

Project Number: WU04
Project Title: Water Distrib. System - Rehabilitation/Replacements
Department Name: Water/ Wastewater

Asset Type: Water Utility
CIP Status: Recurring
Project Category: Capital Upgrade

Budget Year: 2018
Category Code: LR
Sector: Various

Project Purpose:

This project supports the delivery of municipal services that are reliable and responsive to the needs of the citizens by updating essential utility infrastructure.

Project Narrative:

This project provides for the replacement or rehabilitation of water mains in areas that have experienced frequent main breaks, corrosion or hydraulic deficiencies. It also provides for the replacement of hydrants and valves that have failed or are inoperable. This project has been coordinated with the City's Road Improvement Program. In addition, this project provides for the replacement of older Lead (Pb) water service lines. The main projects planned for CY18 include the rehab/replacement of deteriorated water main located in Cress Creek subdivision as well as several railroad crossings.

External Funding Sources Available:

None

Projected Timetable:

Engineering and construction ongoing throughout the 5-year CIP as water main rehabilitation/replacements are scheduled.

Impact on Operating Budget:

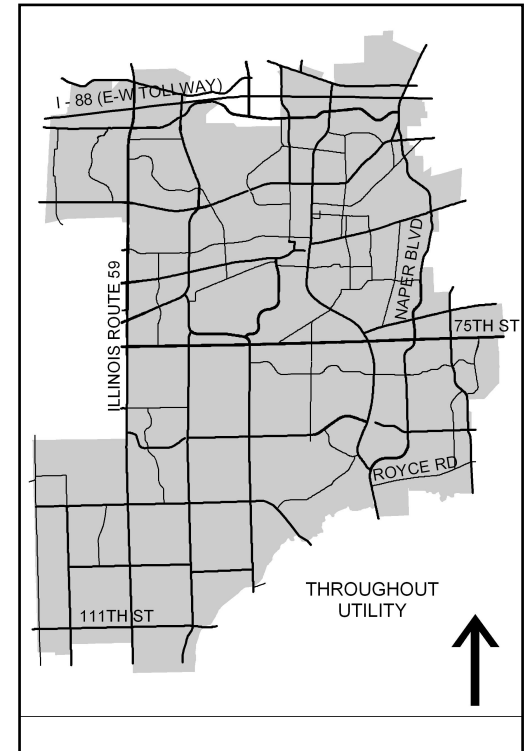
No new personnel; Nominal impact on operations & maintenance budget. The water service line replacement program does not significantly affect ongoing maintenance costs.

Funding Source Summary

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | Total Source |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Water Utility | 1,200,000 | 1,000,000 | 2,311,000 | 1,857,500 | 2,051,000 | 8,419,500 |
| Totals | 1,200,000 | 1,000,000 | 2,311,000 | 1,857,500 | 2,051,000 | 8,419,500 |

Project Cost Summary

| Expense Category | 2017 Budget | 2018 | 2019 | 2020 | 2021 | 2022 | Total CIP |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Construction | 1,050,000 | 1,200,000 | 1,000,000 | 2,311,000 | 1,857,500 | 2,051,000 | 8,419,500 |
| Totals | 1,050,000 | 1,200,000 | 1,000,000 | 2,311,000 | 1,857,500 | 2,051,000 | 8,419,500 |



Project Number: WU07
Project Title: Miscellaneous Waterworks Improvements
Department Name: Water/ Wastewater

Asset Type: Water Utility
CIP Status: No Change
Project Category: Capital Upgrade

Budget Year: 2018
Category Code: A
Sector: Various

Project Purpose:

This project supports the provision of water service to new customers as a demonstration of Naperville's commitment to provide essential services.

Project Narrative:

This project provides for the repair, replacement and rehabilitation of pumps, controls, electrical systems and other components of the city's Water Supply sites.

External Funding Sources Available:

None

Projected Timetable:

Engineering and Construction planned annually through CY2022.

Impact on Operating Budget:

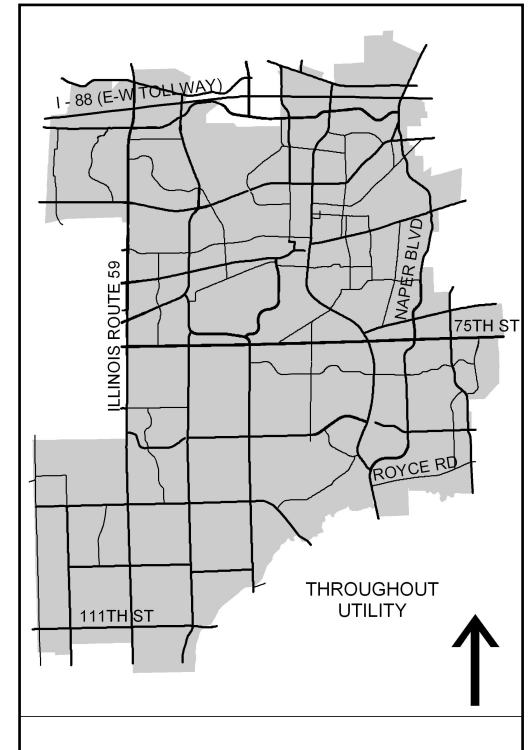
No additional personnel; nominal operating & maintenance expenses anticipated.

Funding Source Summary

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | Total Source |
|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Water Utility | 490,000 | 449,250 | 605,000 | 605,000 | 575,000 | 2,724,250 |
| Totals | 490,000 | 449,250 | 605,000 | 605,000 | 575,000 | 2,724,250 |

Project Cost Summary

| Expense Category | 2017 Budget | 2018 | 2019 | 2020 | 2021 | 2022 | Total CIP |
|------------------|-------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Construction | 0 | 490,000 | 449,250 | 605,000 | 605,000 | 575,000 | 2,724,250 |
| Totals | 0 | 490,000 | 449,250 | 605,000 | 605,000 | 575,000 | 2,724,250 |



Project Number: WU10
Project Title: Water Distribution System - Additions/Extensions
Department Name: Water/ Wastewater

Asset Type: Water Utility
CIP Status: Recurring
Project Category: Capital Upgrade

Budget Year: 2018
Category Code: A
Sector: Various

Project Purpose:

This project supports the provision of water utility service to new customers as a demonstration of the City of Naperville's commitment to provide essential services.

Project Narrative:

This project is for the engineering and construction of various water main additions and/or extensions needed throughout the City in accordance with the City's Master Water Utility Plan. Project WU10 has multiple subprojects that are needed to expand the system to accommodate new customers to serve the remaining growth and to provide improved transmission capacity in critical service areas. Annual funding estimates are based on City's Master plan. Development activity is coordinated with the TED, DPW and DPU-Electric Capital Improvement Plans.

External Funding Sources Available:

None

Projected Timetable:

Engineering and construction ongoing as new water main additions and extensions are needed.

Impact on Operating Budget:

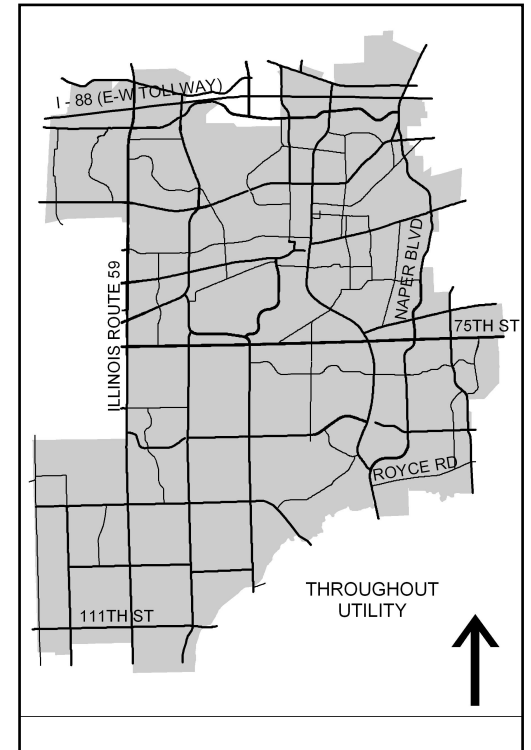
No new personnel; Nominal impact on system operations & maintenance budget.

Funding Source Summary

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | Total Source |
|----------------|---------------|----------------|------------------|----------------|----------------|------------------|
| Water Utility | 80,000 | 650,000 | 1,020,000 | 150,000 | 150,000 | 2,050,000 |
| Totals | 80,000 | 650,000 | 1,020,000 | 150,000 | 150,000 | 2,050,000 |

Project Cost Summary

| Expense Category | 2017 Budget | 2018 | 2019 | 2020 | 2021 | 2022 | Total CIP |
|-----------------------|-------------|---------------|----------------|------------------|----------------|----------------|------------------|
| Construction | 0 | 0 | 619,400 | 978,384 | 150,000 | 150,000 | 1,897,784 |
| Professional Services | 0 | 80,000 | 30,600 | 41,616 | 0 | 0 | 152,216 |
| Totals | 0 | 80,000 | 650,000 | 1,020,000 | 150,000 | 150,000 | 2,050,000 |



Project Number: WU29
Project Title: Emergency Standby Well Rehabilitation
Department Name: Water/ Wastewater

Asset Type: Water Utility
CIP Status: Recurring
Project Category: Capital Upgrade

Budget Year: 2018
Category Code: A
Sector: Various

Project Purpose:

This project supports the delivery of municipal utility services that are responsive to the needs of the citizens by providing exemplary public safety.

Project Narrative:

This project is for the rehabilitation of the City's 8 remaining emergency standby wells. The project includes replacement of old pumps and motors and associated electrical gear, and rehabilitation of the well downhole including the removal of accumulated sand. Replacement of old equipment and rehabilitation of the downhole is estimated at \$350,000 - \$400,000 per well. Four of the eight wells have been rehabilitated.

External Funding Sources Available:

None

Projected Timetable:

Construction: ongoing through CY21 until all 8 emergency standby wells have been rehabilitated.

Impact on Operating Budget:

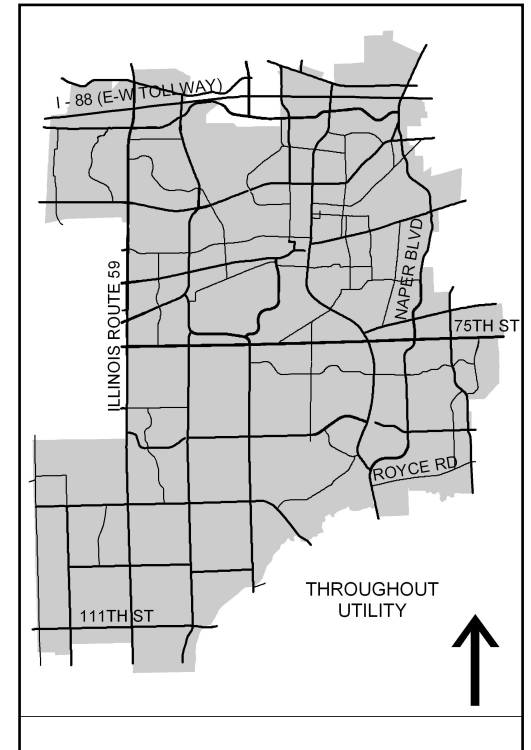
No new personnel; nominal impact on operations and maintenance budget.

Funding Source Summary

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | Total Source |
|----------------|----------------|----------------|----------------|----------------|----------|------------------|
| Water Utility | 350,000 | 350,000 | 400,001 | 400,000 | 0 | 1,500,000 |
| Totals | 350,000 | 350,000 | 400,001 | 400,000 | 0 | 1,500,000 |

Project Cost Summary

| Expense Category | 2017 Budget | 2018 | 2019 | 2020 | 2021 | 2022 | Total CIP |
|------------------|----------------|----------------|----------------|----------------|----------------|----------|------------------|
| Construction | 275,000 | 350,000 | 350,000 | 400,001 | 400,000 | 0 | 1,500,000 |
| Totals | 275,000 | 350,000 | 350,000 | 400,001 | 400,000 | 0 | 1,500,000 |



Project Number: WWU10
Project Title: Sanitary Sewer Capacity Improvements
Department Name: Water/ Wastewater

Asset Type: Wastewater Utility
CIP Status: Recurring
Project Category: Capital Upgrade

Budget Year: 2018
Category Code: A
Sector: Various

Project Purpose:

The project supports the delivery of municipal services to customers as a demonstration of Naperville's commitment to provide essential services.

Project Narrative:

In CY2017 staff developed a system-wide hydraulic model to evaluate the sanitary sewers and identify areas where capacity improvements are an issue and made to improve system function. Final project locations will be determined by the Model results and prioritized.

External Funding Sources Available:

None

Projected Timetable:

Engineering and construction planned annually throughout the 5-year CIP.

Impact on Operating Budget:

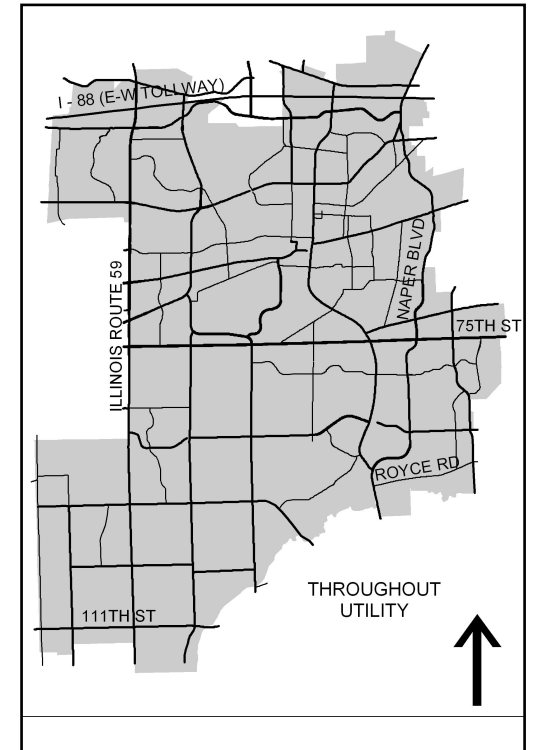
Nominal impact on system operating and maintenance budget.

Funding Source Summary

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | Total Source |
|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Water Utility | 100,000 | 200,000 | 200,000 | 200,000 | 600,000 | 1,299,999 |
| Totals | 100,000 | 200,000 | 200,000 | 200,000 | 600,000 | 1,299,999 |

Project Cost Summary

| Expense Category | 2017 Budget | 2018 | 2019 | 2020 | 2021 | 2022 | Total CIP |
|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Construction | 100,000 | 95,000 | 194,900 | 194,798 | 194,693 | 583,763 | 1,263,155 |
| Professional Services | 0 | 5,000 | 5,100 | 5,202 | 5,306 | 16,236 | 36,845 |
| Totals | 100,000 | 100,000 | 200,000 | 200,000 | 200,000 | 600,000 | 1,299,999 |



Project Number: WWU35
Project Title: SWRC - Phosphorus Removal - Preliminary Engineering (IEPA)
Department Name: Water/ Wastewater

Asset Type: Wastewater Utility
CIP Status: Amended
Project Category: Capital Upgrade

Budget Year: 2018
Category Code: A
Sector: Southeast

Project Purpose:

This project supports the delivery of municipal services that are reliable and responsive to the needs of the citizens by updating essential utility infrastructure.

Project Narrative:

The City's NPDES (National Pollutant Discharge Elimination System) Permit is anticipated to be renewed by the Illinois EPA in October, 2017. The renewed permit requires the completion of a Phosphorus Discharge Optimization Evaluation and Reduction Feasibility Study to determine future SWRC effluent standards for phosphorus discharge to the DuPage River. The funding proposes to conduct the initial studies to begin planning preliminary engineering to ultimately lead to the design of plant upgrades and facilities improvements necessary to meet the new Illinois EPA phosphorus and nitrogen removal requirements. Construction expenditures are anticipated to begin in CY24 and will continue until CY28 when the improvements are scheduled to be operational.

External Funding Sources Available:

None

Projected Timetable:

Engineering Studies/Preliminary Engineering: CY18 through CY22. Construction: CY23 and beyond.

Impact on Operating Budget:

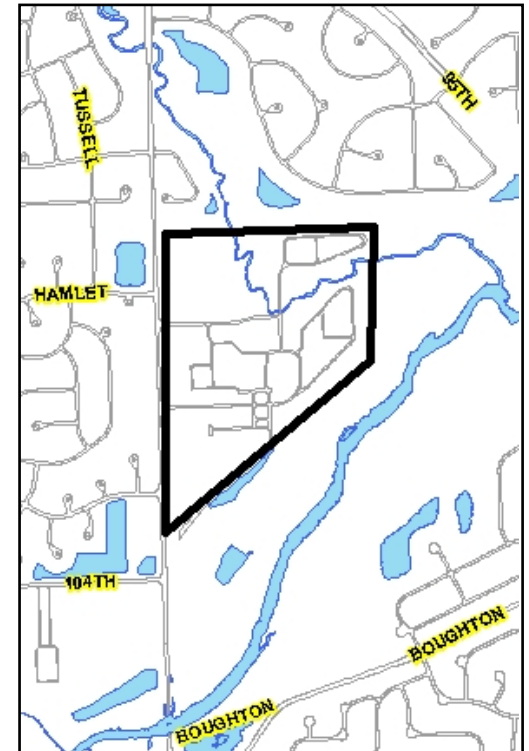
Nominal operating and maintenance-related expenditures anticipated.

Funding Source Summary

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | Total Source |
|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Water Utility | 125,000 | 350,000 | 200,000 | 200,000 | 500,000 | 1,375,000 |
| Totals | 125,000 | 350,000 | 200,000 | 200,000 | 500,000 | 1,375,000 |

Project Cost Summary

| Expense Category | 2017 Budget | 2018 | 2019 | 2020 | 2021 | 2022 | Total CIP |
|------------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Construction | 0 | 125,000 | 350,000 | 200,000 | 200,000 | 500,000 | 1,375,000 |
| Totals | 200,000 | 125,000 | 350,000 | 200,000 | 200,000 | 500,000 | 1,375,000 |



Project Number: WWU42
Project Title: Biosolids Holding Tank - Phase 2
Department Name: Water/ Wastewater

Asset Type: Wastewater Utility
CIP Status: No Change
Project Category: Capital Upgrade

Budget Year: 2018
Category Code: A
Sector: Southeast

Project Purpose:

This project supports the delivery of municipal services that are reliable and responsive to the needs of the citizens by maintaining the utility infrastructure.

Project Narrative:

This project is for the construction of the second Biosolids Holding Tank at the Springbrook Water Reclamation Plant. This project will be constructed in phases . The first tank was recently completed. The second tank will provide operational flexibility and redundancy. The second tank is planned for construction in CY21.

External Funding Sources Available:

None.

Projected Timetable:

Engineering and construction planned for CY21.

Impact on Operating Budget:

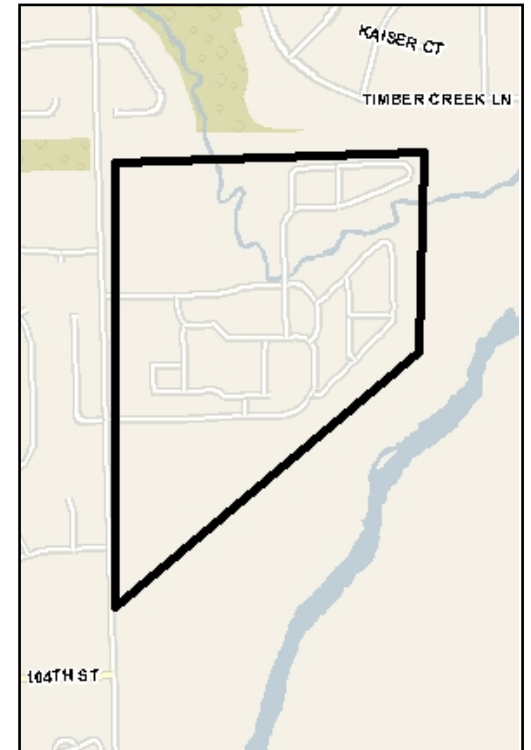
Nominal operating and maintenance-related expenditures anticipated.

Funding Source Summary

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | Total Source |
|----------------|----------|----------|----------|------------------|----------|------------------|
| Water Utility | 0 | 0 | 0 | 1,500,001 | 0 | 1,500,001 |
| Totals | 0 | 0 | 0 | 1,500,001 | 0 | 1,500,001 |

Project Cost Summary

| Expense Category | 2017 Budget | 2018 | 2019 | 2020 | 2021 | 2022 | Total CIP |
|-----------------------|-------------|----------|----------|----------|------------------|----------|------------------|
| Construction | 0 | 0 | 0 | 0 | 1,340,819 | 0 | 1,340,819 |
| Professional Services | 0 | 0 | 0 | 0 | 159,181 | 0 | 159,181 |
| Totals | 0 | 0 | 0 | 0 | 1,500,001 | 0 | 1,500,001 |



Project Number: WWU044
Project Title: SWRC - Miscellaneous Process-related Replacements/Upgrades
Department Name: Water/ Wastewater

Asset Type: Wastewater Utility
CIP Status: Recurring
Project Category: Capital Upgrade

Budget Year: 2018
Category Code: A
Sector: Southeast

Project Purpose:

This project supports the delivery of municipal services that are reliable and responsive to the needs of the citizens by updating essential utility infrastructure.

Project Narrative:

This project provides for the replacement or rehabilitation of miscellaneous process-related components, facilities or equipment at Springbrook Water Reclamation Center (SWRC). Projects include Disinfection System/ORP Controls upgrade and replacement of aging influent measurement equipment (magmeters), Biosolids dewatering, Centrifuge rehabilitation and controls upgrade, and replacement of aging wastewater laboratory Atomic Absorption/Spectrometer system equipment required for the analysis of metals concentration in SWRC's biosolids/sludge.

External Funding Sources Available:

None.

Projected Timetable:

Engineering and construction CY18 through CY21.

Impact on Operating Budget:

No additional personnel; nominal impact to operating and maintenance budget.

Funding Source Summary

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | Total Source |
|----------------|----------------|----------------|----------------|----------------|----------|----------------|
| Water Utility | 125,000 | 100,000 | 100,000 | 100,000 | 0 | 425,000 |
| Totals | 125,000 | 100,000 | 100,000 | 100,000 | 0 | 425,000 |

Project Cost Summary

| Expense Category | 2017 Budget | 2018 | 2019 | 2020 | 2021 | 2022 | Total CIP |
|------------------|----------------|----------------|----------------|----------------|----------------|----------|----------------|
| Construction | 125,000 | 125,000 | 100,000 | 100,000 | 100,000 | 0 | 425,000 |
| Totals | 125,000 | 125,000 | 100,000 | 100,000 | 100,000 | 0 | 425,000 |

