street conduit consists of the following three segments:

1. The first segment is a 22' x 23' horseshoe constructed of reinforced concrete that extended the conduit westward approximately 2,466 feet from Halsted Street to east of Racine Avenue.
2. The second segment is a 24' x 27' horseshoe constructed of reinforced concrete that runs northwest for approximately 367 feet and drops into the double-barrel sewer connecting to RAPS.
3. The third segment is the 16' x 12' RAPS double-barrel rectangular reinforced concrete connecting sewer, with invert elevation approximately 10 feet lower than the invert of the rest of the 39th Street conduit. This runs west approximately 447 feet and curves into RAPS.

**Project Justification** The 39th Street conduit is approximately 110 years old. The conduit receives combined sewage from a service area of approximately nine square miles on the southeast side of Chicago. Video inspection of this conduit indicates severe deterioration, including loss of bricks, infiltrating joints, and mineral deposits at a number of places, which could eventually lead to a collapse. Under Phase I of the project, a bypass tunnel was constructed to allow for the rehabilitation of the 39th Street conduit. Rehabilitation of the conduit will ensure long-term drainage for over 145,000 people in its service area.

**Project Status** Design

## Gate Control Equipment Upgrade at TARP Control Structures, KWRP, NSA

<b>Project Number</b>	06-358-3M
<b>Service Area</b>	North
<b>Location</b>	Kirie WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$3,000,000
<b>Contract Award Date</b>	November 2024
<b>Substantial Completion Date</b>	May 2026
<b>Project Description</b>	This project consists of upgrading approximately 25 TARP control structures including hydraulic power units, actuators, accumulators, and stem assemblies.
<b>Project Justification</b>	Inspection of the control structures determined that the hydraulic units, hydraulic cylinders, stem and guide assembly, electrical conduits, and panels are severely corroded and past their useful life, making them unreliable. To provide reliable operation of the control structures, replacement of these items with corrosion resistant materials is necessary.
<b>Project Status</b>	Design



## Upper Des Plaines Intercepting Sewer 14B Rehabilitation, NSA, Rebid

**Project Number** 06-360-3SR

**Service Area** North

**Location** Wheeling, IL

**Engineering Consultant** In-house design

**Engineering Contractor** Michels Trenchless, Inc.

**Estimated Construction Cost** \$36,082,849

**Contract Award Date** June 2023

**Substantial Completion Date** March 2026



**Project Description** This project entails rehabilitating 2,888 feet of 48-inch diameter sewer and 11,908 feet of 69-inch diameter sewer by cured-in-place pipe lining and/or the slip lining method, rehabilitating 28 manholes/structures and the abandonment of one offset manhole.

**Project Justification** The sewers were inspected by the Maintenance & Operations Department with a closed-circuit television inspection system. The video inspection tapes show cracks (circular and longitudinal), sewage solids deposits, sags, offset joints, root intrusion, infiltration, and concrete erosion. Physical inspection of the manholes revealed cracks and holes in the walls and bases of the manholes and in one offset manhole, which is part of a control structure, and 85 feet of 3.5-foot by 4.5-foot pipe.

**Project Status** Construction

## North Side Sludge Pipeline Replacement - Section 1, NSA, Rebid

**Project Number** 07-027-3SR

**Service Area** North

**Location** Chicago, Lincolnwood, and Skokie, IL

**Engineering Consultant** In-house design

**Engineering Contractor** Joel Kennedy Constructing Corp.

**Estimated Construction Cost** \$27,550,638

**Contract Award Date** June 2022

**Substantial Completion Date** May 2025



**Project Description** This project will replace Section 1 of the existing North Side Sludge Pipeline with 19,000 feet of 20-inch diameter force main, construct air relief, blow off and clean out structures, and rehabilitate 43 existing structures located in the City of Chicago and the Villages of Lincolnwood and Skokie.

**Project Justification** Due to external corrosion and damage caused by construction activities of others in the area, the pipeline developed numerous holes over the years resulting in sludge overflowing into the North Shore Channel. In order to increase the reliability of sludge conveyance, the pipeline needs to be rehabilitated and/or replaced. The structures were inspected by the Maintenance & Operations Department in January 2008 with a closed-circuit television inspection system and by physical inspection. The video inspection shows that the piping and valves inside the structures have corroded. Due to the importance of the North Side Sludge Pipeline, the piping and valves in the 43 structures will be removed and replaced. New automatic air release valves will be installed in the remaining existing structures to preserve the useful life of those structures.

**Project Status** Construction

## Battery A Improvements and Battery B Installation of Mechanical Mixers, SWRP

<b>Project Number</b>	08-174-3D
<b>Service Area</b>	Stickney
<b>Location</b>	Stickney WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$46,000,000
<b>Contract Award Date</b>	February 2024
<b>Substantial Completion Date</b>	January 2026



**Project Description** This project entails concrete rehabilitation and the installation of railing at the Battery A final settling tanks and influent channels, air piping replacement in the Battery A aeration tanks, and the installation of mechanical mixers in the Battery B aeration tanks at the Stickney WRP. This project also includes the installation of a transfer slab below "F" Street to protect the Battery A main effluent conduit below and allow heavy traffic over the road.

**Project Justification** This project will rehabilitate the 80-year-old concrete in the Battery A final settling tanks, which is severely deteriorated in some locations and falling into the tanks. The addition of railing around final settling tanks and along the mixed liquor channel will safeguard against employees, contractors, and/or visitors falling into the tanks and channels. The addition of safety davit sleeves will allow for the use of portable davit hoists, making any necessary emergency retrieval of injured person(s) from tanks safer and quicker. In addition, this project will replace the air drops in the Battery A aeration tanks which are corroded and broken in multiple locations, resulting in inefficient aeration. Mechanical mixers will be installed in the Battery B aeration tanks, which is required to properly mix the anaerobic zones in the biological phosphorus removal process. Lastly, the installation of a load transfer slab over the main effluent conduit will permit the replacement of "F" Street to allow heavy truck and construction traffic. Historically, traffic on this street has been limited to light single axle vehicles. Increasing the road capacity will improve construction access and facilitate improvements in the future.

**Project Status** Design

### North Shore 1 Rehabilitation, NSA

<b>Project Number</b>	10-047-3S
<b>Service Area</b>	North
<b>Location</b>	Kenilworth, Wilmette, and Winnetka, IL
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$43,500,000
<b>Contract Award Date</b>	December 2023
<b>Substantial Completion Date</b>	July 2026



**Project Description** This project will rehabilitate a 10,108-foot long, six-foot by nine-foot sewer, a 4,164-foot long, six-foot by eight-foot sewer, and 22 manhole structures in Kenilworth, Wilmette, and Winnetka, IL. The project will also construct three manholes on the Evanston Intercepting Sewer No. 1 and modify DS-M105E in Evanston.

**Project Justification** The sewers were inspected by the Maintenance & Operations Department with a closed-circuit television inspection system. The video shows infiltration and concrete/metal deterioration due to hydrogen sulfide. In order to restore the hydraulic and structural integrity of the sewers, they need to be rehabilitated. The manholes and structures exhibit similar signs of deterioration and also need to be rehabilitated. Construction of new manholes along the Evanston intercepting sewer is necessary to provide access to the sewer at pipe bends and longer segments. Modifications to DS-M105E will disconnect a City of Evanston storm sewer from the combined sewer system. The storm sewer will be reconnected to an outfall to discharge stormwater to the nearest waterway.

**Project Status** Design

## Upper Des Plaines Intercepting Sewer 11D, Ext. C Rehabilitation, NSA

<b>Project Number</b>	11-404-3S
<b>Service Area</b>	North
<b>Location</b>	Palatine Township
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	Benchmark Construction Co., Inc.
<b>Estimated Construction Cost</b>	\$8,348,000
<b>Contract Award Date</b>	September 2023
<b>Substantial Completion Date</b>	October 2024



**Project Description** This project entails the rehabilitation of 10,828 linear feet of 36-inch sewer pipe, 24 manholes, and one connecting structure in Palatine, Rolling Meadows, and Arlington Heights.

**Project Justification** The sewers were inspected by the Maintenance & Operations Department with a closed-circuit television inspection system. The video shows infiltration and concrete/metal deterioration due to hydrogen sulfide. In order to restore the hydraulic and structural integrity of the sewers, they need to be rehabilitated. The manholes and structures exhibit similar signs of deterioration and also need to be rehabilitated.

**Project Status** Construction

## Upper Des Plaines Intercepting Sewer 11D Rehabilitation, NSA

<b>Project Number</b>	12-369-3S
<b>Service Area</b>	North
<b>Location</b>	Elk Grove Village and Mount Prospect, IL
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$7,750,000
<b>Contract Award Date</b>	August 2024
<b>Substantial Completion Date</b>	September 2025



<b>Project Description</b>	This project entails the rehabilitation of 11,317 feet of 36-inch sewer and 1,089 feet of 54-inch sewer by cured-in-place pipe lining and the rehabilitation of 36 manholes by spray-on products.
<b>Project Justification</b>	The sewer was inspected by a closed-circuit television system. The video shows infiltration and concrete/metal deterioration due to hydrogen sulfide. The manholes and structures exhibit similar signs of deterioration. In order to restore the hydraulic and structural integrity of the sewer and manholes/structure, they need to be rehabilitated.
<b>Project Status</b>	Design

## Rehabilitation of Steel Spandrel Beams of Pump and Blower House, OWRP

<b>Project Number</b>	15-069-3D
<b>Service Area</b>	North
<b>Location</b>	O'Brien WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	IHC Construction Companies, LLC
<b>Estimated Construction Cost</b>	\$21,776,172
<b>Contract Award Date</b>	April 2022
<b>Substantial Completion Date</b>	April 2026



**Project Description** This project consists of rehabilitating the Pump and Blower House building roof and facade components at the O'Brien WRP. Besides protecting, rehabilitating, and structurally strengthening steel frame beams and columns embedded in the masonry wall, the scope of work includes localized roof deck rehabilitation including roof slope remediation, full roofing membrane and insulation replacement, full masonry and flashing rehabilitation at roof parapet walls, localized windows and exterior doors rehabilitation, localized tuckpointing, and other miscellaneous rehabilitation work associated or incidental to a facade/roof rehabilitation project. The District's Structural Architectural Section will be working with RME, Inc., a Chicago-based consulting company. District staff will manage the rehabilitation design process, review, and approve all submitted rehabilitation documents, administer the contract, and oversee the construction. In addition, the District will manage the contract budget and payments. The project goal is to rehabilitate the Pump and Blower House roof and facade and extend the building life span for another 50 to 90 years.

**Project Justification** The Pump and Blower House has not undergone major structural rehabilitation since it was built in 1926. During its 90 years of service, the building has undergone general maintenance including reroofing, window repair, and tuckpointing. In 2013, a portion of the south parapet wall collapsed due to corrosion of the steel spandrel beams that frame the upper roof and support the parapet walls. The steel roof beams that are part of the building's vertical (gravity) and lateral (wind/seismic) loads resisting system were compromised by water infiltration. Subsequent inspection openings were made to examine the embedded steel framing, and similar damage was found around the perimeter of the building. Reinforcing the existing steel framing will extend the useful service life of the structure and prevent further damage to the existing masonry and limestone.

**Project Status** Construction

### A/B and C/D Service Tunnel Rehabilitation - Phase III, SWRP, Rebid

<b>Project Number</b>	16-127-3DR
<b>Service Area</b>	Stickney
<b>Location</b>	Stickney WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	IHC Construction Companies, LLC
<b>Estimated Construction Cost</b>	\$28,854,783
<b>Contract Award Date</b>	February 2023
<b>Substantial Completion Date</b>	February 2026
<b>Project Description</b>	This project will rehabilitate approximately 1,000 feet of the A/B Service Tunnel north of column line 31 and approximately 1,000 feet of the C/D Service Tunnel north of column line 37. This project continues the scope of work from contracts 04-131-2D and 04-132-3D.
<b>Project Justification</b>	This project will address significant structural deterioration that has occurred since the tunnels were constructed approximately 80 years ago. Rehabilitating the tunnels will restore capacity, extend their service life, and prevent further damage to the utilities inside the tunnels.
<b>Project Status</b>	Construction



## Odor Control Facilities at Sludge Concentration, Southwest Coarse Screen, Overhead Weir, & Post-Centrifuge Building, SWRP, Rebid

**Project Number** 17-134-3MR

**Service Area** Stickney

**Location** Stickney WRP

**Engineering Consultant** In-house design

**Engineering Contractor** IHC Construction Companies, LLC

**Estimated Construction Cost** \$17,231,113

**Contract Award Date** September 2019

**Substantial Completion Date** January 2024



**Project Description** This project entails the construction of three biofilter facilities (one for sludge concentration and overhead weir, one for the southwest coarse screen, and one for the post-centrifuge building). The facilities will include new biofilters, heating, ventilation and air conditioning equipment, ductwork and other ancillary equipment.

**Project Justification** An odor control system was evaluated for the anticipated Waste Activated Sludge Stripping to Remove Internal Phosphorus (WASSTRIP®) process, existing sludge holding tanks, overhead weir, sludge screens, and coarse screens located at the Stickney WRP. Currently, odorous air from the sludge holding tanks, overhead weir, and sludge screens is collected but not effectively treated by an ozone odor control system. Odorous air from the coarse screens and adjacent dumpster rooms is collected but not effectively treated by a carbon adsorption system. The WASSTRIP® process is forthcoming but will use existing tanks near the sludge holding tanks. Addressing these odorous sources will help the surrounding community and improve working conditions for plant staff.

**Project Status** Construction

## Roof Replacement of the Lue-Hing M&R Complex, SWRP

<b>Project Number</b>	17-135-3V
<b>Service Area</b>	Stickney
<b>Location</b>	Stickney WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	IHC Construction Companies, LLC
<b>Estimated Construction Cost</b>	\$10,926,975
<b>Contract Award Date</b>	December 2022
<b>Substantial Completion Date</b>	October 2024



**Project Description** This project will replace roof areas 1, 2, 3, 5, and 6 of the Monitoring & Research Department's laboratory at the Stickney WRP. The project scope includes a complete tear off of the existing roof membrane in the specified areas, replacement of the roof top equipment that has exceeded its useful life, removal of obsolete roof top equipment, and additional work associated with the Monitoring & Research Department's east addition at the Stickney WRP.

**Project Justification** The roof has reached the end of its useful life and needs to be replaced. In addition, old, disconnected, and no longer used equipment will be removed for safety considerations.

**Project Status** Construction

## Furnish and Install Odor Control System at Thornton Reservoir

**Project Number** 17-273-4P

**Service Area** Calumet

**Location** Thornton Reservoir

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$2,000,000

**Contract Award Date** May 2024

**Substantial Completion Date** March 2025



**Project Description** This project entails the installation of a biofilter odor control system to treat exhaust from two drop shafts located northeast of the Thornton Reservoir at Indiana Avenue and State Street.

**Project Justification** This project will reduce the odor emissions that affect the District's neighbors and staff.

**Project Status** Design

## Utility Tunnel Cracks and Expansion Joints Rehabilitation, EWRP, HPWRP, KWRP, OWRP

**Project Number** 17-843-3D

**Service Area** North

**Location** Egan, Hanover Park, Kirie, and O'Brien WRPs

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$4,100,000

**Contract Award Date** December 2024

**Substantial Completion Date** October 2026

**Project Description** This project consists of rehabilitating leaking cracks and deteriorated expansion joints inside utility and service tunnels at the Egan, Hanover Park, Kirie, and O'Brien WRPs.

**Project Justification** The service tunnels and operating galleries at the North Service Area WRPs are of varying ages ranging from approximately 50 to 90 years old. Many of these tunnels were built as part of the original plant construction. Over time, several of the tunnel expansion joints have deteriorated and leaking cracks have developed in the tunnel walls and slabs. The tunnels/galleries and associated utilities are essential to each plant's functionality and need to remain operational indefinitely. Rehabilitating the deteriorated expansion joints and leaking cracks will extend their useful life and prevent further damage to the utilities inside the tunnels.

**Project Status** Design



## Rehabilitation of TARP Pumps, MSPS

<b>Project Number</b>	18-144-3M
<b>Service Area</b>	Stickney
<b>Location</b>	Mainstream Pumping Station
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	IHC Construction Companies, LLC
<b>Estimated Construction Cost</b>	\$23,407,726
<b>Contract Award Date</b>	April 2021
<b>Substantial Completion Date</b>	May 2026



**Project Description** This project will completely overhaul TARP Pumps 1 and 3 in the South Pump House and Pump 5 in the North Pump House of the Mainstream Pumping Station, including the associated motors and discharge cone valves and actuators, in order to restore capacity and reliability. The complete overhaul of the pump and motor involves the furnishing and installing of new parts, refurbishing existing salvageable parts, replacing motor exciter panels, and upgrading pump control components.

**Project Justification** This project will reduce the maintenance labor required, allow for better pump and motor monitoring, and improve reliability. Once the overhaul is complete, there will be a reduction in the electrical energy usage to power pumps, as the pump will operate more efficiently by being able to pump more fluid in less time. The overhaul will also extend the useful life of the pumps and motors, which have been in service since May 1985.

**Project Status** Construction

## Digester Rehabilitation and Gas Piping Replacement Phase II, SWRP

<b>Project Number</b>	18-148-3P
<b>Service Area</b>	Stickney
<b>Location</b>	Stickney WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$35,954,000
<b>Contract Award Date</b>	December 2023
<b>Substantial Completion Date</b>	September 2029



**Project Description** This project entails the replacement of digester gas piping in which recent work uncovered extensive fouling and iron sulfide buildup. Replacement of gas piping is required to ensure safety of operations and adequate capacity to convey the additional digester gas expended from the conversion of the Imhoff Tanks to primary settling tanks. Rehabilitation and replacement of the gas mixing piping within the digesters will allow for installation of the final mixing system under a separate contract, without the need to drain the digester.

**Project Justification** Gas piping needs to be replaced to ensure safety of operations and adequate capacity.

**Project Status** Design

## Furnish, Deliver, and Install Disc Filters, EWRP

**Project Number** 18-702-31

**Service Area** North

**Location** Egan and Hanover Park WRPs

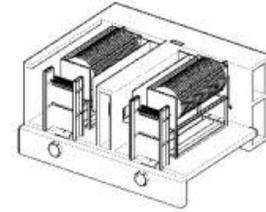
**Engineering Consultant** In-house design

**Engineering Contractor** Independent Mechanical Industries, Inc.

**Estimated Construction Cost** \$9,452,316

**Contract Award Date** March 2022

**Substantial Completion Date** January 2025



**Project Description** This project will replace three pairs of tertiary filter beds with six disc filters.

**Project Justification** The designed maximum capacity of the secondary treatment is 50 million gallons per day (MGD). The maximum tertiary capacity is 44 MGD. During a backwash cycle the total tertiary capacity would drop to 34 MGD. The Egan WRP has six pairs of filter beds. Installing disc filters in filter beds 1, 2, and 6 can increase filtering capacity from 34 to 60 MGD with no loss in capacity during a backwash cycle. The disc filters will reduce the filter backwash from eight percent to less than five percent. The enclosed disc filters will reduce the midge flies in the filter building.

**Project Status** Construction

## Upgrade Wilmette Lift Station, NSA

**Project Number** 19-083-3P

**Service Area** North

**Location** Wilmette Lift Station

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$1,500,000

**Contract Award Date** December 2023

**Substantial Completion Date** October 2024

**Project Description** This project entails the installation of duplex pumps and the rehabilitation and/or rebuilding of the existing 20.5-foot by 12-foot by 18-foot underground structure.

**Project Justification** During maintenance and repairs of the existing pump, flow is diverted to TARP. An additional pump is needed to provide continuous operation. The existing underground structure was built in 1937, and the concrete is in poor condition.

**Project Status** Design



### Boilers 3, 4, 5, and MCC Replacement, SWRP, Rebid

<b>Project Number</b>	19-155-3MR
<b>Service Area</b>	Stickney
<b>Location</b>	Stickney WRP Boiler Building
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	Path Construction Company
<b>Estimated Construction Cost</b>	\$21,882,000
<b>Contract Award Date</b>	May 2023
<b>Substantial Completion Date</b>	September 2025



**Project Description** This project will install new replacement boilers that will have co-firing of digester gas and natural gas to maximize the available digester gas. Existing boilers Nos. 3, 4, and 5, and motor control centers (MCCs) are at the end of their useful lives and require excessive maintenance. A deaerator will also be installed to provide for complete redundancy. Upgrades also include the boiler chemical systems and controls, the boiler MCCs, and lighting.

**Project Justification** This project replaces existing boilers Nos. 3, 4, and 5, and MCCs which are at the end of their useful lives and require excessive maintenance.

**Project Status** Construction

### Chemical Addition Backup System, SWRP

**Project Number** 19-159-3P

**Service Area** Stickney

**Location** Stickney WRP

**Engineering Consultant** In-house design

**Engineering Contractor** IHC Construction Companies, LLC

**Estimated Construction Cost** \$8,342,382

**Contract Award Date** February 2022

**Substantial Completion Date** April 2024



**Project Description** This project will provide a secondary phosphorus removal system in the event that the biological phosphorus system is interrupted. This will allow the treatment plant to achieve compliance with the National Pollutant Discharge Elimination System permit phosphorus effluent limit during any upsets with the biological process. Without a working biological removal process, the annual chemical costs are estimated to be \$11.0 million to meet the 1.0 mg/L effluent phosphorus concentration limit. The District has established a working biological phosphorus removal process at the Stickney WRP. The process has proven to be effective in achieving the 2030 phosphorus effluent requirement of 0.5 mg/L. The District believes that this system will only be used as a back-up system for unforeseen problems with the biological removal process.

**Project Justification** This project addresses the District's National Pollutant Discharge Elimination System permit, which will require a 1.0 ppm effluent limit for phosphorus. The District currently employs enhanced biological phosphorus removal treatment operations and a sidestream phosphorus recovery facility to meet these limitations. At times, the phosphorus loading to the plant can result in exceedances. This new facility will allow chemical polishing to ensure that the limitations are consistently met.

**Project Status** Construction

## Rehabilitation of Pump and Blower House, CWRP

**Project Number** 19-255-3D

**Service Area** Calumet

**Location** Calumet WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$18,000,000

**Contract Award Date** November 2024

**Substantial Completion Date** March 2026



**Project Description** This project consists of rehabilitating the Pump and Blower House building roof and facade components at the Calumet WRP. Besides protecting, rehabilitating, and structurally strengthening steel frame beams and columns embedded in the masonry wall, the scope of work includes roof slope remediation, full roofing membrane and insulation replacement, masonry and flashing rehabilitation at roof parapets, localized tuckpointing, and other miscellaneous rehabilitation work associated or incidental to a facade/roof rehabilitation project. The District's Structural/Architectural Design Section will be working with RME, Inc., a Chicago-based consulting company. District staff will manage the rehabilitation design process, review and approve all submitted rehabilitation documents, administer the contract, and oversee the construction. In addition, the District will manage the contract budget and payments. The project goal is to rehabilitate the Pump and Blower House roof and facade and extend the building life span for another 50 to 90 years.

**Project Justification** The envelope of the building is in poor condition. Repairs are required to ensure structural integrity and long-term operation and maintenance requirements of the building.

**Project Status** Design

## Phosphorus Removal, KWRP

**Project Number** 19-375-3P

**Service Area** North

**Location** Kirie WRP

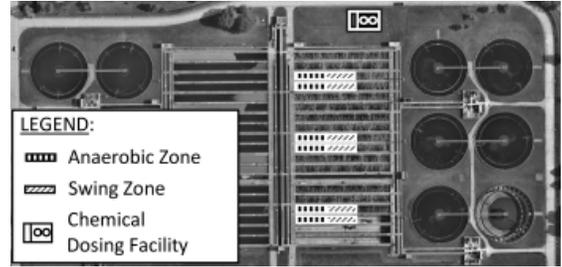
**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$6,500,000

**Contract Award Date** September 2024

**Substantial Completion Date** July 2025



**Project Description** This project includes the conversion of the six aeration tanks in Battery A to an enhanced biological phosphorus removal process by installing baffle walls, large-bubble mixers, and actuated air valves; a chemical phosphorus removal backup system, including chemical storage tanks, feed pumps, and piping; and odor control for the Coarse Screen Building, including removal of existing fans, installation of new fans, and ductwork.

**Project Justification** The Kirie WRP has a total phosphorus effluent limit of 1.0 mg/L that takes effect within 5 years of the effective date of permit as part of the Lower Des Plaines Watershed Workgroup, which is currently scheduled to be August 2026. Based on the initial results from the phosphorus removal feasibility study, the Kirie WRP will be able to meet the 1.0 mg/L total phosphorus effluent limit at its current average flow with modifications. The odor control work will effectively address the odors currently being exhausted from the Coarse Screen Building.

**Project Status** Design

## Central Boiler Facility and Electrical Updates, HPWRP, Rebid

<b>Project Number</b>	19-542-3MR
<b>Service Area</b>	North
<b>Location</b>	Hanover Park WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	IHC Construction Companies, LLC
<b>Estimated Construction Cost</b>	\$13,907,921
<b>Contract Award Date</b>	November 2021
<b>Substantial Completion Date</b>	February 2025



**Project Description** This project will remove two natural gas boilers and provide five new boilers (two natural gas and three digester gas/natural gas) in the Pump and Blower Building. Five digester gas/natural gas boilers will be removed from the Digester Complex. All associated mechanical piping, electrical, control, civil and structural work needed to provide hot water for process and building heating demands will be completed. Replace digester gas piping and remove and replace all electrical equipment, such as motor control center, motors, conduit, gas alarm system, fire alarm system, lighting, etc., with explosion-proof equipment in the classified areas to meet National Fire Protection Association 820 requirements.

**Project Justification** This project replaces the boilers in the Digester Complex which are 10 to 20 years old and do not perform properly, as the control systems are not reliable (due to hydrogen sulfide gas related corrosion) and need to be removed to comply with National Fire Protection Association 820 requirements. Centralized boiler operation will maximize the use of available digester gas. Existing electrical equipment in the Digester Complex does not meet the National Fire Protection Association 820 requirement and needs to be replaced with explosion-proof rated equipment or relocated to an unclassified location. The natural gas boilers in the Pump and Blower Building are more than 35 years old, parts are no longer supported by the original equipment manufacturer, and procuring the replacement parts has been increasingly difficult and costly. Also, the State of Illinois Boiler Inspector recommended the boilers be operated in low fire only, due to their poor conditions.

**Project Status** Construction

## TARP Control System Replacement, CSA, NSA, SSA

<b>Project Number</b>	19-856-3E
<b>Service Area</b>	Calumet, North, and Stickney
<b>Location</b>	Calumet, North, and Stickney Service Areas
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$25,000,000
<b>Contract Award Date</b>	October 2024
<b>Substantial Completion Date</b>	March 2026
<b>Project Description</b>	This project entails the replacement of the communication and control system for TARP control structures throughout the District. Line of sight radio communications are to be replaced with secure cellular network communications. Existing controllers at TARP control structures and reporting sites are to be replaced and reconfigured to communicate with cellular transmission. Provide distributed control system upgrades at the Lockport Powerhouse.
<b>Project Justification</b>	The control system equipment is no longer available. In order to avoid failure and ensure the appropriate level of service, the equipment must be replaced.
<b>Project Status</b>	Design



## Chemical Phosphorus Removal, OWRP

**Project Number** 20-087-3P

**Service Area** North

**Location** O'Brien WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$14,000,000

**Contract Award Date** September 2024

**Substantial Completion Date** May 2026



**Project Description** This project will provide a chemical phosphorus removal system at the O'Brien WRP. Aluminum sulfate (alum) is the chemical that will be used to remove phosphorus from the treatment process. It will be dosed at the influent to the primary tanks and at the effluent channel of aeration tanks in Batteries A, B, C, and D. Once Battery E is constructed, alum will also be dosed to its final tanks. The project will include chemical storage tanks and alum feed pumps as well as piping, instruments, and electrical work. Chemical phosphorus removal will be used as a back-up for the future enhanced biological phosphorus removal process in Batteries A, B, C, D and E.

**Project Justification** This project addresses the District's National Pollutant Discharge Elimination System (NPDES) permit, which will require a 1.0 mg/L effluent limit for phosphorus by 2027. The chemical removal system will allow the O'Brien WRP to achieve compliance with the NPDES permit phosphorus effluent limit during any upsets with the future enhanced biological phosphorus removal process in Batteries A, B, C, D, and in the future Battery E. The process has proven to be effective in achieving the 2030 phosphorus effluent requirement of 0.5 mg/L. This new facility will allow chemical polishing to ensure that the effluent phosphorus limitations in the NPDES permit are consistently met.

**Project Status** Design

## TARP Mainstream Dropshaft DS-M73E at Armitage Avenue, SSA

**Project Number** 20-160-4H

**Service Area** Stickney

**Location** Chicago, IL

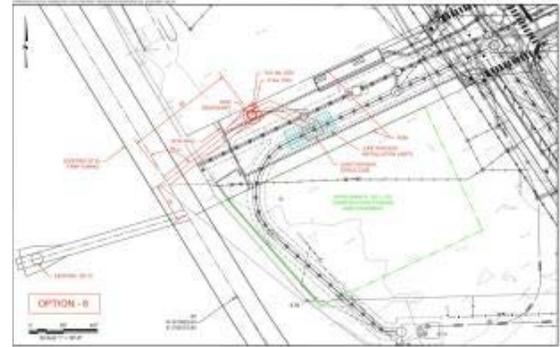
**Engineering Consultant** Stantec Consulting Services, Inc.

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$12,600,000

**Contract Award Date** November 2024

**Substantial Completion Date** October 2025



**Project Description** This project includes constructing a connecting sewer and TARP dropshaft which will connect to the existing Mainstream Tunnel at approximately Armitage Avenue and the Chicago River. The overflow structure to be built by the City of Chicago on a new sewer will divert stormwater flow to the dropshaft. The new shaft will be constructed within the right-of-way of the proposed extension of Armitage Avenue.

**Project Justification** Recent modeling has shown that three combined sewer outfalls located on the east bank of the Chicago River between Webster Avenue and McLean Avenue discharge combined sewer overflow into the river in storms exceeding a six-month storm event. Flow from the municipal sewers connected to all three outfalls is conveyed by the West Side Intercepting Sewer 9. The capacity of the West Side Intercepting Sewer 9 is limited in storm events by a siphon under the river. The new dropshaft will convey storm flows to the Mainstream Tunnel upstream of the siphon to minimize combined sewer overflows at these three locations while there is still capacity in TARP.

**Project Status** Design

### Salt Creek 3 Intercepting Sewer Rehabilitation, SSA

**Project Number** 20-161-3S

**Service Area** Stickney

**Location** Brookfield and La Grange Park, IL

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$13,350,000

**Contract Award Date** June 2024

**Substantial Completion Date** October 2026

**Project Description** This project consists of rehabilitating 11,230 feet of 42-inch by 60-inch diameter concrete sewer pipe, as well as 4,410 feet of 36-inch diameter concrete sewer pipe by the cured-in-place pipe lining and/or the slip lining method, filling large voids and holes in the sewer invert, and rehabilitating 31 manholes.

**Project Justification** The sewers were inspected by the Maintenance & Operations Department with a closed-circuit television inspection system and via man entry. The inspection showed cracks (circular and longitudinal), sewage solid deposits, voids, missing concrete, offset joints, root intrusion, infiltration, and concrete erosion. Physical inspection of the manholes revealed cracks and holes in the walls and bases of the manholes.

**Project Status** Design



## Drop Shaft Modifications and Collection Facilities Work, NSA, Rebid

<b>Project Number</b>	20-859-3SR
<b>Service Area</b>	North
<b>Location</b>	Des Plaines, Morton Grove, and Mount Prospect, IL
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	IHC Construction Companies, LLC
<b>Estimated Construction Cost</b>	\$3,158,000
<b>Contract Award Date</b>	November 2022
<b>Substantial Completion Date</b>	March 2024
<b>Project Description</b>	This project entails the installation of louvers and grating at Drop Shaft 8, removal of Gate 11, replacement of Gate 13, installation of a new actuator at Control Structure 10, installation of gratings and louvers at Drop Shaft N-19, and modifications to Manhole 0+00 on Upper Des Plaines 11B.
<b>Project Justification</b>	This project will reduce sanitary sewer overflow incidents during wet weather events.
<b>Project Status</b>	Construction



## Furnish, Deliver, and Install Coarse Screens, SWRP

<b>Project Number</b>	20-903-31
<b>Service Area</b>	Stickney
<b>Location</b>	Stickney WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	IHC Construction Companies, LLC
<b>Estimated Construction Cost</b>	\$4,188,423
<b>Contract Award Date</b>	May 2021
<b>Substantial Completion Date</b>	December 2024



**Project Description** This project entails the removal of existing climber-style southwest coarse screens at the Stickney WRP and installing new chain and sprocket-style coarse screens.

**Project Justification** The southwest coarse screens at the Stickney WRP protect the main sewage pumps in the Pump and Blower Building from debris in the influent flow. The current climber-style screens have a number of issues. The hydraulic systems for each coarse screen have caused frequent failures and the annual maintenance costs for the screens are exceedingly high. Also, the coarse screens see heavy debris and the bar screen spacing is too fine for this application. Because of this, the screens are frequently "blinded" due to the extended cycle time required for climber screens. This causes additional maintenance costs as well as issues with the operation of the main sewage pumps downstream of the screens. This project will replace the existing southwest coarse screens with more heavy-duty, reliable, chain and sprocket-style screens and significantly reduce maintenance costs and operational issues caused by the current coarse screens.

**Project Status** Construction

## Phosphorus Removal Modifications to Battery D, OWRP

<b>Project Number</b>	21-091-3P
<b>Service Area</b>	North
<b>Location</b>	O'Brien WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	IHC Construction Companies, LLC
<b>Estimated Construction Cost</b>	\$14,850,000
<b>Contract Award Date</b>	June 2023
<b>Substantial Completion Date</b>	November 2024
<b>Project Description</b>	This project will include pumps (including a new pump building to house return activated sludge pumps), piping, mixers, and baffles to support side stream enhanced biological phosphorus removal in Battery D at the O'Brien WRP.
<b>Project Justification</b>	Per the compliance schedule in the National Pollutant Discharge Elimination System permit, the O'Brien WRP must install biological phosphorus removal in all batteries by July 31, 2025 to meet a new total phosphorus effluent limit of 1.0 mg/L beginning August 1, 2027. Side stream enhanced biological phosphorus removal through return activated sludge fermentation will be used to meet these new limits. The fermentation of return activated sludge in this process encourages the growth of phosphorus accumulating organisms, stabilizes phosphorus removal, and allows for greater phosphorus removal under less favorable influent conditions.
<b>Project Status</b>	Construction



## Westchester Pumping Station Relief Sewer, SSA

**Project Number** 21-168-3S

**Service Area** Stickney

**Location** Westchester, IL

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$6,650,000

**Contract Award Date** December 2023

**Substantial Completion Date** December 2024



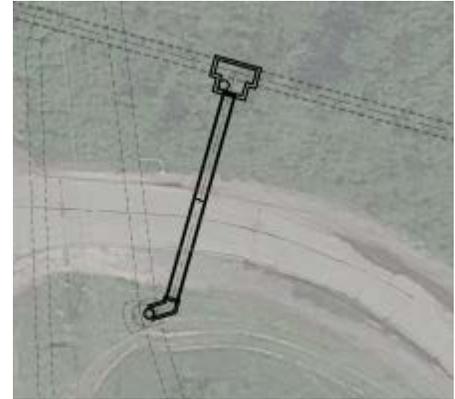
**Project Description** This project entails the installation of a 45-inch diameter sewer in order to provide relief to the Berkley-Hillside Intercepting Sewer and Broadview-Bellwood Intercepting Sewer during wet weather by diverting flow to the Roosevelt Road leg of TARP at DS-D34-AI.

**Project Justification** The Westchester Pumping Station was constructed in 1951 to provide relief to both the Berkley-Hillside Intercepting Sewer and the Broadview-Bellwood Intercepting Sewer. The Westchester Pumping Station relieves the intercepting sewer by discharging combined sewer overflow into Addison Creek. The construction of the proposed sewer should reduce the frequency of combined sewer overflow events in Addison Creek by diverting the flow to the Roosevelt Road leg of TARP at DS-D34-AI.

**Project Status** Design

### Calumet 18E Relief Connecting Structure and Sewer Work, CSA

<b>Project Number</b>	21-262-3S
<b>Service Area</b>	Calumet
<b>Location</b>	Alsip, IL
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	Rausch Infrastructure LLC
<b>Estimated Construction Cost</b>	\$2,817,700
<b>Contract Award Date</b>	December 2022
<b>Substantial Completion Date</b>	June 2024
<b>Project Description</b>	This project consists of one new connecting structure, 100 linear feet of 48-inch diameter concrete sewer, one new connection to an existing access manhole, and the installation of a louver system in an existing access manhole.
<b>Project Justification</b>	This project entails the construction of a 48-inch diameter sewer and connection structure in order to provide relief to the Calumet Intercepting Sewer 18F ext. A, Calumet Intercepting Sewer 18F, Calumet Intercepting Sewer 18E, and the Palos Hills Pumping Station during wet weather by diverting flow to the 78-inch Calumet Intercepting Sewer 20R-2.
<b>Project Status</b>	Construction



## Sludge Pumping Improvements, Various Locations

<b>Project Number</b>	21-603-31
<b>Service Area</b>	Calumet, North, and Stickney
<b>Location</b>	Calumet, Egan, O'Brien, and Stickney WRPs
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	Independent Mechanical Industries, Inc.
<b>Estimated Construction Cost</b>	\$8,291,115
<b>Contract Award Date</b>	April 2022
<b>Substantial Completion Date</b>	April 2025



**Project Description** This project will furnish, deliver, and install non-clog centrifugal pumps to replace existing screw-centrifugal pumps in the waste activated and primary sludge pumping streams at the Stickney WRP, higher capacity sludge pumping systems at the O'Brien WRP, and variable frequency drives for selected pumping systems at the Calumet WRP.

**Project Justification** The existing sludge pumps at the Stickney WRP do not provide reliable pumping. Installation of various non-clog centrifugal pumps will restore reliable pumping capacity for the separated sludge streams now in place throughout the plant. The pumping systems at the Calumet and O'Brien WRPs require additional variable speed pumping capability.

**Project Status** Construction

## Rehabilitation of Elevated Deck and Boat Dock at North Branch Pumping Station, NSA

**Project Number** 22-094-3D

**Service Area** North

**Location** North Branch Pumping Station

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$15,000,000

**Contract Award Date** December 2023

**Substantial Completion Date** November 2024

**Project Description** This project replaces deteriorated exterior concrete decking, stairs, boat dock, and balustrades at the North Branch Pumping Station, and will also replace flap gates at nearby Drop Shaft DS-91.

**Project Justification** The North Branch Pumping Station is nearly 100 years old and structural rehabilitation is required to address deterioration of the exterior elevated concrete deck, boat dock, and boat dock stairs. Upon completion of structural rehabilitation, new cast stone balustrade and light pylons will be installed. The project will also replace the flap gates at the nearby connecting structure to Drop Shaft DS-91.

**Project Status** Design



## Construction Trailer and Modifications of Supports for Raw Sewage Pump Discharge Pipes, KWRP

<b>Project Number</b>	22-377-3D
<b>Service Area</b>	North
<b>Location</b>	Kirie WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$2,000,000
<b>Contract Award Date</b>	March 2024
<b>Substantial Completion Date</b>	March 2025



**Project Description** This project will provide a new modular building for use by construction staff and also modify the pipe supports for the raw sewage pump discharge risers.

**Project Justification** The modification of pipe supports is required to strengthen structural supports and accommodate thermal movements. Modifying the supports will restore capacity, extend their service life, and prevent damage to the pipes. A modular building is required for use by Construction Division staff.

**Project Status** Design

## Overburden Removal at Location of Battery E, OWRP

**Project Number** 23-098-3P

**Service Area** North

**Location** O'Brien WRP

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$30,000,000

**Contract Award Date** April 2024

**Substantial Completion Date** July 2025



**Project Description** This project will remove the overburden soil pile at the southwest corner of the O'Brien WRP that needs to be removed to prepare the site for construction of a new battery. The soil pile covers approximately 10 acres and its volume is approximately 120,000 cubic yards. A portion of the soil includes some contamination that will require hauling to a contaminated soil disposal/remediation facility.

**Project Justification** To meet the upcoming effluent phosphorus limit, a new Battery E is planned to be constructed at the southwest corner of the O'Brien WRP. There is an overburden soil pile at that site location that needs to be removed prior to construction of the new battery. Removal of the overburden will shorten construction time for Battery E and allow existing soils to be better evaluated for foundation design.

**Project Status** Design

## Upper Des Plaines Drop Shafts 1/1A and 5 Rehabilitation, NSA

**Project Number** 23-378-3S

**Service Area** North

**Location** Des Plaines and Mount Prospect, IL

**Engineering Consultant** In-house design

**Engineering Contractor** To be determined

**Estimated Construction Cost** \$5,350,000

**Contract Award Date** June 2024

**Substantial Completion Date** June 2025

**Project Description** This project will include rehabilitation work at the Upper Des Plaines Drop Shaft 5 by means of slip lining or form and pour, repairing 100 feet of 108-inch pipe by either cured-in-place pipe lining or geopolymer lining, repairing 100 feet of the drop shaft exit conduit with geopolymer, replacing deteriorated louvers and grating, abandonment of an existing odor control structure, installing a suppression weir in the Upper Des Plaines Tunnel near Drop Shaft 1/1A, and other miscellaneous work.

**Project Justification** This project will reduce events of geysering and restore the structural integrity of existing structures.

**Project Status** Design



### Kirie - Egan Solids Pipeline Rehabilitation Section No. 1, NSA

<b>Project Number</b>	23-416-3S
<b>Service Area</b>	North
<b>Location</b>	Egan WRP
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	To be determined
<b>Estimated Construction Cost</b>	\$3,500,000
<b>Contract Award Date</b>	October 2024
<b>Substantial Completion Date</b>	October 2025
<b>Project Description</b>	This project will consist of the rehabilitation of 2,705 feet of 18-inch sewer by flexible fabric reinforced pipe lining process between stations 0+00 and 27+05. Four manholes will be rehabilitated with spray-on epoxy products and by carbon fiber reinforced polymer lining system.
<b>Project Justification</b>	There have been a total of four breaks along the existing 18-inch solids pipeline between stations 0+00 and 27+05 as reported by the Maintenance & Operations Department. The subject contract will rehabilitate the existing pipeline between these stations to address the aforementioned critical areas.
<b>Project Status</b>	Design



## Furnish, Deliver, and Install Replacement Gearboxes at SEPA Stations Phase II, CSA

<b>Project Number</b>	23-801-31
<b>Service Area</b>	Calumet
<b>Location</b>	SEPA Stations 2, 3, 4, and 5
<b>Engineering Consultant</b>	In-house design
<b>Engineering Contractor</b>	Independent Mechanical Industries, Inc.
<b>Estimated Construction Cost</b>	\$2,889,500
<b>Contract Award Date</b>	April 2023
<b>Substantial Completion Date</b>	September 2024



**Project Description** This project will furnish, deliver, and install a replacement gearbox and associated upper and lower bearings for Sidestream Elevated Pool Aeration (SEPA) Stations #2, #3, #4, and #5 in the Calumet Service Area. This project is the second phase of a two-phase project. The first phase will be completed under project 20-801-31.

**Project Justification** Due to changes in the permit that require average dissolved oxygen levels to be increased to 3.0 mg/L to 5.0 mg/L from March through July and 3.5 mg/L from August through February, normal operation may require all SEPA screw pumps to be operated. The SEPA stations have been in service for over 25 years and failures of the oil seals and bearings have increased. This project will help maintain the reliability of these stations and ensure the District continues to meet the Illinois Environmental Protection Agency's waterway dissolved oxygen requirements.

**Project Status** Construction

### Pavement Rehabilitation, LASMA

**Project Number** 23-902-31

**Service Area** Stickney

**Location** Lawndale Avenue Solids Management Area

**Engineering Consultant** In-house design

**Engineering Contractor** K-Five Construction Corporation

**Estimated Construction Cost** \$7,417,413

**Contract Award Date** June 2023

**Substantial Completion Date** October 2024

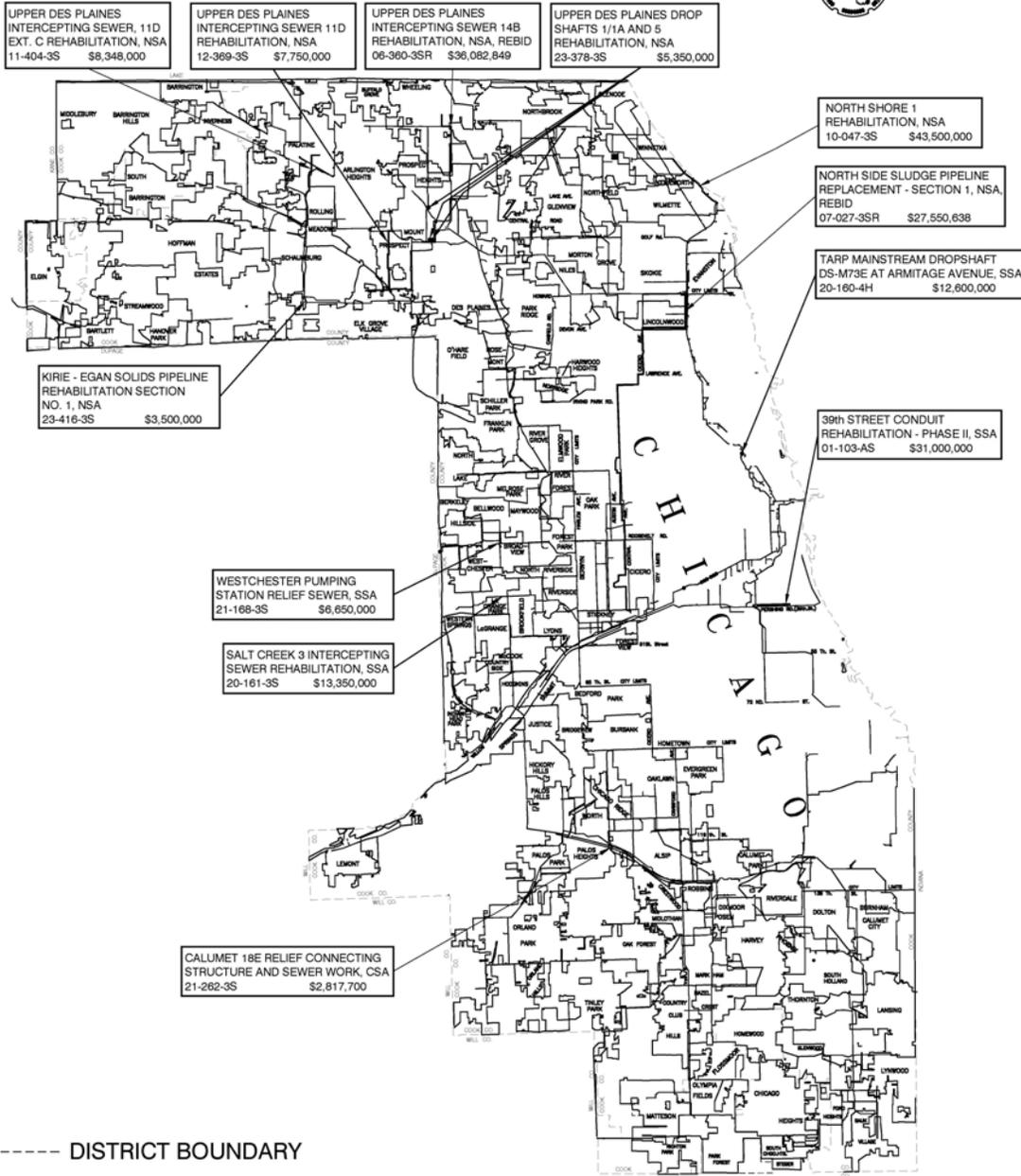


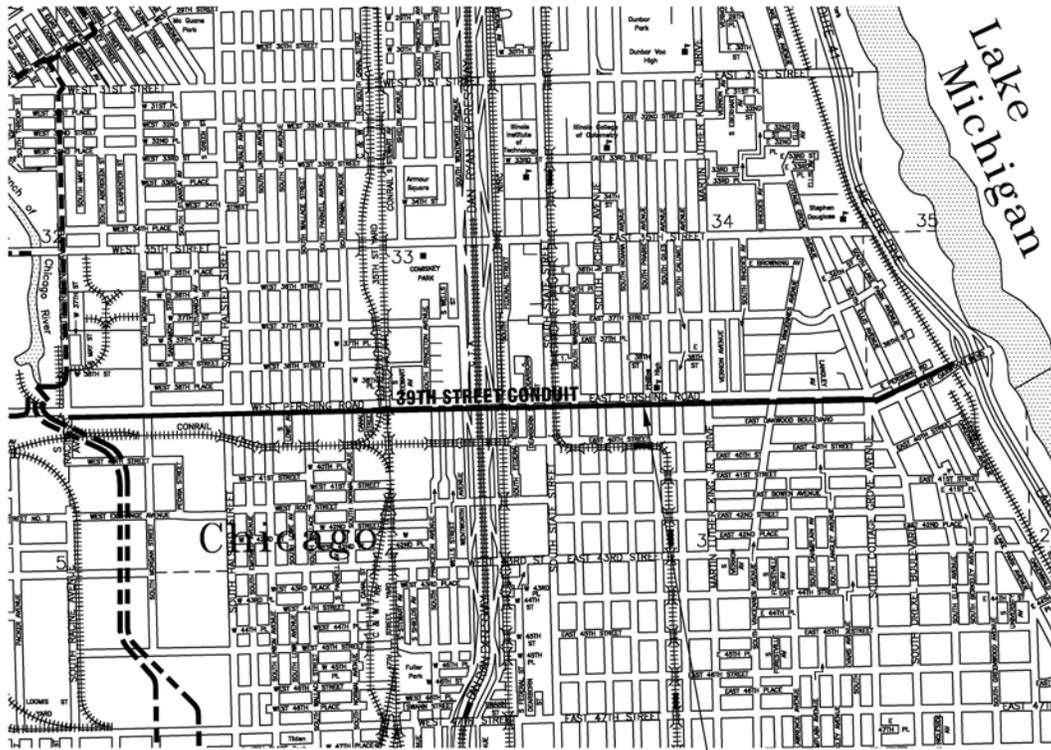
**Project Description** This project entails repaving the Lawndale Avenue Solids Management Area drying cells (48 acres) and repaving approaches to the Marathon scale.

**Project Justification** This project will address deteriorating asphalt and modernize the truck scale.

**Project Status** Construction

SEWER DESIGN PROJECT MAP  
2024





LOCATION MAP

39th STREET CONDUIT REHABILITATION - PHASE II, SSA  
 REHABILITATION OF 367 FEET OF 24' X 27' SEMI-ELLIPTIC CONCRETE  
 SEWER, 2,466 FEET OF 22' X 23' SEMI-ELLIPTIC CONCRETE SEWER, 459  
 FEET OF 12' X 16' DOUBLE BARREL CONCRETE SEWER, 10 CONNECTING  
 STRUCTURES, AND 6 MANHOLES; AND REPLACEMENT OF A DAMAGED  
 FLAP GATE IN A CONNECTING STRUCTURE  
 COST: \$31,000,000

**LEGEND:**

- = SEWER TO BE REHABILITATED
- - - -** = EXISTING SEWER

**39th STREET CONDUIT REHABILITATION - PHASE II, SSA  
 CONTRACT 01-103-AS**



UPPER DES PLAINES INTERCEPTING SEWER 14B  
 REHABILITATION, NSA, REBID  
 2,888 FEET OF 48-INCH SEWER  
 11,908 FEET OF 69-INCH SEWER  
 28 MANHOLES/STRUCTURES  
 ABANDONING 1 OFFSET MANHOLE  
 ABANDONING PART OF A CONTROL STRUCTURE  
 ABANDONING 85 FEET OF 3'6" x 4'6" SEWER  
 COST: \$36,082,849



**LEGEND:**

- = SEWER TO BE REHABILITATED
- ..... = EXISTING SEWER

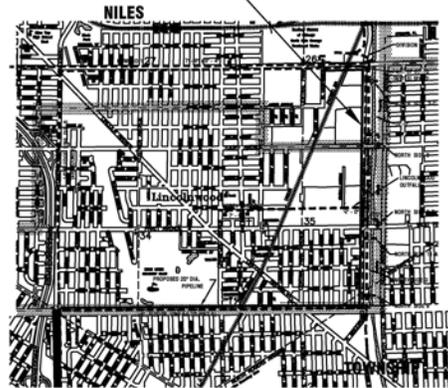
**UPPER DES PLAINES INTERCEPTING SEWER 14B REHABILITATION, NSA, REBID  
 CONTRACT 06-360-3SR**



N  
 NORTH SIDE SLUDGE PIPELINE REPLACEMENT - SECTION 1, NSA, REBID  
 19,000 FEET OF 20-INCH DIAMETER FORCE MAIN  
 AIR RELIEF, BLOW OFF AND CLEANOUT STRUCTURES  
 REHABILITATION OF 43 STRUCTURES  
 COST: \$27,550,638



LOCATION MAP

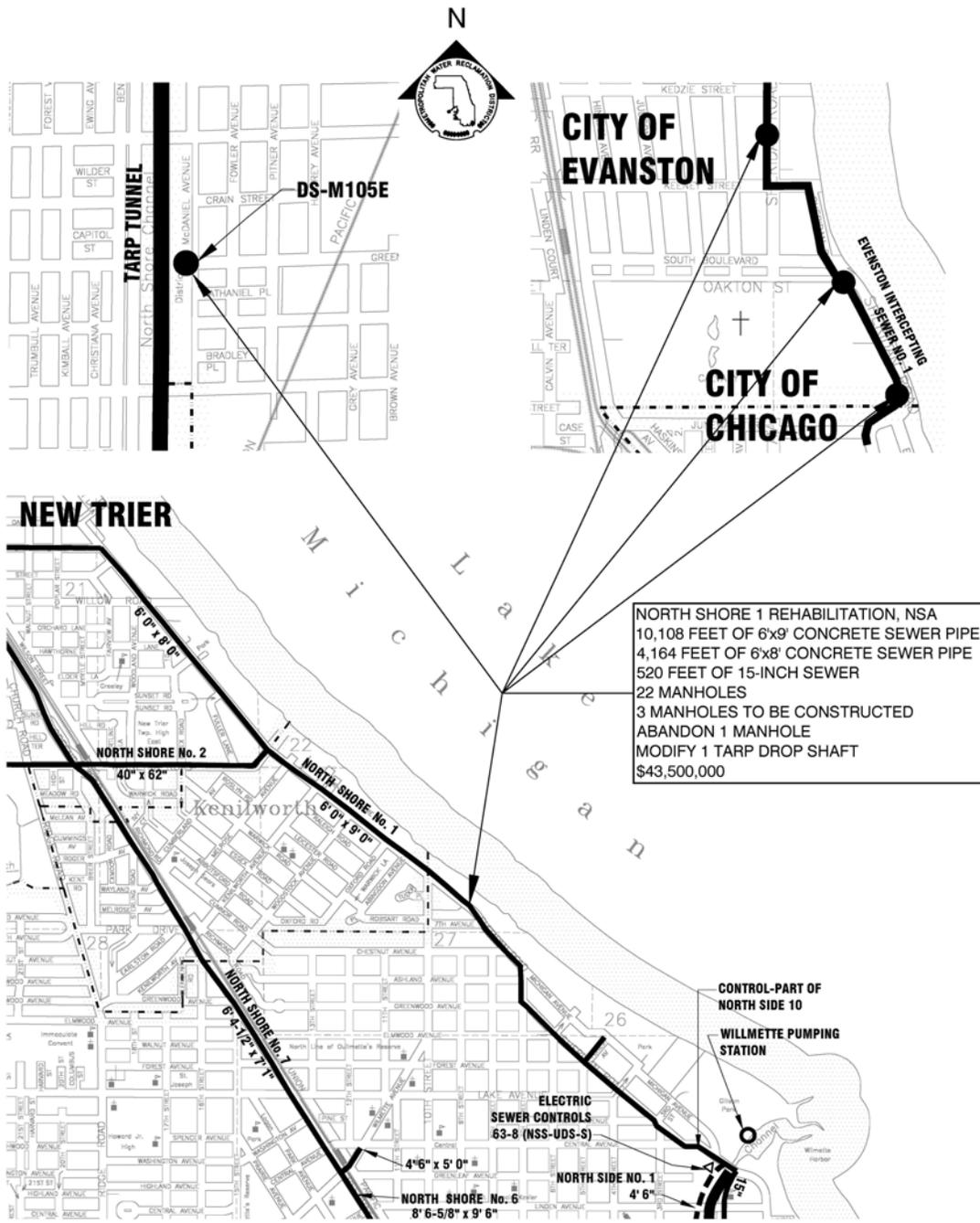


LOCATION MAP

LEGEND:

- = SEWER TO BE REHABILITATED
- ..... = EXISTING SEWER

**NORTH SIDE SLUDGE PIPELINE REPLACEMENT - SECTION 1, NSA, REBID  
 CONTRACT 07-027-3SR**

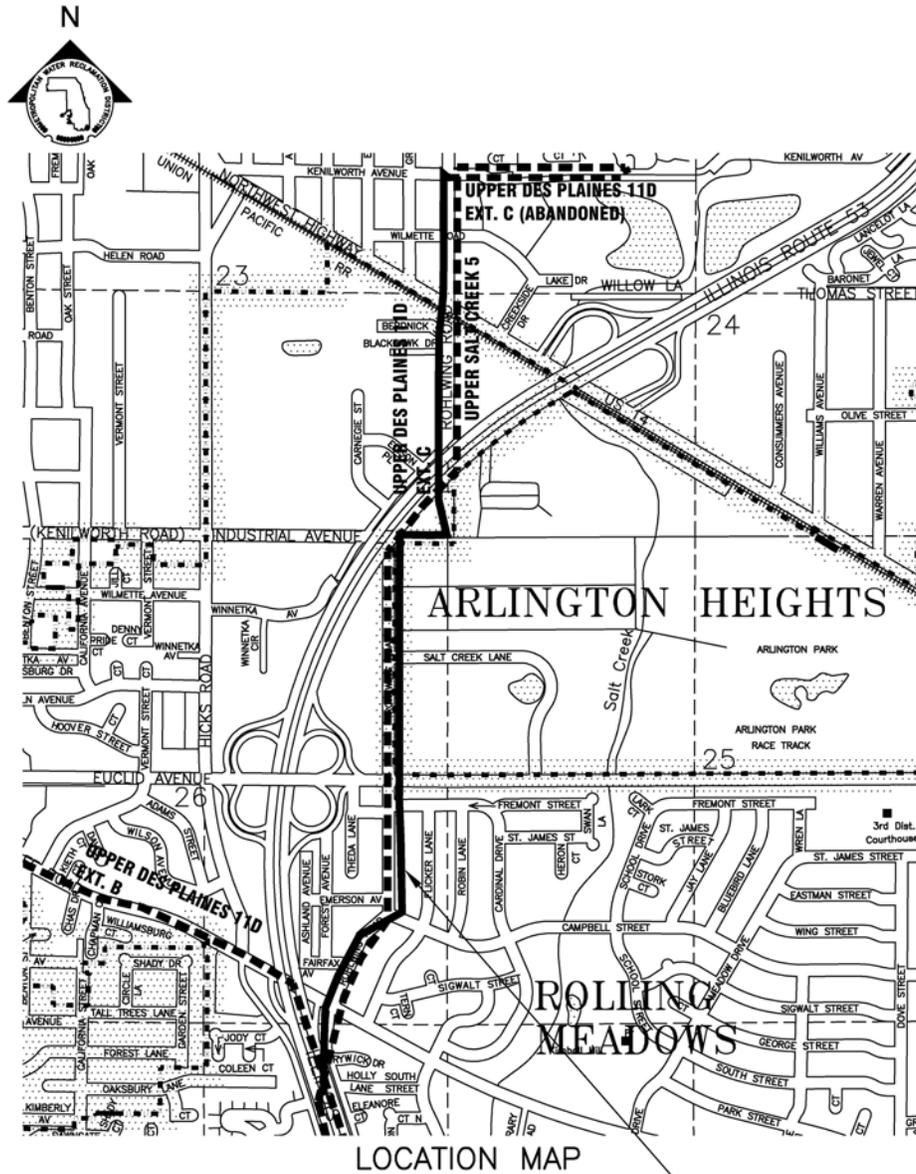


LOCATION MAP

**LEGEND:**

- = SEWER TO BE REHABILITATED
- .....** = EXISTING SEWER

**NORTH SHORE 1 REHABILITATION, NSA  
CONTRACT 10-047-3S**



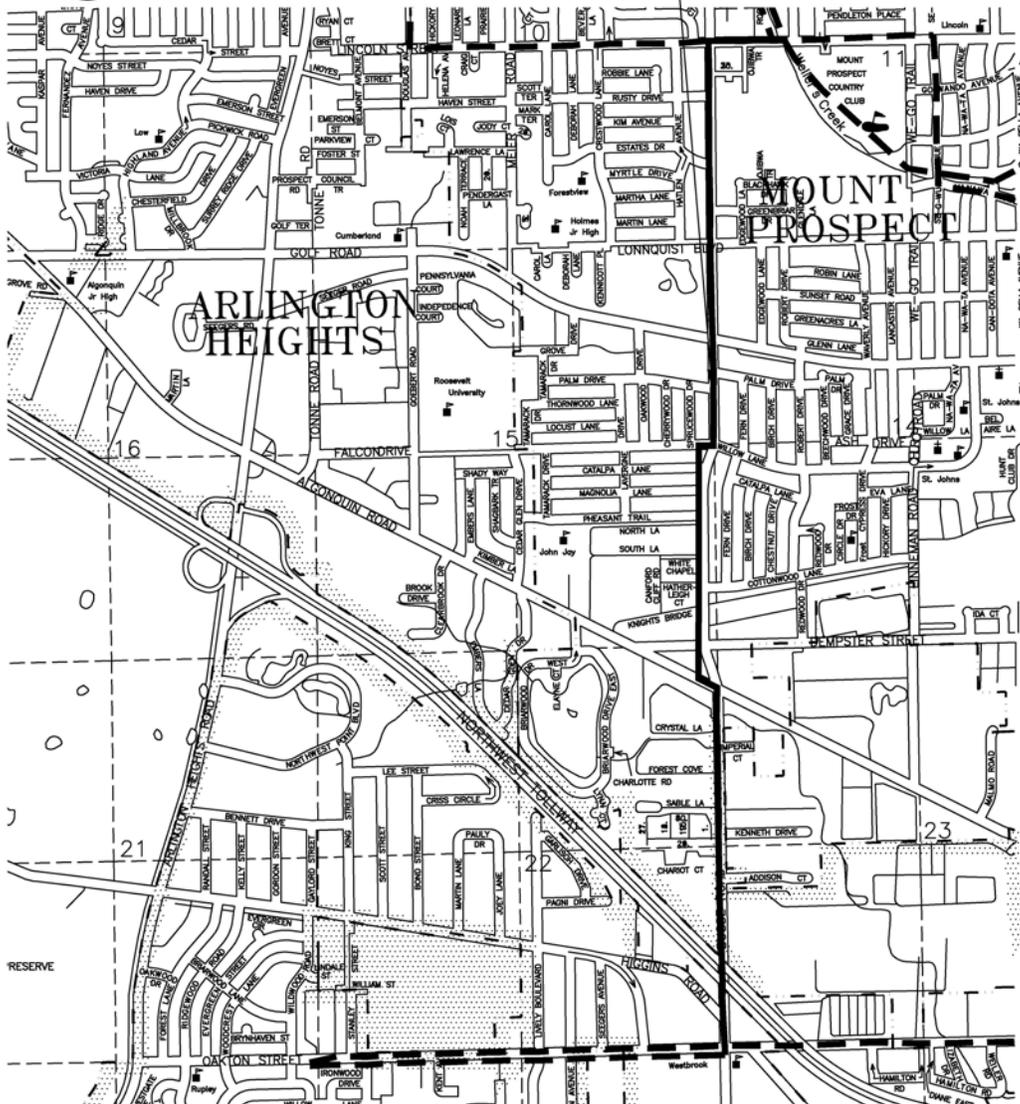
UPPER DES PLAINES INTERCEPTING  
SEWER 11D, EXT. C REHABILITATION, NSA  
10,828 FEET OF 36-INCH DIAMETER SEWER  
24 MANHOLES AND ONE CONNECTING  
STRUCTURE  
COST: \$8,348,000

**LEGEND:**

- = SEWER TO BE REHABILITATED
- - - -** = EXISTING SEWER

**UPPER DES PLAINES INTERCEPTING SEWER 11D, EXT. C REHABILITATION, NSA  
CONTRACT 11-404-3S**

UPPER DES PLAINES INTERCEPTING SEWER 11D  
 REHABILITATION, NSA  
 11,317 FEET OF 36-INCH SEWER  
 1,089 FEET OF 54-INCH SEWER  
 36 MANHOLES  
 COST: \$7,750,000



LOCATION MAP

**LEGEND:**

- = SEWER TO BE REHABILITATED
- - - -** = EXISTING SEWER

**UPPER DES PLAINES INTERCEPTING SEWER 11D REHABILITATION, NSA  
 CONTRACT 12-369-3S**



TARP MAINSTREAM DROPSHAFT DS-M73E AT ARMITAGE AVENUE, SSA  
CONSTRUCTION OF A 7'2" DIAMETER CONCRETE LINED DROPSHAFT  
256-FEET DEEP, CONNECTING SEWER AND LIVE CONNECTION TO  
THE MAINSTREAM TARP TUNNEL.  
COST: \$12,600,000



LOCATION MAP

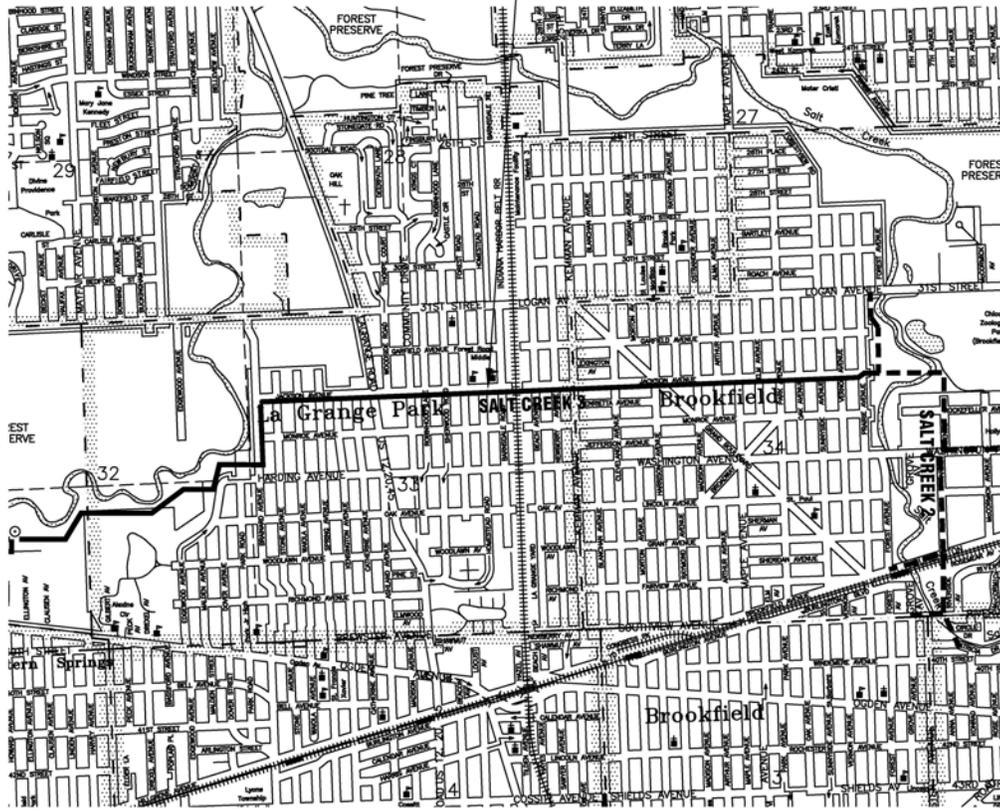
**LEGEND:**

- = PROPOSED DROP SHAFT
- = EXISTING SEWER

**TARP MAINSTREAM DROPSHAFT DS-M73E AT ARMITAGE AVENUE, SSA  
CONTRACT 20-160-4H**



SALT CREEK 3 INTERCEPTING SEWER REHABILITATION, SSA  
 11,230 FEET OF 42"x60" CONCRETE SEWER PIPE  
 4,410 FEET OF 36-INCH CONCRETE SEWER PIPE  
 31 MANHOLES  
 FILLING VOIDS IN SEWER INVERT  
 COST: \$13,350,000



LOCATION MAP

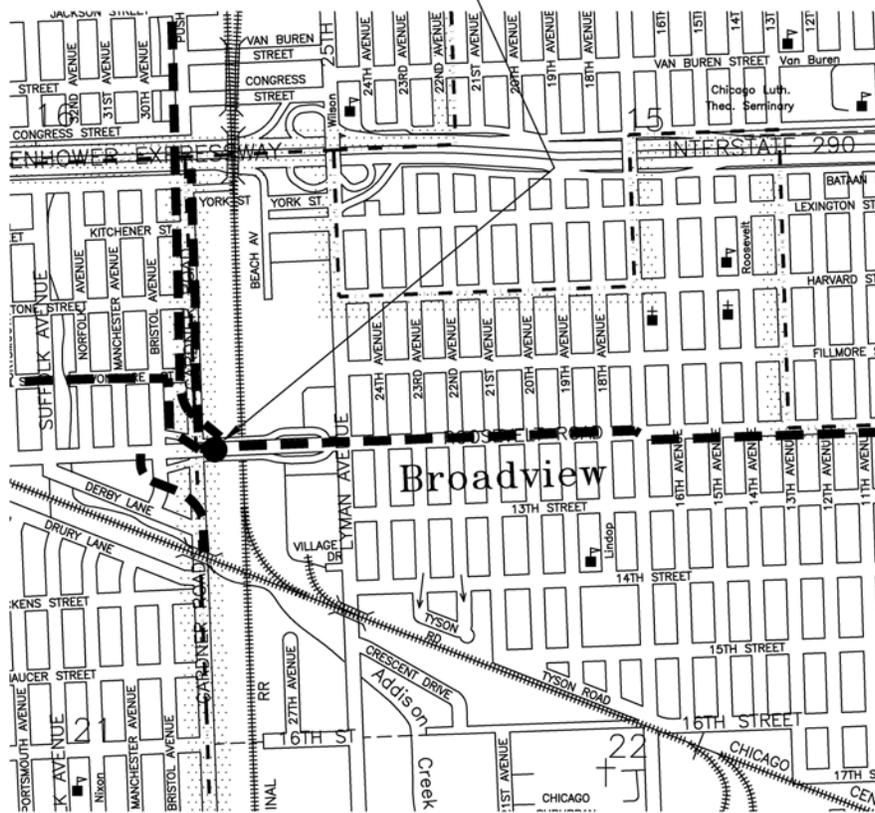
**LEGEND:**

- = SEWER TO BE REHABILITATED
- - - -** = EXISTING SEWER

**SALT CREEK 3 INTERCEPTING SEWER REHABILITATION, SSA  
 CONTRACT 20-161-3S**



WESTCHESTER PUMPING STATION RELIEF SEWER, SSA  
 ONE 36-INCH DIAMETER MANHOLE  
 320 FEET OF 27-INCH DIAMETER SEWER  
 COST: \$6,650,000



LOCATION MAP

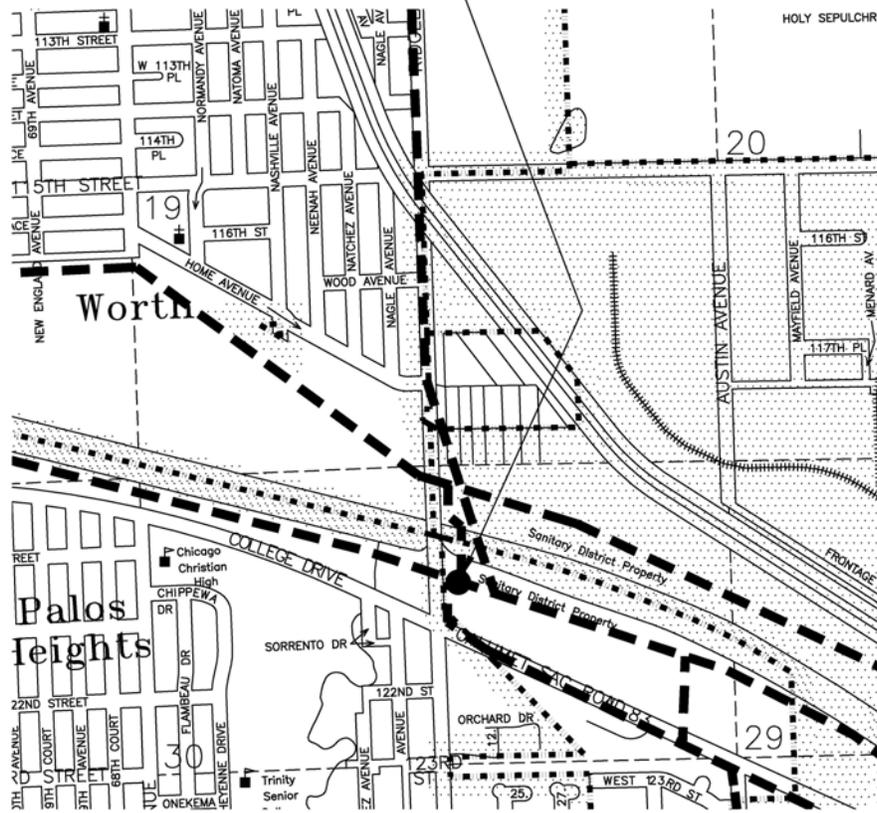
**LEGEND:**

- = LOCATION OF SEWER MODIFICATIONS
- = EXISTING SEWER

**WESTCHESTER PUMPING STATION RELIEF SEWER, SSA  
 CONTRACT 21-168-3S**



CALUMET 18E RELIEF CONNECTING STRUCTURE AND SEWER WORK, CSA  
 1 CONNECTING STRUCTURE  
 100 FEET OF 48-INCH DIAMETER CONCRETE SEWER PIPE  
 INSTALLATION OF A LOUVER SYSTEM IN THE CALUMET INTERCEPTING SEWER 20R-2 ACCESS MANHOLE  
 COST: \$2,817,700

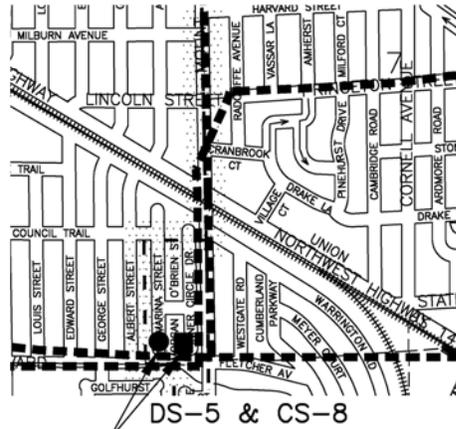


LOCATION MAP

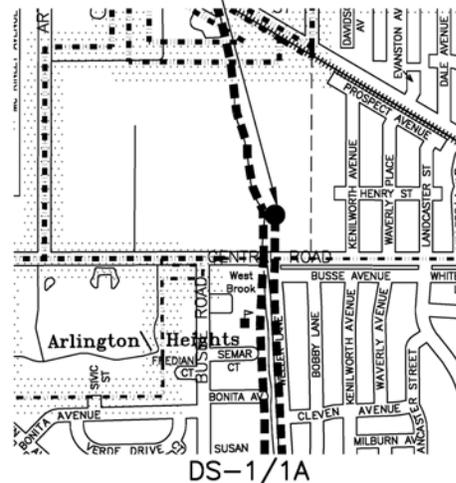
**LEGEND:**

- = LOCATION OF SEWER MODIFICATIONS
- = EXISTING SEWER

**CALUMET 18E RELIEF CONNECTING STRUCTURE AND SEWER WORK, CSA  
 CONTRACT 21-262-3S**

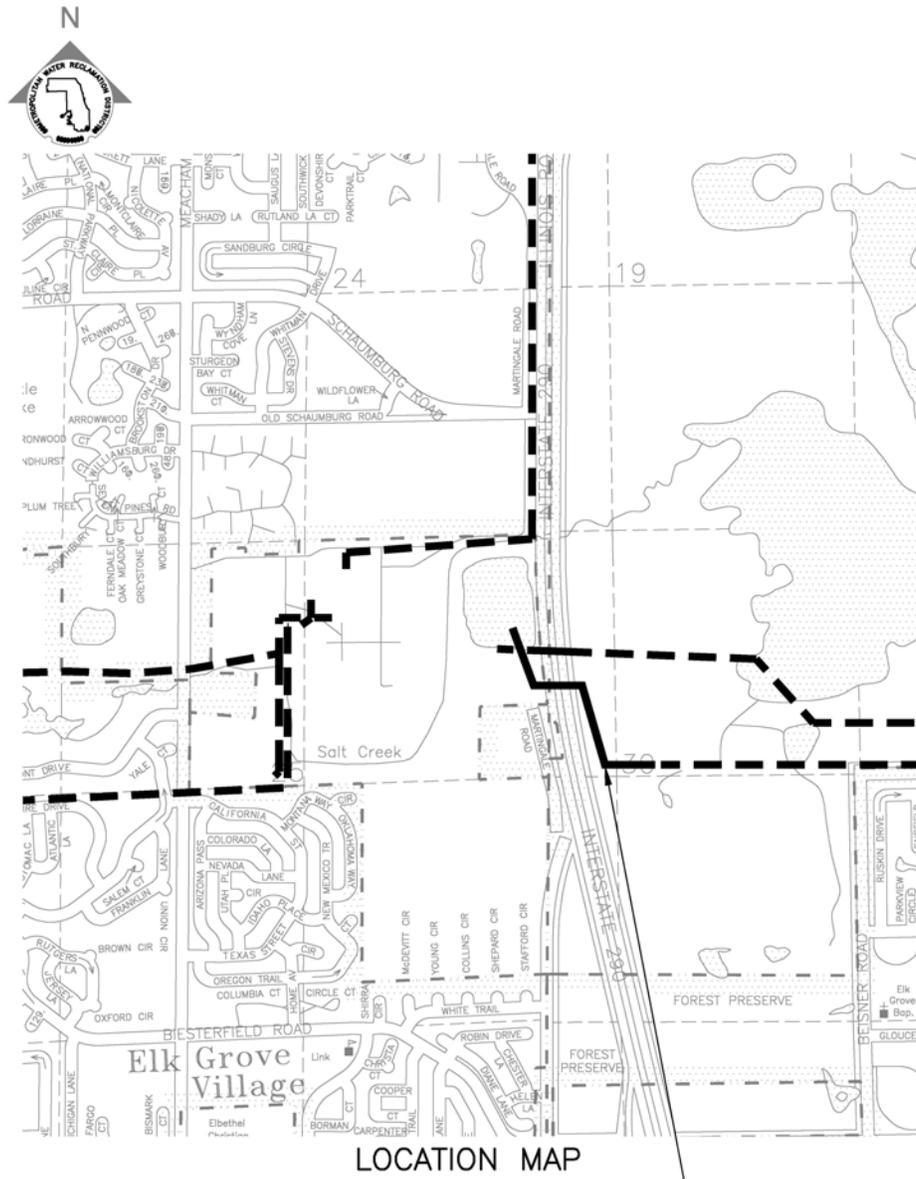


UPPER DES PLAINES DROP SHAFTS 1/1A AND 5 REHABILITATION, NSA  
 100 FEET OF 108" DIAMETER SEWER AT DS-5 TO BE REHABILITATED  
 75 FEET OF 108" DIAMETER DROP SHAFT TO BE REHABILITATED  
 REPLACEMENT OF METAL APPURTENANCES  
 INSTALLATION OF LOUVER SYSTEM AND GRATING  
 INSTALLATION OF SUPPRESSION WEIR  
 COST: \$5,350,000



**LEGEND:**  
 ● = DROP SHAFT TO BE REHABILITATED  
 - - - = EXISTING SEWER

**UPPER DES PLAINES DROP SHAFTS 1/1A AND 5 REHABILITATION, NSA  
 CONTRACT 23-378-3S**



KIRIE - EGAN SOLIDS PIPELINE  
 REHABILITATION SECTION NO. 1, NSA  
 2,705 FEET OF 18-INCH DIAMETER SEWER  
 1 CONNECTING STRUCTURE  
 2 MANHOLE STRUCTURES  
 COST: \$3,500,000

**LEGEND:**

- = SEWER TO BE REHABILITATED
- - - -** = EXISTING SEWER

**KIRIE - EGAN SOLIDS PIPELINE REHABILITATION SECTION NO. 1, NSA  
 CONTRACT 23-416-3S**

### Stormwater Management Capital Improvements Bond Fund Program

**Projects Under Construction**

Projects under construction in the Capital Improvements Bond Fund were appropriated in prior years using the full encumbrance (obligation) method of budgetary accounting. The construction contract award amount and the anticipated project duration are provided in this table.

Project Name	Project Number	Est. Construction Cost	Duration (days)	Award Date
* Lyons and McCook Levee Improvements, SSA	13-199-3F	\$ 1,358	2,298	Sep 2018
* Addison Creek Channel Improvements, SSA	11-187-3F	4,357	757	Jul 2023
Total Projects Under Construction		\$ 5,715		

\* These projects are funded by the Capital Improvements Bond Fund and the Stormwater Management Fund.

Refer to Section VI Stormwater Management Fund for more information about the Stormwater Management Capital Improvement Program.

**Note: All cost figures are in thousands of dollars.**

**50000 CAPITAL IMPROVEMENTS BOND FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. COLLECTION FACILITIES: Award four construction projects: 39th Street Conduit Rehabilitation - Phase II, SSA, Salt Creek 3 Intercepting Sewer Rehabilitation, SSA, Upper Des Plaines Intercepting Sewer 11D Rehabilitation, NSA, and Upper Des Plaines Drop Shafts 1/1A and 5 Rehabilitation, NSA.	\$ 57,450,000	22.5 %
2. TREATMENT FACILITIES: Award eight construction projects: Battery A Improvements and Battery B Installation of Mechanical Mixers, SWRP, Chemical Phosphorus Removal, OWRP, Phosphorus Removal, KWRP, Utility Tunnel Cracks and Expansion Joints Rehabilitation, EWRP, HPWRP, KWRP, OWRP, Rehabilitation of Pump and Blower House, CWRP, Kirie-Egan Solids Pipeline Rehabilitation Section No. 1, NSA, Construction Trailer and Modifications of Supports for Raw Sewage Pump Discharge Pipes, KWRP, and Overburden Removal at Location of Battery E, OWRP.	\$ 124,100,000	48.5 %
3. FLOOD AND POLLUTION CONTROL: Award four construction projects: TARP Control System Replacement, CSA, NSA, SSA, TARP Mainstream Dropshaft DS-M73E at Armitage Avenue, SSA, Gate Control Equipment Upgrade at TARP Control Structures, KWRP, NSA, and Furnish and Install Odor Control System at Thornton Reservoir.	\$ 42,600,000	16.6 %
4. LAND AND RIGHT-OF-WAY ACQUISITION COSTS: Acquisition of land for the expansion of reservoir projects and payments for land easements.	\$ 550,000	0.2 %
5. PROJECT SUPPORT: Administration, design, and construction inspection for current and future contracts, funding support, and construction services such as concrete and soil testing.	\$ 31,291,200	12.2 %
Totals	<u>\$ 255,991,200</u>	<u>100.0 %</u>

**50000 CAPITAL IMPROVEMENTS BOND FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2022	Budgeted		Change	
Number	Name	Actual	FTEs	Dollars	Dollars	Percent
1700	Collection Design	\$ 325,229	2024	— \$ 900,000	\$ 900,000	100.0
			2023	— \$ —		
1800	Collection Construction	\$ 238,824	2024	— \$ 62,122,500	\$ (95,290,000)	(60.5)
			2023	— \$ 157,412,500		
2700	Treatment Design	\$ 496,072	2024	— \$ 83,600	\$ —	—
			2023	— \$ 83,600		
2800	Treatment Construction	\$ 16,397,995	2024	— \$ 136,955,000	\$ 18,604,200	15.7
			2023	— \$ 118,350,800		
2818	Treatment Claims Prevention and Resolution	\$ —	2024	— \$ —	\$ (45,800)	(100.0)
			2023	— \$ 45,800		
3700	Solids Processing Design	\$ 66,351	2024	— \$ —	\$ —	—
			2023	— \$ —		
3800	Solids Processing Construction	\$ 8,453,773	2024	— \$ 25,000	\$ (26,785,000)	(99.9)
			2023	— \$ 26,810,000		
4341	Flood Mitigation Projects Planning and Design	\$ 356,606	2024	— \$ —	\$ —	—
			2023	— \$ —		
4343	Flood Mitigation Projects Construction	\$ 6,617,949	2024	— \$ —	\$ (3,454,800)	(100.0)
			2023	— \$ 3,454,800		
4700	Flood and Pollution Control Design	\$ —	2024	— \$ 7,000,000	\$ 4,750,000	211.1
			2023	— \$ 2,250,000		
4800	Flood and Pollution Control Construction	\$ 44,678,872	2024	— \$ 46,940,000	\$ (9,957,500)	(17.5)
			2023	— \$ 56,897,500		
5800	Solids Utilization Construction	\$ 4,389,764	2024	— \$ 500,000	\$ (8,100,000)	(94.2)
			2023	— \$ 8,600,000		
7601	Capital Financing Program and Other Related Costs	\$ —	2024	— \$ 1,215,100	\$ 759,200	166.5
			2023	— \$ 455,900		
7740	Land and Easements	\$ 6,100	2024	— \$ 250,000	\$ —	—
			2023	— \$ 250,000		
Totals		\$ 82,027,535	2024	— \$ 255,991,200	\$ (118,619,700)	(31.7)%
			2023	— \$ 374,610,900		

Projects budgeted in the Capital Improvements Bond Fund are prioritized based on operational needs, design time frames, and available funding. Year-over-year variances in program area budgets are the result of project timing within the five-year capital planning cycle. The Capital Improvements Bond Fund is budgeted on an obligation basis, meaning the projects are budgeted at their full value in the year they are awarded, whether the project expenditures occur in the same budget year or not.

401 50000	Fund: Capital Improvements Bond Department: Engineering	LINE ITEM ANALYSIS						
		2022	2023				2024	
Account Number	Account Name	Expenditure	Original Appropriation *	Adjusted Appropriation 09/30/23 **	Expenditure (Committed Budget plus Disbursement) 09/30/23	Estimated Expenditure 12/31/23	Proposed by Executive Director	Recommended by Committee on Budget and Employment
612090	Reprographic Services	\$ —	\$ 10,000	\$ 10,000	\$ —	\$ 5,000	\$ 10,000	\$ —
612250	Court Reporting Services	—	35,000	80,000	45,000	10,000	25,000	—
612400	Intergovernmental Agreements	439,800	5,711,000	8,885,600	3,483,000	50,000	150,000	—
612430	Payments for Professional Services	67,598	259,200	998,605	963,574	258,700	133,600	—
612440	Preliminary Engineering Reports and Studies	—	250,000	250,000	—	—	—	—
612450	Professional Engineering Services for Construction Projects	1,300,697	2,000,000	17,436,937	15,836,937	3,013,300	7,900,000	—
612470	Personal Services for Post-Award Engineering for Construction Projects	484,549	—	2,604,597	2,604,597	392,100	—	—
612780	Safety Repairs and Services	—	100,000	100,000	—	—	100,000	—
200	TOTAL CONTRACTUAL SERVICES	2,292,644	8,365,200	30,365,740	22,933,108	3,729,100	8,318,600	—
645600	Collection Facilities Structures	8,824	4,175,000	13,256,985	13,256,985	4,428,300	500,000	—
645620	Waterway Facilities Structures	31,108,147	18,684,800	59,494,423	46,817,952	16,774,300	17,230,000	—
645630	Army Corps of Engineers Services	8,523,107	—	20,693,094	20,693,079	12,046,000	—	—
645650	Process Facilities Structures	11,847,094	35,975,000	85,649,492	79,565,052	19,717,700	58,025,000	—
645680	Buildings	—	700,000	1,214,091	514,091	—	1,000,000	—
645700	Preservation of Collection Facility Structures	6,149,079	153,137,500	182,880,613	117,998,666	10,797,400	64,622,500	—
645720	Preservation of Waterway Facility Structures	7,575,265	41,357,500	26,764,137	22,651,972	4,454,200	26,250,000	—
645750	Preservation of Process Facility Structures	8,438,955	110,210,000	136,422,655	103,927,547	25,571,200	58,380,000	—
645780	Preservation of Buildings	1,688,557	1,000,000	37,288,821	36,288,821	10,374,000	19,900,000	—
500	TOTAL CAPITAL PROJECTS	75,339,028	365,239,800	563,664,312	441,714,165	104,163,100	245,907,500	—
656010	Land	—	300,000	300,000	—	—	300,000	—
600	TOTAL LAND	—	300,000	300,000	—	—	300,000	—

401 50000	Fund: Capital Improvements Bond Department: Engineering	LINE ITEM ANALYSIS						
		2022	2023			2024		
Account Number	Account Name	Expenditure	Original Appropriation *	Adjusted Appropriation 09/30/23 **	Expenditure (Committed Budget plus Disbursement) 09/30/23	Estimated Expenditure 12/31/23	Proposed by Executive Director	Recommended by Committee on Budget and Employment
667340	Payments for Easements	6,100	250,000	250,000	102,186	102,200	250,000	—
727102	Principal - Capital Lease	3,142,878	—	25,881,993	25,881,993	3,297,100	—	—
727112	Interest - Capital Lease	1,246,887	—	4,753,159	4,753,159	1,092,700	—	—
767300	Bond Issuance Costs	—	455,900	511,754	55,854	15,800	1,215,100	—
700	TOTAL FIXED AND OTHER CHARGES	4,395,865	705,900	31,396,905	30,793,192	4,507,800	1,465,100	—
TOTAL CAPITAL IMPROVEMENTS BOND FUND		\$ 82,027,536	\$ 374,610,900	\$ 625,726,957	\$ 495,440,465	\$112,400,000	\$ 255,991,200	\$ —

\* The Capital Improvements Bond Fund is budgeted and accounted for on an obligation basis.

\*\* The appropriation in the Capital Improvements Bond Fund is adjusted to carry forward open value of contracts from the prior year.

NOTES: 1. Amounts may not add up due to rounding.

2. Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated or be less than Expenditure (Committed Budget plus Disbursement) when not all commitments are anticipated to be completed by year-end.

3. The Capital Improvements Bond Fund appropriation is controlled on the Summary Object level.