

Capital Improvement Plan



Capital Improvement Plan Guide

FY2027 Operating & Capital Budget

Purpose and Definitions:

The purpose of the capital improvement plan (CIP) is to forecast and match projected revenues and major capital needs over a seven-year period. Capital planning is an important management tool that strengthens the linkages between community infrastructure needs and the financial capacity of the town.

The town defines CIP capital expenditures as any expenditure of major value that recurs irregularly, results in the acquisition of a fixed asset, and has a useful life greater than one (1) year. As a rule of thumb, items included in the CIP include those which:

- Involve acquisition, renovation, and/or construction of a single fixed asset greater than \$100,000.
- Involve any land purchases greater than \$100,000 not associated with or included in another CIP project.

Capital Improvement Plan Development

The CIP is updated annually as part of the town's regular budget process. Projects are reviewed and evaluated based on Mayor and Board of Commissioners' service desires, other town infrastructure needs, the financial capacity of the town and the impact the projects will create on the town's operating budget. Once the projects are evaluated, a recommended CIP is developed that identifies the selection and timing of capital projects into future fiscal years. First-year projects are incorporated into the Town Manager's recommended annual operating budget. The Mayor and Board of Commissioners are also presented the future, unappropriated planning years for their consideration, review and endorsement so staff can proceed with planning and evaluation of potential capital projects.

Capital Improvement Plan Development

The capital improvement plan is simply that – a plan. As such, projects are subject to change based on new or shifting service needs, special financing opportunities, emergency needs, or other directives or priorities established by the Mayor or Board of Commissioners. Because priorities can change, projects included in outward planning years are not guaranteed for funding.

The Hillsborough CIP achieves five major objectives as a component of the town's budget and financial planning process:

1. Helps the town rationally and intelligently plan for the repair, replacement, and acquisition of capital items that are necessary in providing high quality services to the residents of Hillsborough.
2. Assists in fiscal planning by forecasting capital demands together with future revenues and expenditures (as part of the financial plan).
3. Ensures better coordination, evaluation and planning of projects to serve the community and its needs.
4. The CIP, together with the Financial Plan, serves as a guide to decision-making for the Board, Town Manager, and employees.
5. The systematic and comprehensive analysis of capital needs increases the probability of making rational (and correct) budgetary judgments since improvements are identified, prioritized, and matched to the projected fiscal resources of the town.

General Capital Improvement Plan



General Capital Improvement Plan Summary

Capital Improvement Plan (FY27-FY33)

General Capital Improvements Expenditures by Project

General CIP Expenditure Summary by Project

Worksheet Name	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
Cates Creek Park Basketball Court	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0
Engine Truck	\$0	\$0	\$0	\$0	\$1,302,010	\$0	\$0
Garbage Truck Replacements	\$0	\$422,010	\$0	\$0	\$0	\$0	\$0
Knuckleboom Truck Replacements	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ladder Truck	\$0	\$0	\$0	\$0	\$0	\$0	\$2,627,010
Leaf Truck Replacements	\$0	\$0	\$0	\$0	\$0	\$0	\$437,010
North Churton Street Fire Station	\$1,050,000	\$300,000	\$8,650,000	\$15,000	\$15,000	\$15,000	\$15,000
Parks Play Equipment Replacement	\$0	\$0	\$75,000	\$0	\$40,000	\$0	\$125,000
Passenger Rail/Multi-Modal Station	\$10,439,000	\$0	\$1,275,000	\$35,000	\$35,000	\$35,000	\$35,000
Rainey Avenue Sidewalk	\$0	\$30,000	\$0	\$125,000	\$0	\$0	\$0
Ridgewalk Greenway - North Segment	\$791,003	\$333,000	\$333,000	\$5,501,000	\$0	\$0	\$0
Ridgewalk Greenway - South Segment	\$0	\$0	\$0	\$0	\$800,000	\$0	\$6,000,000
South Churton Street Improvements Cost Share	\$0	\$0	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$12,280,003	\$1,085,010	\$10,333,000	\$5,676,000	\$2,192,010	\$80,000	\$9,239,020

Worksheet Name	FY33
Amount	
Cates Creek Park Basketball Court	\$300,000
Engine Truck	\$0
Garbage Truck Replacements	\$497,010
Knuckleboom Truck Replacements	\$0
Ladder Truck	\$0
Leaf Truck Replacements	\$0
North Churton Street Fire Station	\$15,000
Parks Play Equipment Replacement	\$0
Passenger Rail/Multi-Modal Station	\$35,000
Rainey Avenue Sidewalk	\$0
Ridgewalk Greenway - North Segment	\$0
Ridgewalk Greenway - South Segment	\$0
South Churton Street Improvements Cost Share	\$100,000
AMOUNT	\$947,010

General Capital Improvements Revenues by Type

General CIP Revenue Summary by Category

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DEBT ISSUANCE PROCEEDS	\$2,110,000	\$0	\$9,625,000	\$5,168,000	\$0	\$0	\$8,430,000
NCDOT RAIL (TIP)	\$870,000	\$0	\$0	\$0	\$0	\$0	\$0
OPERATING REVENUE	\$0	\$2,010	\$75,000	\$50,000	\$92,010	\$50,000	\$179,020
STATE TIP	\$6,914,000	\$0	\$0	\$0	\$0	\$0	\$0
TRANSFER FROM COMMITTED FUNDS	\$0	\$420,000	\$0	\$0	\$1,300,000	\$0	\$630,000
TRANSFER FROM GENERAL FUND	\$1,914,713	\$663,000	\$633,000	\$458,000	\$800,000	\$30,000	\$0
TRANSFER FROM RAIL STATION PROJECT FUND	\$19,290	\$0	\$0	\$0	\$0	\$0	\$0
TRANSIT TAX	\$452,000	\$0	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$12,280,003	\$1,085,010	\$10,333,000	\$5,676,000	\$2,192,010	\$80,000	\$9,239,020

Itemization Description	FY33
Amount	
DEBT ISSUANCE PROCEEDS	\$0
NCDOT RAIL (TIP)	\$0
OPERATING REVENUE	\$52,010
STATE TIP	\$0
TRANSFER FROM COMMITTED FUNDS	\$495,000
TRANSFER FROM GENERAL FUND	\$400,000
TRANSFER FROM RAIL STATION PROJECT FUND	\$0
TRANSIT TAX	\$0
AMOUNT	\$947,010

General Capital Improvements: Operating Budget Impact

General CIP Operating Impact by Project

Worksheet Name	FY2027	FY2028	FY2029
Amount			
Fire Station at North Churton Street	\$300,000	\$300,000	\$685,026
Garbage Truck Replacements	\$422,010	\$0	\$0
Parks Play Equipment Replacement	\$0	\$75,000	\$0
Passenger Rail Multi-Modal Station	\$0	\$0	\$361,119
Ridgewalk Greenway - North Segment	\$333,000	\$333,000	\$333,000
Sidewalk at Rainey Avenue	\$30,000	\$0	\$125,000
AMOUNT	\$1,085,010	\$708,000	\$1,504,145



Engine Truck

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Fire Protection

Priority Rank

2

Project Description

Replace the 2015 engine truck used by Orange Rural Fire Department (ORFD).

Project Justification

The truck is expected to run for 15 years as a front-line vehicle, followed by an additional 5 years as a backup.

Project Highlights

- Lead times on trucks can often be extensive and may necessitate ordering earlier than anticipated. The town will monitor lead times as truck nears replacement.
- The town plans to issue debt in the amount of \$800,000 in Fiscal Year 2030 to finance this vehicle.

Project Expenditures

Engine Truck

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CAPITAL - VEHICLES	\$0	\$0	\$0	\$0	\$1,300,000	\$0	\$0
MISC - TAX, TAGS, ETC	\$0	\$0	\$0	\$0	\$2,010	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$1,302,010	\$0	\$0

Object Code Description	FY33
Amount	
CAPITAL - VEHICLES	\$0
MISC - TAX, TAGS, ETC	\$0
AMOUNT	\$0

Project Funding

Engine Truck

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
OPERATING REVENUE	\$0	\$0	\$0	\$0	\$2,010	\$0	\$0
TRANSFER FROM COMMITTED FUNDS	\$0	\$0	\$0	\$0	\$1,300,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$1,302,010	\$0	\$0

Itemization Description	FY33
Amount	
OPERATING REVENUE	\$0
TRANSFER FROM COMMITTED FUNDS	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Fire Station at North Churton Street

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Fire Protection

Priority Rank

1

Project Description

Build a new station north of town to replace the downtown station.

Project Justification

The current station lacks sufficient space for staff and modern fire vehicles. The new station will serve as the Orange Rural Fire Department's (ORFD) headquarters. The new station will be located at 604 N. Churton St, near the intersection of N. Churton Street and Corbin St.

Project Highlights

The town began setting aside funds in FY22 to fund design and offset construction costs.

Anticipated Station Timeline:

- FY26 - Feasibility Study
- FY27 - Design
- FY28 - Construction
- FY29 - First Debt Payment (\$8.3M @ 5.0% for 20 years = \$670k/yr)

Project Expenditures

Fire Station at North Churton Street

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$750,000	\$0	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$225,000	\$300,000	\$8,650,000	\$0	\$0	\$0	\$0
PROFESSIONAL SERVICES	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0
UTILITIES	\$0	\$0	\$0	\$15,000	\$15,000	\$15,000	\$15,000
AMOUNT	\$1,050,000	\$300,000	\$8,650,000	\$15,000	\$15,000	\$15,000	\$15,000

Object Code Description	FY33
Amount	
DESIGN	\$0
CONSTRUCTION	\$0
PROFESSIONAL SERVICES	\$0
UTILITIES	\$15,000
AMOUNT	\$15,000

Project Funding

Fire Station at North Churton Street

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$8,350,000	\$0	\$0	\$0	\$0
TRANSFER FROM GENERAL FUND	\$1,050,000	\$300,000	\$300,000	\$0	\$0	\$0	\$0
OPERATING REVENUE	\$0	\$0	\$0	\$15,000	\$15,000	\$15,000	\$15,000
AMOUNT	\$1,050,000	\$300,000	\$8,650,000	\$15,000	\$15,000	\$15,000	\$15,000

Itemization Description	FY33
Amount	
DEBT ISSUANCE PROCEEDS	\$0
TRANSFER FROM GENERAL FUND	\$0
OPERATING REVENUE	\$15,000
AMOUNT	\$15,000

Operating Budget Impact

Fire Station at North Churton Street

Object Code Description	FY2027	FY2028	FY2029
Amount			
DEBT SERVICE - INTEREST	\$0	\$0	\$404,874
DEBT SERVICE - PRINCIPAL	\$0	\$0	\$265,152
TRANSFER TO GENERAL CAPITAL IMPROVEMENT FUND	\$300,000	\$300,000	\$0
UTILITIES	\$0	\$0	\$15,000
AMOUNT	\$300,000	\$300,000	\$685,026



Ladder Truck

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Fire Protection

Priority Rank

3

Project Description

Replace the 2012 ladder truck used by Orange Rural Fire Department (ORFD).

Project Justification

The truck is expected to run for 20 years as a front-line vehicle, followed by an additional 5 years as a backup.

Project Highlights

- Lead times on trucks can often be extensive and may necessitate ordering earlier than anticipated. The town will monitor lead times as truck nears replacement.
- The town plans to issue debt in the amount of \$2,000,000 in Fiscal Year 2032 to finance this vehicle.

Project Expenditures

Ladder Truck

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
MISC - TAX, TAGS, ETC	\$0	\$0	\$0	\$0	\$0	\$0	\$2,010
CAPITAL - VEHICLES	\$0	\$0	\$0	\$0	\$0	\$0	\$2,625,000
AMOUNT	\$0	\$0	\$0	\$0	\$0	\$0	\$2,627,010

Object Code Description	FY33
Amount	
MISC - TAX, TAGS, ETC	\$0
CAPITAL - VEHICLES	\$0
AMOUNT	\$0

Project Funding

Ladder Truck

Line Item Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
Empty Values	\$0	\$0	\$0	\$0	\$0	\$0	\$2,627,010
AMOUNT	\$0	\$0	\$0	\$0	\$0	\$0	\$2,627,010

Line Item Description	FY33
Amount	
Empty Values	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Cates Creek Basketball Courts

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Public Space

Priority Rank

5

Project Description

Basketball courts at Cates Creek Park.

Project Justification

The Parks and Recreation Board adopted an update to the Cates Creek Park Master Plan in August 2024. The update includes a recommendation for the construction of basketball courts on one end of the existing multi-use field. The Parks and Recreation Board recognizes the field is over-sized for the type of play the town allows and, as a result, is underutilized recreation space. There are very few public outdoor basketball courts in Hillsborough and none in town-owned parks. The Parks and Recreation Board has identified basketball courts as a priority for many years, trying to incentivize the construction of courts as part of new developments by increasing the value of points allotted for courts in the Unified Development Ordinance. Recent developments have not included basketball courts as a recreation resource. There is a lack of available basketball courts in town.

The addition of the Hillsborough Skate Spot has brought a lot of welcome activity to Cates Creek Park. The skatepark appeals to all ages of skaters but was built with teenagers in mind. Teens are an underserved population in Hillsborough parks. The Cates Creek Park Master Plan recommends additional investment in teen resources. The Parks and Recreation Board believes the addition of basketball courts will further attract teenagers to the park, providing valuable outdoor recreational opportunities for underserved population.

Project Highlights

- Construction cost estimates are likely to change once design and engineering is completed.
- There is no specific project timeline identified in the Cates Creek Park Master Plan but it is recommended as a top priority.

Project Expenditures

Cates Creek Basketball Court

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0
CONSTRUCTION	\$0	\$0	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0

Object Code Description	FY33
Amount	
DESIGN	\$0
CONSTRUCTION	\$300,000
AMOUNT	\$300,000

Project Funding

Cates Creek Basketball Court

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM GENERAL FUND	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0

Object Code Description	FY33
Amount	
TRANSFER FROM GENERAL FUND	\$300,000
AMOUNT	\$300,000

Operating Budget Impact

No FY27-29 operating impact.



Parks Play Equipment Replacement

Capital Improvement Project (FY27-FY33)

Fund	Department	Priority Rank
General Fund	Public Space	4

Project Description

This project includes the design, acquisition, and installation of new play equipment at Murray Street Park, Hillsborough Heights Park, and Turnip Patch Park

Project Justification

The Parks and Recreation Board adopted master plans for each of the town's parks. The master plans recommend maintaining the existing playground equipment and park amenities in safe and working order. The play equipment at Murray Street Park, Hillsborough Heights Park, and Turnip Patch Park is more than 15 years old. Though the equipment is being maintained, it is starting to deteriorate and will need to be replaced in the coming years. Also, older equipment does not meet current safety standards. There is no specific project timeline identified in the park's master plans, but equipment needs to be replaced before it presents a safety hazard.

Project Highlights

Initial estimates for play equipment:

- Murray Street Park: \$75,000
- Hillsborough Heights Park: \$40,000
- Turnip Patch Park: \$125,000

Project Expenditures

Parks Play Equipment Replacements

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CAPITAL - INFRASTRUCTURE	\$0	\$0	\$75,000	\$0	\$40,000	\$0	\$125,000
AMOUNT	\$0	\$0	\$75,000	\$0	\$40,000	\$0	\$125,000

Object Code Description	FY33
Amount	
CAPITAL - INFRASTRUCTURE	\$0
AMOUNT	\$0

Project Funding

Parks Play Equipment Replacements

Line Item Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
Empty Values	\$0	\$0	\$75,000	\$0	\$40,000	\$0	\$125,000
AMOUNT	\$0	\$0	\$75,000	\$0	\$40,000	\$0	\$125,000

Line Item Description	FY33
Amount	
Empty Values	\$0
AMOUNT	\$0

Operating Budget Impact

Parks Play Equipment Replacement

Object Code Description	FY2027	FY2028	FY2029
Amount			
CAPITAL - INFRASTRUCTURE	\$0	\$75,000	\$0
AMOUNT	\$0	\$75,000	\$0

Rainey Avenue Sidewalk

Capital Improvement Project (FY27-FY33)

Fund	Department	Priority Rank
General Fund	Public Space	3

Project Description

Sidewalk along Rainey Avenue between Torain Street and the Dorothy N. Johnson Community Center.

Project Justification

This project has been identified in the Comprehensive Sustainability Plan as a connectivity recommendation. It has also been recommended in the Fairview Activate Plan, endorsed by the Fairview Community Watch.

Project Highlights

Rainey Avenue is a primary corridor for vehicular and pedestrian traffic in Fairview. There has been increasing activity on this corridor over the past few years, especially since the Dorothy N. Johnson Community Center opened. The roadway is narrow and pedestrians have no place to walk safely. The town has invested in traffic-calming devices (speed humps) along this stretch of road after it was deemed warranted by traffic studies. Fairview Community Watch has requested additional safety measures including a sidewalk along the route. The Comprehensive Sustainability Plan also recommends this pedestrian improvement. This project aligns with the town's Vision Zero and Complete Streets policies. It may be possible to leverage funds from the Orange County Transit Tax for this project because there are existing transit stations in Fairview Community Park and at the community center and this project improves accessibility, connectivity, and safety for transit riders.

Project Expenditures

Rainey Avenue Sidewalk

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$0	\$30,000	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$0	\$0	\$0	\$125,000	\$0	\$0	\$0
AMOUNT	\$0	\$30,000	\$0	\$125,000	\$0	\$0	\$0

Object Code Description	FY33
Amount	
DESIGN	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Rainey Avenue Sidewalk

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM GENERAL FUND	\$0	\$30,000	\$0	\$125,000	\$0	\$0	\$0
AMOUNT	\$0	\$30,000	\$0	\$125,000	\$0	\$0	\$0

Object Code Description	FY33
Amount	
TRANSFER FROM GENERAL FUND	\$0
AMOUNT	\$0

Operating Budget Impact

Rainey Avenue Sidewalk

Itemization Description	FY2027	FY2028	FY2029
Amount			
TRANSFER TO GENERAL CAPITAL IMPROVEMENT FUND	\$30,000	\$0	\$125,000
AMOUNT	\$30,000	\$0	\$125,000



Ridgewalk Greenway - North Segment

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Public Space

Priority Rank

1

Project Description

Greenway connecting downtown to the new train station and the Collins Ridge Greenway.

Project Justification

The Ridgewalk greenway is included in the Comprehensive Sustainability Plan as a transportation priority. It is a paved, urban, accessible greenway that provides pedestrian and bicycle access between downtown Hillsborough to Cates Creek Park. Ridgewalk may be implemented in phases. The north segment of Ridgewalk connects downtown Hillsborough and Riverwalk to the Collins Ridge greenway via the future train station site. The alignment is shown as Alternative 1 in the Ridgewalk Feasibility Study Phase II. The conditions of the approval for Collins Ridge require the developer to build and dedicate to the town a segment of greenway and to work with the town to determine the location and specific design details for pedestrian and bicycle connectivity between the parcel south of I-85 and the public rights-of-way, sidewalks, greenways, and trails in Collins Ridge. The Collins Ridge greenway is required to be complete by December 2027.

The train station is scheduled for completion in February 2027 but permitting delays may cause the schedule to shift.

Project Highlights

- Ridgewalk was identified by the Board of Commissioners as a transportation priority in September 2021 and included as a priority in the Comprehensive Sustainability Plan.
- An initial feasibility study and schematic design of the greenway system between downtown Hillsborough and Cates Creek Park was completed in FY24. The engineer cost estimates were higher than anticipated, so additional feasibility work was completed in FY25. A Benefits Analysis was also developed. The Ridgewalk Feasibility Study Phase II shows alternative alignments for the trails which result in cost savings. The Benefits Analysis shows great support for the greenway by community groups and members. The initial feasibility study was funded via a Surface Transportation Block Grant through the Metropolitan Planning Organization and 20% local match. It is uncertain though if Ridgewalk will compete well for funding through the Transportation Improvement Plan. Additional funding options, including grants, will be pursued once the feasibility of the project is determined.
- North Segment: Downtown to Collins Ridge Greenway (via train station site)
- South Segment: Collins Ridge Greenway to Cates Creek Park
- This project will be funded with cash transfers from the General Fund for design/engineering work and installment financing for the construction portion estimated in Fiscal Year 2029.

Project Expenditures

Ridgewalk Greenway - North Segment

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$458,003	\$0	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$333,000	\$333,000	\$333,000	\$5,501,000	\$0	\$0	\$0
AMOUNT	\$791,003	\$333,000	\$333,000	\$5,501,000	\$0	\$0	\$0

Object Code Description	FY33
Amount	
DESIGN	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Ridgewalk Greenway - North Segment

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM GENERAL FUND	\$791,003	\$333,000	\$333,000	\$333,000	\$0	\$0	\$0
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$5,168,000	\$0	\$0	\$0
AMOUNT	\$791,003	\$333,000	\$333,000	\$5,501,000	\$0	\$0	\$0

Itemization Description	FY33
Amount	
TRANSFER FROM GENERAL FUND	\$0
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$0

Operating Budget Impact

Ridgewalk Greenway - North Segment

Itemization Description	FY2027	FY2028	FY2029
Amount			
TRANSFER TO GENERAL CAPITAL IMPROVEMENT FUND	\$333,000	\$333,000	\$333,000
AMOUNT	\$333,000	\$333,000	\$333,000



Ridgewalk Greenway - South Segment

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Public Space

Priority Rank

2

Project Description

Greenway connecting the Collins Ridge Greenway to Cates Creek Park.

Project Justification

The Ridgewalk greenway is included in the Comprehensive Sustainability Plan as a transportation priority. It is a paved, urban, accessible greenway that provides pedestrian and bicycle access between downtown Hillsborough to Cates Creek Park. Ridgewalk may be implemented in phases. The south segment of Ridgewalk connects the Collins Ridge greenway to Cates Creek Park. The alignment is shown as Alternative 4 in the Ridgewalk Feasibility Study Phase II. The conditions of the approval for Collins Ridge require the developer to build and dedicate to the town a segment of greenway and to work with the town to determine the location and specific design details for pedestrian and bicycle connectivity between the parcel south of I-85 and the public rights-of-way, sidewalks, greenways, and trails in Collins Ridge. The Collins Ridge greenway is required to be complete by December 2027.

The train station is scheduled for completion in February 2027 but permitting delays may cause the schedule to shift.

North Segment: Downtown to Collins Ridge Greenway (via train station site)

South Segment: Collins Ridge Greenway to Cates Creek Park

Project Highlights

- Ridgewalk was identified by the Board of Commissioners as a transportation priority in September 2021 and included as a priority in the Comprehensive Sustainability Plan.
- Initial feasibility study and schematic design of the greenway system between downtown Hillsborough and Cates Creek Park was completed in FY24. The engineer cost estimates were higher than anticipated, so additional feasibility work was completed in FY25. A Benefits Analysis was also developed.
- Feasibility Study Phase II shows alternative alignments for the trails which result in cost savings.
- Benefits Analysis shows great support for the greenway by community groups and members.
- It is uncertain if Ridgewalk will compete well for funding through the Transportation Improvement Plan. Additional funding options, including grants, will be pursued once the feasibility of the project is determined.

Project Expenditures

Ridgewalk Greenway - South Segment

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CONSTRUCTION	\$0	\$0	\$0	\$0	\$0	\$0	\$6,000,000
DESIGN	\$0	\$0	\$0	\$0	\$800,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$800,000	\$0	\$6,000,000

Object Code Description	FY33
Amount	
CONSTRUCTION	\$0
DESIGN	\$0
AMOUNT	\$0

Project Funding

Ridgewalk Greenway - South Segment

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$0	\$0	\$0	\$6,000,000
TRANSFER FROM GENERAL FUND	\$0	\$0	\$0	\$0	\$800,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$800,000	\$0	\$6,000,000

Itemization Description	FY33
Amount	
DEBT ISSUANCE PROCEEDS	\$0
TRANSFER FROM GENERAL FUND	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Garbage Truck Replacements

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Solid Waste

Priority Rank

1

Project Description

Replace garbage trucks on a 7-year replacement cycle.

Project Justification

Solid Waste vehicles are replaced on a 7-year replacement cycle to ensure reliability, and reduce downtime and maintenance costs. Replaced trucks move into reserve status for several years before being retired.

#229, a 2015 Mack automated garbage truck - The truck is already 9 years old with 56k+ miles, and is now being used as a backup.

#437

Project Highlights

Truck replacements will be paid for with set-aside funding committed for solid waste vehicles.

#229: Order in FY27

#437: Order in FY33

Project Expenditures

Garbage Truck Replacements

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
MISC - TAX, TAGS, ETC	\$0	\$2,010	\$0	\$0	\$0	\$0	\$0
CAPITAL - VEHICLES	\$0	\$420,000	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$422,010	\$0	\$0	\$0	\$0	\$0

Object Code Description	FY33
Amount	
MISC - TAX, TAGS, ETC	\$2,010
CAPITAL - VEHICLES	\$495,000
AMOUNT	\$497,010

Project Funding

Garbage Truck Replacements

Line Item Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
Empty Values	\$0	\$422,010	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$422,010	\$0	\$0	\$0	\$0	\$0

Line Item Description	FY33
Amount	
Empty Values	\$497,010
AMOUNT	\$497,010

Operating Budget Impact

Garbage Truck Replacements

Object Code Description	FY2027	FY2028	FY2029
Amount			
CAPITAL - VEHICLES	\$420,000	\$0	\$0
MISC - TAX, TAGS, ETC	\$2,010	\$0	\$0
AMOUNT	\$422,010	\$0	\$0



Leaf Truck Replacements

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Solid Waste

Priority Rank

3

Project Description

Replace leaf trucks on a 7-year replacement cycle.

Project Justification

Solid Waste vehicles are replaced on a 7-year replacement cycle to ensure reliability, and reduce downtime and maintenance costs. Replaced trucks move into reserve status for several years before being retired.

- #833, a 2022 Freightliner.

Project Highlights

The purchase of these trucks will be paid for with set-aside funding committed for solid waste vehicles.

- #833 - Order in FY32 for delivery in FY33.

Project Expenditures

Leaf Truck Replacements

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
MISC - TAX, TAGS, ETC	\$0	\$0	\$0	\$0	\$0	\$0	\$2,010
CAPITAL - VEHICLES	\$0	\$0	\$0	\$0	\$0	\$0	\$435,000
AMOUNT	\$0	\$0	\$0	\$0	\$0	\$0	\$437,010

Object Code Description	FY33
Amount	
MISC - TAX, TAGS, ETC	\$0
CAPITAL - VEHICLES	\$0
AMOUNT	\$0

Project Funding

Leaf Truck Replacements

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
OPERATING REVENUE	\$0	\$0	\$0	\$0	\$0	\$0	\$2,010
TRANSFER FROM COMMITTED FUNDS	\$0	\$0	\$0	\$0	\$0	\$0	\$435,000
AMOUNT	\$0	\$0	\$0	\$0	\$0	\$0	\$437,010

Itemization Description	FY33
Amount	
OPERATING REVENUE	\$0
TRANSFER FROM COMMITTED FUNDS	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Passenger Rail and Multi-Modal Station

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Special Appropriations

Priority Rank

1

Project Description

Train station building and parking to facilitate passenger rail service in Hillsborough.

Project Justification

The station will include a ticket office and waiting room, as well as a town board meeting room and a few permanent town offices (approximately 18% of the overall building). This facility is largely funded by the state and regional transit partners, excluding the cost of town offices, up-fitting the facility, and any expense that exceeds the allotted allocation. The town will accept long-term maintenance and ownership responsibility for the building.

Site improvements will include an access road from Orange Grove Street, two parking lots with a combined 100 parking spaces, some of which could be used as a local transit park-and-ride facility, stormwater treatment and bringing utilities to the site. Regional transit partners will be asked to modify routes to provide connected service from the Hillsborough Circulator, 420 route and other bus service to the train station. Feasibility of pedestrian connectivity to the station from downtown Hillsborough was included in the design of this project, but the construction of those improvements is considered outside the scope of this project and will be requested separately.

Station design includes several sustainability initiatives with the goal of eventually providing a net zero building, including a green roof, green stormwater infrastructure, and photo-voltaic rooftop solar arrays. The project also advances the town's sustainability goals by providing a transit connection for regular commuting and travel not currently available to town residents. The station and expected surrounding development will also provide enhanced connectivity and walkability to a new area of town and is expected to serve as a bridge to connect downtown to activity areas south of the river. The creation of a station that serves as a transit hub and public gathering place represents a significant investment in the town's physical and social infrastructure.

Project Highlights

The town, NCDOT and Go Triangle have approved an interlocal agreement for the project, committing the state and local tax funding to the project. The project must be completed within 7 years of the funding agreement date, or the town will be expected to reimburse the outside funding to the partners. Project costs will be run through the town's budget and reimbursed later.

FY15 - Conceptual station plan was completed

FY23 - Station design completed

FY24 - Design submitted to NC Railroad for approval

FY26 & FY27 - Design

FY28 - Construction (spring '28 is earliest possible date)

NOTE: Budget does not currently include \$600k for solar panels or EV charging infrastructure.

Project Expenditures

Passenger Rail and Multi-Modal Station

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CONSTRUCTION	\$9,360,000	\$0	\$1,175,000	\$0	\$0	\$0	\$0
DESIGN	\$891,000	\$0	\$0	\$0	\$0	\$0	\$0
MISCELLANEOUS	\$145,500	\$0	\$100,000	\$0	\$0	\$0	\$0
LEGAL	\$42,500	\$0	\$0	\$0	\$0	\$0	\$0
UTILITIES	\$0	\$0	\$0	\$2,500	\$2,500	\$2,500	\$2,500
MAINTENANCE - GROUNDS	\$0	\$0	\$0	\$2,500	\$2,500	\$2,500	\$2,500
MAINTENANCE - BUILDINGS	\$0	\$0	\$0	\$30,000	\$30,000	\$30,000	\$30,000
AMOUNT	\$10,439,000	\$0	\$1,275,000	\$35,000	\$35,000	\$35,000	\$35,000

Object Code Description	FY33
Amount	
CONSTRUCTION	\$0
DESIGN	\$0
MISCELLANEOUS	\$0
LEGAL	\$0
UTILITIES	\$2,500
MAINTENANCE - GROUNDS	\$2,500
MAINTENANCE - BUILDINGS	\$30,000
AMOUNT	\$35,000

Project Funding

Passenger Rail and Multi-Modal Station

Line Item Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
Empty Values	\$10,439,000	\$0	\$1,275,000	\$35,000	\$35,000	\$35,000	\$35,000
AMOUNT	\$10,439,000	\$0	\$1,275,000	\$35,000	\$35,000	\$35,000	\$35,000

Line Item Description	FY33
Amount	
Empty Values	\$35,000
AMOUNT	\$35,000

Operating Budget Impact

Passenger Rail and Multi-Modal Station

Object Code Description	FY2027	FY2028	FY2029
Amount			
DEBT SERVICE - INTEREST	\$0	\$0	\$169,250
DEBT SERVICE - PRINCIPAL	\$0	\$0	\$156,869
MAINTENANCE - BUILDINGS	\$0	\$0	\$30,000
MAINTENANCE - GROUNDS	\$0	\$0	\$2,500
UTILITIES	\$0	\$0	\$2,500
AMOUNT	\$0	\$0	\$361,119



South Churton Street Improvements Cost Share

Capital Improvement Project (FY27-FY33)

Fund

General Fund

Department

Streets

Priority Rank

1

Project Description

Pedestrian improvements in the S. Churton Street corridor, from the Eno River to the Interstate 40 interchange.

Project Justification

This project is funded in the NCDOT Transportation Improvement Plan and is listed as a widening, but will also allow for the construction of bicycle and pedestrian improvements in the entire corridor.

Current NCDOT policy would require the town to financially participate in the provision of pedestrian improvements where they do not already exist in the corridor. In FY19, the town's participation was estimated at \$68,000 (20% of actual sidewalk construction cost). Given the passage of time and escalation of prices, staff is estimating the town's participation at \$100,000. Changes in design and NCDOT policy may impact whether and how much the town must participate in this project. The FY29 funds are placeholder funds.

It is possible the town will not have to participate in this project if NCDOT amends their policies to robustly implement their Complete Streets policy. At this time, the town should plan on participating. Missing this opportunity to install pedestrian improvements in this corridor would commit the town to fully funding any future sidewalk improvements in the corridor. Such a project would be in the millions of dollars rather than the modest amount estimated by participating at the time of widening.

Project Highlights

- FY23 & FY24 - The town is funding a feasibility study with Surface Transportation Block Grant funds passed through from the Metropolitan Planning Organization. The town approved a \$50,000 contribution of local funds in FY23 to pair with \$150,000 of block grant funding to complete the feasibility study. This effort will include detailed outreach to ensure the final design is fully acceptable to the community as a whole and matches the town's long-term interests.
- FY26 - NCDOT is anticipated to start right-of-way acquisition.
- FY29 - NCDOT is anticipated to start construction, but this is subject to adjustment as the schedules of other state projects becomes clearer. The town's funding portion is planned as a cash transfer from the General Fund in Fiscal Year 2029.

Project Expenditures

South Churton Street Improvements Cost Share

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CONSTRUCTION	\$0	\$0	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Object Code Description	FY33
Amount	
CONSTRUCTION	\$100,000
AMOUNT	\$100,000

Project Funding

South Churton Street Improvements Cost Share

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM GENERAL FUND	\$0	\$0	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Object Code Description	FY33
Amount	
TRANSFER FROM GENERAL FUND	\$100,000
AMOUNT	\$100,000

Operating Budget Impact

South Churton Street Improvements Cost Share

Itemization Description	FY2027	FY2028	FY2029
Amount			
TRANSFER TO GENERAL CAPITAL IMPROVEMENT FUND	\$0	\$0	\$0
AMOUNT	\$0	\$0	\$0

Water & Sewer Capital Improvement Plan



Water & Sewer Capital Improvement Plan Summary

Capital Improvement Plan (FY27-FY33)

Water & Sewer Capital Improvements Expenditures by Project

Water and Sewer CIP Expenditure Summary by Project

Worksheet Name	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
Bellevue Mill Interceptor Upgrade	\$0	\$0	\$0	\$0	\$140,000	\$40,000	\$1,320,000
Cates Creek Outfall Upgrade	\$195,000	\$2,705,000	\$0	\$0	\$0	\$225,000	\$5,175,000
Dam Repairs at West Fork Eno Reservoir	\$115,840	\$2,800,000	\$0	\$0	\$0	\$0	\$0
Electrical System Upgrade at Water Treatment Plant	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
Elizabeth Brady Pump Station and Force Main Upgrade	\$1,000,000	\$800,000	\$0	\$3,500,000	\$0	\$0	\$0
Eno River Interceptor Upgrade - East	\$750,000	\$2,080,000	\$0	\$3,120,000	\$0	\$0	\$0
Eno River Interceptor Upgrade - West	\$0	\$0	\$0	\$0	\$350,000	\$1,790,000	\$0
Exchange Club Interceptors	\$380,000	\$0	\$0	\$0	\$2,500,000	\$0	\$0
Galvanized Water Main and Lead/Galvanized Service Replacements	\$160,000	\$0	\$300,000	\$0	\$200,000	\$200,000	\$0
Hasell Water Tank Replacement	\$210,000	\$0	\$0	\$0	\$395,000	\$5,240,000	\$0
Hydrant and Valve Project	\$487,647	\$0	\$0	\$270,000	\$275,000	\$0	\$0
Process Controls Relocation to SCADA	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0
Sewer Equalization Basin	\$0	\$0	\$0	\$0	\$2,200,000	\$0	\$0
Sewer Jetter/Flush Truck	\$0	\$222,010	\$0	\$0	\$0	\$0	\$0
Tertiary Filter Flocculators	\$0	\$0	\$0	\$10,000	\$180,000	\$0	\$0
Undersized Sewer Main Replacements	\$0	\$500,000	\$0	\$0	\$500,000	\$0	\$0
US-70 Business Water Improvements	\$305,000	\$0	\$0	\$50,000	\$5,320,000	\$0	\$0
Vacuum Excavator	\$0	\$0	\$0	\$155,000	\$0	\$0	\$0
Water Distribution System Master Plan Improvements	\$0	\$0	\$100,000	\$200,000	\$500,000	\$500,000	\$500,000
Water Treatment Plant Sodium Hypochlorite Conversion	\$615,600	\$1,350,000	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$4,219,087	\$10,757,010	\$400,000	\$7,305,000	\$12,660,000	\$7,995,000	\$6,995,000

Worksheet Name	FY33
Amount	
Bellevue Mill Interceptor Upgrade	\$0
Cates Creek Outfall Upgrade	\$100,000
Dam Repairs at West Fork Eno Reservoir	\$0
Electrical System Upgrade at Water Treatment Plant	\$0
Elizabeth Brady Pump Station and Force Main Upgrade	\$0
Eno River Interceptor Upgrade - East	\$0
Eno River Interceptor Upgrade - West	\$0

Worksheet Name	FY33
Exchange Club Interceptors	\$0
Galvanized Water Main and Lead/Galvanized Service Replacements	\$0
Hasell Water Tank Replacement	\$0
Hydrant and Valve Project	\$0
Process Controls Relocation to SCADA	\$0
Sewer Equalization Basin	\$0
Sewer Jetter/Flush Truck	\$0
Tertiary Filter Flocculators	\$0
Undersized Sewer Main Replacements	\$0
US-70 Business Water Improvements	\$0
Vacuum Excavator	\$0
Water Distribution System Master Plan Improvements	\$0
Water Treatment Plant Sodium Hypochlorite Conversion	\$0
AMOUNT	\$100,000

Water & Sewer Capital Improvements Revenues by Type

Water and Sewer CIP Revenue Summary by Category

Object Type (Re)	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
Debt Issuance Proceeds	\$0	\$2,547,660	\$0	\$6,620,000	\$6,436,426	\$7,030,000	\$5,720,000
Grants	\$70,000	\$0	\$0	\$0	\$0	\$0	\$0
Interfund Transfers	\$4,251,537	\$4,997,042	\$150,000	\$580,000	\$6,223,574	\$965,000	\$1,275,000
Intergovernmental	\$92,550	\$56,800	\$0	\$0	\$0	\$0	\$0
Other	\$0	\$3,230,508	\$300,000	\$155,000	\$0	\$0	\$0
AMOUNT	\$4,414,087	\$10,832,010	\$450,000	\$7,355,000	\$12,660,000	\$7,995,000	\$6,995,000

Object Type (Re)	FY33
Amount	
Debt Issuance Proceeds	\$0
Grants	\$0
Interfund Transfers	\$100,000
Intergovernmental	\$0
Other	\$0
AMOUNT	\$100,000

Water & Sewer Capital Improvements: Operating Budget Impact

Water and Sewer CIP Operating Impact by Project

Worksheet Name	FY2027	FY2028	FY2029
Amount			
Dam Repairs at West Fork Eno Reservoir	\$195,540	\$164,967	\$329,933
Hydrant & Valve Project	\$0	\$0	\$270,000
Process Controls Relocation to SCADA	\$300,000	\$0	\$0
Sewer Jetter/Flush Truck	\$222,010	\$0	\$0
Tertiary Filter Flocculators	\$0	\$0	\$10,000
Vacuum Excavator	\$0	\$0	\$155,000
Water Distribution System Master Plan Improvements	\$0	\$100,000	\$200,000
AMOUNT	\$717,550	\$264,967	\$964,933



Bellevue Mill Interceptor Upgrade

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Collection

Priority Rank

8

Project Description

Replace 2,700 linear feet of 8" sewers with 12" sewers and 15 manholes, from near the end of Forrest Street southward to Eno Street. Abandon the currently unused branch.

Project Justification

This Bellevue Mill interceptor was in existence prior to the town having a wastewater treatment plant, and possibly as early as the 1920s per mill maps. Portions of the are located in brownfield sites, so additional costs will be incurred for extra permitting and to identify and properly dispose of contaminated soils. Hydraulic modeling has shown this interceptor is undersized for 2040 growth scenarios and is significant contributor of inflow/infiltration. Regardless, it is well beyond its useful life and likely contributing to inflow and infiltration in the basin.

This interceptor is also paralleled by a 12" sewer. The parallel 12" interceptor was constructed to take flow from the Efland force main, which has since been abandoned. CCTV footage collected by Town staff indicates it is possible to reconfigure existing connections to this line to allow its abandonment. Abandonment of this line is recommended in the first phase to reduce inflow/infiltration, the upsizing of this line is proposed only after the Eno Outfall projects are complete (seperate project).

Project Highlights

Upgrading this main is required to enable higher density redevelopment and development in the western part of Hillsborough.

\$1.2M - Construction (FY32)

\$120k - Construction Administration (FY32)

Project Expenditures

Bellevue Mill Interceptor Upgrade

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
LAND ACQUISITION PROJECTS	\$0	\$0	\$0	\$0	\$20,000	\$20,000	\$0
PROFESSIONAL SERVICES	\$0	\$0	\$0	\$0	\$20,000	\$0	\$0
CONSTRUCTION	\$0	\$0	\$0	\$0	\$0	\$20,000	\$1,320,000
AMOUNT	\$0	\$0	\$0	\$0	\$140,000	\$40,000	\$1,320,000

Object Code Description	FY33
Amount	
DESIGN	\$0
LAND ACQUISITION PROJECTS	\$0
PROFESSIONAL SERVICES	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Bellevue Mill Interceptor Upgrade

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM WATER AND SEWER FUND	\$0	\$0	\$0	\$0	\$140,000	\$40,000	\$0
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$0	\$0	\$0	\$1,320,000
AMOUNT	\$0	\$0	\$0	\$0	\$140,000	\$40,000	\$1,320,000

Itemization Description	FY33
Amount	
TRANSFER FROM WATER AND SEWER FUND	\$0
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Cates Creek Outfall Upgrade

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Collection

Priority Rank

4

Project Description

Upsize the Cates Creek Outfall to address anticipated demand from current and anticipated growth.

Project Justification

The Cates Creek Outfall is 3.4 miles long and was built in two phases. The upper reach, which discharges into the Elizabeth Brady Pumping Station was built in the mid-1990s. The lower portion, which is called Phase 2, was built in the early to mid-2000s when Waterstone began to develop. The entire line is the main pipeline in the Elizabeth Brady sewer basin.

Collection system modeling shows in the next ten years that the outfall will need to be monitored and upsized appropriately. While much newer than the River Pumping Station Eno River Interceptors, there is evidence of a wet weather response in the system. This schedule may need to be escalated however due to a recent inquiry about a significant development south of Waterstone Drive that was not accounted for in modeling, as well as the underestimation of demand proposals of sites that were accounted for. The scope and extent of the upsizing is currently unknown, but the proposed development, if it proceeds, would exceed the pipe capacity in some areas. Developers will be expected to cost share in necessary upgrades.

Project Highlights

This request relates to the Elizabeth Brady Pumping Station and Force Main project as both will need to be investigated and upsized accordingly, either sooner or later depending on development pacing. If the project is not approved, development will be limited, and sanitary sewer overflows may occur as the system ages and starts to leak more.

Funding Timeline:

Preliminary Engineering: FY27 - \$200k & FY28 - \$200k

Design/Permitting/Bidding: FY27 - \$800k & FY29 - \$800k

Construction Administration: FY-27 - \$1.9 million, FY29 - \$400k & FY31 - \$320k

Construction: FY29 - \$4.0M & FY31 - \$4.2M

***Project is development driven and must be completed per the budgeted timeline. Developer proffers to be applied directly to design and construction costs.

Project Expenditures

Cates Creek Outfall Upgrade

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$120,000	\$680,000	\$0	\$0	\$0	\$25,000	\$775,000
PROFESSIONAL SERVICES	\$75,000	\$125,000	\$0	\$0	\$0	\$200,000	\$0
CONSTRUCTION	\$0	\$1,900,000	\$0	\$0	\$0	\$0	\$4,400,000
AMOUNT	\$195,000	\$2,705,000	\$0	\$0	\$0	\$225,000	\$5,175,000

Object Code Description	FY33
Amount	
DESIGN	\$0
PROFESSIONAL SERVICES	\$0
CONSTRUCTION	\$100,000
AMOUNT	\$100,000

Project Funding

Cates Creek Outfall Upgrade

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM WATER AND SEWER FUND	\$195,000	\$0	\$0	\$0	\$0	\$0	\$517,538
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$0	\$0	\$0	\$4,400,000
DEVELOPERS CONTRIBUTION	\$0	\$1,708,498	\$0	\$0	\$0	\$0	\$0
SPECIAL ASSESSMENT DISTRICT REVENUE	\$0	\$996,502	\$0	\$0	\$0	\$225,000	\$257,462
AMOUNT	\$195,000	\$2,705,000	\$0	\$0	\$0	\$225,000	\$5,175,000

Itemization Description	FY33
Amount	
TRANSFER FROM WATER AND SEWER FUND	\$100,000
DEBT ISSUANCE PROCEEDS	\$0
DEVELOPERS CONTRIBUTION	\$0
SPECIAL ASSESSMENT DISTRICT REVENUE	\$0
AMOUNT	\$100,000

Operating Budget Impact

No FY27-29 operating impact.



Elizabeth Brady Pump Station and Force Main Upgrade

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Collection

Priority Rank

3

Project Description

Design, bid and construct a public sanitary sewer pumping station upgrade at the existing Elizabeth Brady Pumping Station site. DEVELOPMENT RELATED - DO NOT MOVE

Project Justification

The station upgrades would enable new development in the Elizabeth Brady basin, as well as denser redevelopment of existing sites. The station was rebuilt in 2012 and sized for a quick upgrade of pump capacity, which is currently being implemented. Unfortunately, the level of development discharging to this station is much greater than this quick upgrade option can handle, extending the useful life only a few years at best.

A developer is proposing consolidation of two to three existing sanitary sewer pumping stations (Woods Edge Front, Woods Edge Back, and Nazarene) into a new, larger pumping station. The larger pumping station would be sized to handle the three existing station that would be abandoned, as well future buildout within the basin, including the new, proposed development. The new station would likely discharge into the existing Cates Creek interceptor that drains to the Elizabeth Brady station.

The new, larger pumping station's operating point is significant when compared to Elizabeth Brady's operating point, and even a phased approach to the buildout of the basin served by the new pumping station would require upgrades at Elizabeth Brady. The developer is working with town staff to provide funding, either with an advance of system development fees or a proffer of future funds, to enable this upgrade to serve the proposed development. The developer would also be required to build the new station and force main that enables the future abandonment of Wood Edge Front, Woods Edge Back, and Nazarene Pumping Stations to town standards with no cost participation by the town. The upgrade to the Elizabeth Brady station will require an upgrade of the existing force main to the wastewater treatment plant to ensure efficient pumping station operations.

Project Highlights

This project relates to the Cates Creek interceptor. If the decision is made to control the amount of development discharging to this station, then this project and the related Cates Creek outfall project scope can be minimized.

Project Expenditures

Elizabeth Brady Pump Station and Force Main Upgrade

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$750,000	\$0	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$250,000	\$800,000	\$0	\$3,500,000	\$0	\$0	\$0
AMOUNT	\$1,000,000	\$800,000	\$0	\$3,500,000	\$0	\$0	\$0

Object Code Description	FY33
Amount	
DESIGN	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Elizabeth Brady Pump Station and Force Main Upgrade

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
SEWER SYSTEM DEVELOPMENT FEES	\$450,000	\$800,000	\$0	\$0	\$0	\$0	\$0
CAPITAL FACILITIES FEES	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0
TRANSFER FROM WATER AND SEWER FUND	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$3,500,000	\$0	\$0	\$0
AMOUNT	\$1,000,000	\$800,000	\$0	\$3,500,000	\$0	\$0	\$0

Itemization Description	FY33
Amount	
SEWER SYSTEM DEVELOPMENT FEES	\$0
CAPITAL FACILITIES FEES	\$0
TRANSFER FROM WATER AND SEWER FUND	\$0
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Eno River Interceptor Upgrade - East

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Collection

Priority Rank

1

Project Description

Replace approximately 1 mile of 18" and 21" pipes with at least 30" and 36" pipes from the current River Pumping Station location to Churton Street, along with several manholes.

Project Justification

The Eno River Interceptors were constructed with the wastewater plant in the mid-70s, thus they are over 40 years old. They are concrete and subject to corrosion from hydrogen sulfide. The original interceptors were installed very shallow – in places less than 4 feet deep, making them susceptible to damage by excavation or directional drilling of communications lines. There is also corrosion from hydrogen sulfide.

No significant rehabilitation or replacement of the collection system in this area has ever occurred. Over the years, the interceptor manholes were raised to prevent sanitary sewer overflows due to wet weather surcharging (water other than wastewater entering the system) and because they were not protected from the floodplain and some lining has been performed. The original manholes are constructed of brick material and subject to groundwater intrusion. Hydraulic modeling shows that due to the shallowness and some flat sloped pipes, the pipes are exceeding their capacity during wet weather events and TS Debby verified this concern with multiple sanitary sewer overflows along this portion of pipe. The town has committed and projected growth. These and other similar projects will exacerbate the collection system's hydraulic capacity which is already restricted in wet weather, resulting in sanitary sewer overflows and violations, and possibly even a moratorium on growth until upsizing can occur. To support current needs and future growth through 2040, these pipes need to be upsized.

Since these interceptor pipes carry flow from areas that are the focus of growth, the Board has already agreed to defer large projects contributing wastewater into the River pumping station basin due to wet weather concerns as we investigate our most leaky basin, Lawndale, and secure funding for this replacement. These pipes are some of the oldest in town. This project intertwines with the River Pump Station project for which a federal grant award was received.

Project Highlights

Further development, as planned for the town, will exacerbate any hydraulically limited sewer pipes and cause overflows that result in noncompliance. This request supports the growth the town has worked hard to attract and approve. The money budgeted is what was submitted for funding to the state revolving fund (but not selected to date) and is reflective of 2040 projected flows. The current construction climate may result in an increase in costs. Much of the pipe need to be upsized to handle the projected 2025 growth. This cannot be deferred much longer.

The town currently plans to pursue the State of North Carolina's revolving loan program to finance the \$5.2M construction portion of this project. However, the loan program is based upon priority points for various categories. As such, an award is NOT guaranteed. However, recent sanitary sewer overflows in this interceptor will add priority to future applications.

Project Expenditures

Eno River Interceptor Upgrade - East

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0
LAND ACQUISITION PROJECTS	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0
PROFESSIONAL SERVICES	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$0	\$2,080,000	\$0	\$3,120,000	\$0	\$0	\$0
AMOUNT	\$750,000	\$2,080,000	\$0	\$3,120,000	\$0	\$0	\$0

Object Code Description	FY33
Amount	
DESIGN	\$0
LAND ACQUISITION PROJECTS	\$0
PROFESSIONAL SERVICES	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Eno River Interceptor Upgrade - East

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CAPITAL FACILITIES FEES	\$750,000	\$0	\$0	\$0	\$0	\$0	\$0
SEWER SYSTEM DEVELOPMENT FEES	\$0	\$2,080,000	\$0	\$0	\$0	\$0	\$0
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$3,120,000	\$0	\$0	\$0
AMOUNT	\$750,000	\$2,080,000	\$0	\$3,120,000	\$0	\$0	\$0

Itemization Description	FY33
Amount	
CAPITAL FACILITIES FEES	\$0
SEWER SYSTEM DEVELOPMENT FEES	\$0
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Eno River Interceptor Upgrade - West

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Collection

Priority Rank

6

Project Description

Replace approximately 2,900 linear feet of 18" sewers with 24" sewers and 12 manholes.

Project Justification

This sewer interceptor is one of the oldest in town, built in the 1970s. The modeling report recommendation has shown that the sewer experiences wet weather capacity issues (leaks) and is undersized for potential 2040 growth. It will need to be upsized to meet future demands and due to general condition deterioration. The general vicinity of the work is west of Churton Street to Oconechee Street on the south side of the river.

Project Highlights

With the high-density redevelopment and new development expected in the downtown and west Hillsborough area west of Churton Street, it is recommended to upsize this interceptor.

Project Expenditures

Eno River Interceptor - West

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
LAND ACQUISITION PROJECTS	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
CONSTRUCTION	\$0	\$0	\$0	\$0	\$0	\$1,790,000	\$0
DESIGN	\$0	\$0	\$0	\$0	\$250,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$350,000	\$1,790,000	\$0

Object Code Description	FY33
Amount	
LAND ACQUISITION PROJECTS	\$0
CONSTRUCTION	\$0
DESIGN	\$0
AMOUNT	\$0

Project Funding

Eno River Interceptor - West

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
STATE REVOLVING LOAN	\$0	\$0	\$0	\$0	\$0	\$1,790,000	\$0
TRANSFER FROM WATER AND SEWER FUND	\$0	\$0	\$0	\$0	\$350,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$350,000	\$1,790,000	\$0

Itemization Description	FY33
Amount	
STATE REVOLVING LOAN	\$0
TRANSFER FROM WATER AND SEWER FUND	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Exchange Club Interceptors

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Collection

Priority Rank

2

Project Description

Replace 2,250 linear feet of gravity sewer with 15-inch (2040 committed) or 18-inch diameter (2040 committed + potential flows) between Orange Grove Road and Riverwalk.

Project Justification

This gravity sewer was installed in the early 1970s. Recent hydraulic modeling of the collection system revealed a capacity deficiency for existing and proposed growth conditions. There is also some configuration of the mains that may contribute to hydraulic flow restrictions (i.e., there are zig zags that do not provide smooth transitions and allow buildup of corrosive gases). The current brick manholes along this segment are in disrepair. The town has paid to rehabilitate the manholes to keep them from crumbling, leaking or allowing infiltration. This segment of sewers goes through Exchange Club Park and is generally between Orange Grove Road and the Riverwalk.

Project Highlights

Upsize this infrastructure with possible realignments to address current and future growth, and to improve its condition.

Project Expenditures

Exchange Club Interceptors

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CONSTRUCTION	\$170,000	\$0	\$0	\$0	\$2,500,000	\$0	\$0
DESIGN	\$140,000	\$0	\$0	\$0	\$0	\$0	\$0
LAND ACQUISITION PROJECTS	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0
PROFESSIONAL SERVICES	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$380,000	\$0	\$0	\$0	\$2,500,000	\$0	\$0

Object Code Description	FY33
Amount	
CONSTRUCTION	\$0
DESIGN	\$0
LAND ACQUISITION PROJECTS	\$0
PROFESSIONAL SERVICES	\$0
AMOUNT	\$0

Project Funding

Exchange Club Interceptors

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM WATER AND SEWER FUND	\$360,000	\$0	\$0	\$0	\$0	\$0	\$0
SEWER SYSTEM DEVELOPMENT FEES	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$0	\$2,500,000	\$0	\$0
AMOUNT	\$380,000	\$0	\$0	\$0	\$2,500,000	\$0	\$0

Itemization Description	FY33
Amount	
TRANSFER FROM WATER AND SEWER FUND	\$0
SEWER SYSTEM DEVELOPMENT FEES	\$0
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Sewer Equalization Basin

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Collection

Priority Rank

9

Project Description

Construct a 1,000,000 gallon above-ground concrete storage tank. This tank will receive flow from the sewer system during wet weather events to reduce the total volume of sewage that must be processed by the wastewater treatment plant. The flow discharged into this basin will be drained back into the plant once the wet weather event passes and the flow into the plant drops to more treatable levels.

Project Justification

The proposed tank would either be installed adjacent to the existing Elizabeth Brady Pump Station on property already owned by the Town, or at the wastewater treatment plant at a location determined at a later date. A final location for the basin will be established once a master plan for the wastewater treatment plant is complete, the cost estimate provided for this project is associated with a site adjacent to the Elizabeth Brady pump station and is subject to revision if the tank is moved to the wastewater treatment plant site.

Project Highlights

N/A

Project Expenditures

Sewer Equalization Basin

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CONSTRUCTION	\$0	\$0	\$0	\$0	\$2,200,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$2,200,000	\$0	\$0

Object Code Description	FY33
Amount	
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Sewer Equalization Basin

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$0	\$2,200,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$2,200,000	\$0	\$0

Object Code Description	FY33
Amount	
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Sewer Jetter/Flush Truck

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Collection

Priority Rank

7

Project Description

Sewer Jetter/Flush Truck - This truck incorporates a jet machine mounted to the chassis of a single axle truck, providing easy maneuverability for use in sewer line cleaning and flushing, clearing sewer blockages, and pressure washing. This truck would be an upgrade to our trailer mounted jet machine for everyday jetting/cleaning needs.

Project Justification

Our current jet machine is a trailer mounted unit that has to be pulled by a larger utility truck in order to be used. It was purchased in 2008 (16 yrs old) and has been a vital asset to provide quality service to our customers in cleaning sewer lines, customers sewer laterals, and keeping the river walk clean by our Public Works Department. With our current machine, not all of our Collections crew staff is able to pull it due to vehicle size needed to tow. Having a truck mounted jet machine would allow all staff to respond to emergencies during and after operating hours, allow for quicker response times since trailer hookup is not needed and its size is more compact than the utility truck and trailer allowing for easier maneuverability around the narrower streets in Hillsborough and tighter sewer outfall easements.

Due to the age of our current jet machine and the amount of use it receives, this jet/flush truck would become a dependable and highly utilized piece of equipment with everyday tasks including sewer blockages and sewer line maintenance. Our state permit for the Collections system requires that we clean 10% of our sewer system each year which is growing exponentially. Having this truck would allow our team to operate 2 crews and 2 pieces of equipment to be more efficient with our state mandated cleaning which would free up the rest of the year to focus on other tasks/maintenance.

Project Highlights

- More compact for easier accessibility and maneuverability around town.
- A vehicle that every crew member can operate.
- Decrease trailer related incidents.
- Provides redundancy to improve sewer line cleaning efficiency and a backup for emergency response situations if a machine is down for repair/maintenance.

Project Expenditures

Sewer/Jetter Flush Truck

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CAPITAL - VEHICLES	\$0	\$220,000	\$0	\$0	\$0	\$0	\$0
MISC - TAX, TAGS, ETC	\$0	\$2,010	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$222,010	\$0	\$0	\$0	\$0	\$0

Object Code Description	FY33
Amount	
CAPITAL - VEHICLES	\$0
MISC - TAX, TAGS, ETC	\$0
AMOUNT	\$0

Project Funding

Sewer/Jetter Flush Truck

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
OPERATING REVENUE	\$0	\$222,010	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$222,010	\$0	\$0	\$0	\$0	\$0

Itemization Description	FY33
Amount	
OPERATING REVENUE	\$0
AMOUNT	\$0

Operating Budget Impact

Sewer Jetter/Flush Truck

Object Code Description	FY2027	FY2028	FY2029
Amount			
CAPITAL - VEHICLES	\$220,000	\$0	\$0
MISC - TAX, TAGS, ETC	\$2,010	\$0	\$0
AMOUNT	\$222,010	\$0	\$0



Undersized Sewer Main Replacements

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Collection

Priority Rank

5

Project Description

Replace 4" & 6" sewer mains.

Project Justification

The town installed or allowed to be installed sewer mains less than the state minimum design criteria of 8" diameter. Several parcels are served by 4" and 6" sewer mains where normally, one residential home or low demand non-residential home has its own dedicated 4" sewer main. Some of the undersized mains installed were extended without a permit, and have already demonstrated to be clogged and have several sags. These undersized sewer mains cause extra staff time to clean, have multiple sags which holds sewage and debris, cross properties without established easements, and are not serving customers to the level of service the town wants to provide. This project would replace such sewers with a proper design and established right of entry (easement) for future accessibility and maintenance.

Project Highlights

- Phase I: Mollies Ct., Hill St., and W. Corbin St.
- Phase II: Lawndale Ave, Sherwood Ave and Waddell St.

Project Expenditures

Undersized Sewer Main Replacements

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
LAND ACQUISITION PROJECTS	\$0	\$20,000	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$0	\$400,000	\$0	\$0	\$500,000	\$0	\$0
DESIGN	\$0	\$80,000	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$500,000	\$0	\$0	\$500,000	\$0	\$0

Object Code Description	FY33
Amount	
LAND ACQUISITION PROJECTS	\$0
CONSTRUCTION	\$0
DESIGN	\$0
AMOUNT	\$0

Project Funding

Undersized Sewer Main Replacements

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CAPITAL FACILITIES FEES	\$0	\$500,000	\$0	\$0	\$0	\$0	\$0
TRANSFER FROM WATER AND SEWER FUND	\$0	\$0	\$0	\$0	\$500,000	\$0	\$0
AMOUNT	\$0	\$500,000	\$0	\$0	\$500,000	\$0	\$0

Itemization Description	FY33
Amount	
CAPITAL FACILITIES FEES	\$0
TRANSFER FROM WATER AND SEWER FUND	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Tertiary Filter Flocculators

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Wastewater Treatment Plant

Priority Rank

1

Project Description

Install new flocculators ahead of tertiary filtration to maximize the total phosphorous removal needed to meet the Falls Lake Rules and reduce chemical usage.

Project Justification

The 2014 Phase 1 Plant Expansion included new tertiary filtration. The structure was designed to have flocculators installed, but the installation was removed from the project to reduce costs. The pedestals and electrical conduit were however installed to provide for future needs.

Currently, a chemical called Polyaluminum Chloride (PAC) is used to precipitate Phosphorous out of a dissolved state to a solid form that can be removed by filtration. Currently, PAC is fed to the clarifier, which provides the mixing necessary to activate the chemical. This method currently works well but will be insufficient in the future to meet the removal efficiency needed to meet the Falls Lake Rules.

Feeding PAC directly to the filters is also much more efficient. Laboratory testing has shown that with the addition of flocculators, the town should be able to reduce its chemical feed by 28% or more. This equates to chemical savings of approximately \$12,600 per year.

Project Highlights

This project can be delayed until the current Phosphorous removal efficiency is inadequate to meet permit requirements, which is estimated to be in FY29. However, the town will not realize the cost savings of reduced chemical usage or the reduction in its carbon footprint. The PAC is manufactured and then delivered from out-of-state locations. Flocculation will not only reduce the carbon emissions from the chemical manufacturing process but also the semi-truck deliveries from hundreds of miles away.

Project Expenditures

Tertiary Filter Flocculators

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
PROFESSIONAL SERVICES	\$0	\$0	\$0	\$10,000	\$0	\$0	\$0
CONSTRUCTION	\$0	\$0	\$0	\$0	\$180,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$10,000	\$180,000	\$0	\$0

Object Code Description	FY33
Amount	
PROFESSIONAL SERVICES	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Tertiary Filter Flocculators

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM WATER AND SEWER FUND	\$0	\$0	\$0	\$10,000	\$180,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$10,000	\$180,000	\$0	\$0

Itemization Description	FY33
Amount	
TRANSFER FROM WATER AND SEWER FUND	\$0
AMOUNT	\$0

Operating Budget Impact

Tertiary Filter Flocculators

Itemization Description	FY2027	FY2028	FY2029
Amount			
TRANSFER TO UTILITIES CAPITAL IMPROVEMENT FUND	\$0	\$0	\$10,000
AMOUNT	\$0	\$0	\$10,000



Galvanized Water Main Replacement

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Water Distribution

Priority Rank

6

Project Description

Replace galvanized water mains, upsize to 6" and provide fire protection.

Project Justification

Several old, galvanized 2" waterlines remain in service throughout Hillsborough. These lines are undersized, are not capable of providing fire flow protection, and corrode in the Hillsborough's soils. Galvanized pipes are not used in today's water main construction. The proposed project replaces existing galvanized lines with new, larger diameter mains capable of providing fire protection. Town records indicate that there are approximately 1.45 miles of identified galvanized mains. Compliance with the EPA's lead and copper rule will take place under a separate CIP item.

Project Highlights

If the project is not completed, the affected waterlines will continue to deteriorate. Adequate fire protection will not be available in the areas served by the current galvanized system.

FY26 - Design to begin

Project Expenditures

Galvanized Water Main & Lead/Galvanized Service Replacement

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$160,000	\$0	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$0	\$0	\$300,000	\$0	\$200,000	\$200,000	\$0
AMOUNT	\$160,000	\$0	\$300,000	\$0	\$200,000	\$200,000	\$0

Object Code Description	FY33
Amount	
DESIGN	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Galvanized Water Main & Lead/Galvanized Service Replacement

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM WATER AND SEWER FUND	\$160,000	\$0	\$0	\$0	\$200,000	\$200,000	\$0
CAPITAL FACILITIES FEES	\$0	\$0	\$300,000	\$0	\$0	\$0	\$0
AMOUNT	\$160,000	\$0	\$300,000	\$0	\$200,000	\$200,000	\$0

Itemization Description	FY33
Amount	
TRANSFER FROM WATER AND SEWER FUND	\$0
CAPITAL FACILITIES FEES	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Hasell Water Tank Replacement

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Water Distribution

Priority Rank

1

Project Description

Replace Hasell Street Water Tank with a new elevated water tank.

Project Justification

The existing Hasell Street Water Tank was constructed in the mid-1930s and it is the oldest tank in the town system. It holds 200,000 gallons and is constructed of riveted steel. It is the controlling tank in the Central Pressure Zone (CPZ), where water is initially pumped from the Water Treatment Plant and then distributed to CPZ customers, as well as to the North Tank in the North Pressure Zone (NPZ) through a pumping station beside the tank. The small volume of the tank makes it difficult to manage water distribution, with customers near the tank experiencing more pressure fluctuations due to the quickly varying water levels of this tank style.

Development within the Central Pressure Zone (CPZ) has created additional water volume needs, and an elevated tank will enable use of the entire tank volume. The existing tank is a standpipe, with only about 40 percent usable volume, as the tank cannot drop more than about 30 feet of its 72 feet height. The proposed tank will be the same height, but the design will allow use of the entire tank volume.

The new tank size will be a 500,000 gallon tank and located near the same site as the existing tank. If possible, the existing Hassell Pump Station should be replaced with newer equipment as part of this project. An additional \$500,000 was included in construction costs to cover this replacement. The existing pumps and motors are out of date, new equipment is needed to ensure parts and spares availability. The existing pump building is undersized, leaving limited space to work. New pumps, motors, and buildings are needed to facilitate efficient operations of the pumping station.

Project Highlights

The tank structure is sound, and inspections are performed annually, so this project is slated for later in the CIP. Costs are based on the final estimate prepared as part of the AIA grant report. This project is semi-related but not codependent to the US-70 Business Water Main Improvements project as water from Hasell tank must get to the US-70A tank.

The costs of this project will be funded by a combination of leftover funds from completed projects, system development fees, and transfers from the Water & Sewer Operating Fund.

Funding Timeline
FY30 - Design
FY31 - Construction

***Project is development driven and must be completed per the budgeted timeline.



Project Expenditures

Hasell Water Tank Replacement

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
LAND ACQUISITION PROJECTS	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0
DESIGN	\$70,000	\$0	\$0	\$0	\$370,000	\$0	\$0
PROFESSIONAL SERVICES	\$40,000	\$0	\$0	\$0	\$25,000	\$0	\$0
CONSTRUCTION	\$0	\$0	\$0	\$0	\$0	\$5,240,000	\$0
AMOUNT	\$210,000	\$0	\$0	\$0	\$395,000	\$5,240,000	\$0

Object Code Description	FY33
Amount	
LAND ACQUISITION PROJECTS	\$0
DESIGN	\$0
PROFESSIONAL SERVICES	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Hasell Water Tank Replacement

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM WATER AND SEWER FUND	\$95,000	\$0	\$0	\$0	\$395,000	\$0	\$0
PRIOR PROJECT REMAINING FUNDS - OTHER	\$43,522	\$0	\$0	\$0	\$0	\$0	\$0
GRANT - ASSET INVENTORY AND ASSESSMENT (AIA)	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0
PRIOR PROJECT REMAINING BOND PROCEEDS	\$31,478	\$0	\$0	\$0	\$0	\$0	\$0
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$0	\$0	\$5,240,000	\$0
AMOUNT	\$210,000	\$0	\$0	\$0	\$395,000	\$5,240,000	\$0

Itemization Description	FY33
Amount	
TRANSFER FROM WATER AND SEWER FUND	\$0
PRIOR PROJECT REMAINING FUNDS - OTHER	\$0
GRANT - ASSET INVENTORY AND ASSESSMENT (AIA)	\$0
PRIOR PROJECT REMAINING BOND PROCEEDS	\$0
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Hydrant and Valve Project

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Water Distribution

Priority Rank

2

Project Description

Replace old, obsolete fire hydrants and install valves on the hydrant legs where needed. Install new valves and piping where redundancy study recommends.

Project Justification

There are currently a large number of fire hydrants in the central pressure zone that were installed without a watch valve on the hydrant leg (valve on the pipe connecting the water main and the hydrant assembly). These cannot be turned off without turning off the water. Some of these hydrants date back to the 1930s and need to be replaced since parts are hard to find and they are sometimes difficult or impossible to disassemble. There are approximately 150 hydrants without watch valves. Additionally, in FY21, a consultant studied how many customers would be out of water if a pipe broke in various locations. The affected customers were prioritized based on the estimated demand of the outage area. This budget would include adding valves where needed to minimize impacts in four groups over the next several years.

If the town does not perform this work, it risks having these hydrants not work properly in the event of a fire, which could be catastrophic. Customers would also experience service disruptions or other impacts when ad-hoc repairs or replacements are needed. Additionally, there is an opportunity to reduce the risk of customers being out of service under certain main break scenarios by providing additional valves and piping in the system.

Project Highlights

This project has been funded with ARPA-enabled funds up to this point. Future allocations will come from Water & Sewer Operating Fund transfers in future years. This project is underway and is expected to take several years. Future allocations will ensure the project is completed in its entirety.

Project Expenditures

Hydrant and Valve Project

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CONSTRUCTION	\$462,647	\$0	\$0	\$270,000	\$275,000	\$0	\$0
DESIGN	\$15,000	\$0	\$0	\$0	\$0	\$0	\$0
PROFESSIONAL SERVICES	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$487,647	\$0	\$0	\$270,000	\$275,000	\$0	\$0

Object Code Description	FY33
Amount	
CONSTRUCTION	\$0
DESIGN	\$0
PROFESSIONAL SERVICES	\$0
AMOUNT	\$0

Project Funding

Hydrant and Valve Project

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM WATER AND SEWER FUND	\$487,647	\$0	\$0	\$270,000	\$275,000	\$0	\$0
AMOUNT	\$487,647	\$0	\$0	\$270,000	\$275,000	\$0	\$0

Itemization Description	FY33
Amount	
TRANSFER FROM WATER AND SEWER FUND	\$0
AMOUNT	\$0

Operating Budget Impact

Hydrant and Valve Project

Itemization Description	FY2027	FY2028	FY2029
Amount			
TRANSFER TO UTILITIES CAPITAL IMPROVEMENT FUND	\$0	\$0	\$270,000
AMOUNT	\$0	\$0	\$270,000



Water Distribution Master Plan Improvements

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Water Distribution

Priority Rank

5

Project Description

Implement the recommendations of the Water Distribution Master Plan.

Project Justification

The Town is preparing a Water Distribution System Master Plan using a hydraulic model of the water distribution system. This master plan will provide recommendations on where improvements are needed to provide adequate fire flow to current and future customers, as well as improve drinking water quality and redundancy throughout the distribution system. The Master Plan recommendations may include waterline extensions, replacements, and installation of new appurtenances. The request is a placeholder until specific projects are identified.

Project Highlights

The staff recommend implementing the recommendations of the Water Distribution Master Plan once complete.

Project Expenditures

Water Distribution Master Plan Improvements

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CONSTRUCTION	\$0	\$0	\$100,000	\$200,000	\$500,000	\$500,000	\$500,000
AMOUNT	\$0	\$0	\$100,000	\$200,000	\$500,000	\$500,000	\$500,000

Object Code Description	FY33
Amount	
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Water Distribution Master Plan Improvements

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM WATER AND SEWER FUND	\$0	\$0	\$100,000	\$200,000	\$500,000	\$500,000	\$500,000
AMOUNT	\$0	\$0	\$100,000	\$200,000	\$500,000	\$500,000	\$500,000

Itemization Description	FY33
Amount	
TRANSFER FROM WATER AND SEWER FUND	\$0
AMOUNT	\$0

Operating Budget Impact

Water Distribution Master Plan Improvements

Itemization Description	FY2027	FY2028	FY2029
Amount			
TRANSFER TO UTILITIES CAPITAL IMPROVEMENT	\$0	\$100,000	\$200,000
AMOUNT	\$0	\$100,000	\$200,000



US-70A Business Water Improvements

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Water Distribution

Priority Rank

3

Project Description

Replace over 9,000 linear feet of asbestos cement water main along US-70A with 16" ductile iron water main.

Project Justification

The main transmission line along Highway 70-A is only 12 inches in diameter and is made out of asbestos-cement. This pipe is no longer manufactured, is a hazard to repair due to the asbestos content and is more prone to breakage. Ductile iron pipe or plastic pressure pipe is the current standard for water mains. This project will provide long-term stability for this section of the water system. The increase in pipe size was recommended through system modeling to handle more flow to the US-70 tank, prevent the US-70 tank from emptying too much when the Forest Ridge Booster Pump Station is operating, and to better meet the town's needs when we need to transfer water from Durham in an emergency situation. Modeling has confirmed that upsizing from 12" to 16" between Churton Street and the US 70-A tank should help with pressure and ability to receive a target flow of 2 MGD from Durham. The report also recommended a new express main from Valley Forge to US 70-A tank, however that is not under consideration at this time.

Some sections of this pipeline are the only way to move water along 70-A east of Elizabeth Brady Road. The town has been fortunate to avoid major breaks thus far along this pipeline, due to its age (built in 1973) and the substandard material. If a main break occurs in the area between Hwy 86 and Forest Ridge on US 70-A, water cannot get to the US-70 tank. When the town has to make repairs, it typically has to cut the pipe with a saw, which releases asbestos fibers, thus requiring a respirator. If the town does not perform this work, it risks this line deteriorating further and draining the US-70 Tank. The town can currently receive 1.6 MGD from Durham.

Project Highlights

This project is related to the Hasell Street Tank Replacement project to help move water to other parts of the central zone, but the projects are not codependent.

- Phase I: Replace approximately 4,900 linear feet of 12-inch Asbestos-Cement (AC) water main along Highway 70-A between Highway 86/Elizabeth Brady Road to the Highway 70-A Water Tank with a new 16" ductile iron water main.
- Phase II: Replace approximately 4,320 linear feet of 12" AC water main along Highway 70-A between Churton Street and Highway 86 with a new 16" ductile iron water main.

Project Expenditures

US-70A Business Water Improvements

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$275,000	\$0	\$0	\$0	\$0	\$0	\$0
PROFESSIONAL SERVICES	\$30,000	\$0	\$0	\$20,000	\$0	\$0	\$0
CONSTRUCTION	\$0	\$0	\$0	\$0	\$5,320,000	\$0	\$0
LAND ACQUISITION PROJECTS	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0
AMOUNT	\$305,000	\$0	\$0	\$50,000	\$5,320,000	\$0	\$0

Object Code Description	FY33
Amount	
DESIGN	\$0
PROFESSIONAL SERVICES	\$0
CONSTRUCTION	\$0
LAND ACQUISITION PROJECTS	\$0
AMOUNT	\$0

Project Funding

US-70A Business Water Improvements

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
WATER SYSTEM DEVELOPMENT FEES	\$275,000	\$0	\$0	\$50,000	\$2,357,131	\$0	\$0
GRANT - ASSET INVENTORY AND ASSESSMENT (AIA)	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0
CAPITAL FACILITIES FEES	\$0	\$0	\$0	\$0	\$1,226,443	\$0	\$0
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$0	\$1,736,426	\$0	\$0
AMOUNT	\$305,000	\$0	\$0	\$50,000	\$5,320,000	\$0	\$0

Itemization Description	FY33
Amount	
WATER SYSTEM DEVELOPMENT FEES	\$0
GRANT - ASSET INVENTORY AND ASSESSMENT (AIA)	\$0
CAPITAL FACILITIES FEES	\$0
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Vacuum Excavator

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Water Distribution

Priority Rank

4

Project Description

Purchase a Pacific Tek PV500 Vacuum Excavator equipped with the Pacific Tek Valve Exerciser for use by the Water Distribution crew.

Project Justification

Pacific Tek Power Vac Vacuum Excavators are manufactured for potholing/"vacuum excavation." Every Pacific Tek Vacuum Excavator can non-destructively find utility lines and pipelines, clean out catch basins, and work with Pacific Tek Valve Exercisers. To aid in digging, water or air is used under low pressure to loosen up the dirt so that the Vacuum Excavator can vacuum the dirt into the Vacuum Excavator's debris tank.

These units are offered as a skid mounted vacuum or can be built onto a flatbed or trailer. Pacific Tek offers eight basic tank sizes with over 100 different configurations and options, depending on the customer's needs. The larger tanks have a reverse flow option where, at the flip of a lever, flow is reversed in the system which allows you to either pump liquid or slurry out of the tank to a higher place, or, to free up clogging in the pickup hose by having air blow the reverse direction. The specific model we are looking at is the PV500 with the optional PT1000 valve exerciser/valve operator mounted on the trailer.

Vacuum Excavating:

Vacuum Excavation, also known as "Potholing" is the process of using vacuum and sometimes an assisting process such as high pressure water jetting and high velocity air jetting to "suck" a hole in the ground. The hole size can be from 4 to 12 inches in diameter and can be from 1 to 20 feet deep. This process replaces manual or machine digging when there is the possibility of damage to anything in the underground vicinity of the area being uncovered.

With the number of utilities being run underground and the use of plastic pipe and conduit instead of heavier steel the risk of damage once a line is found by either a shovel or a backhoe is greatly increased. Vacuum excavation greatly reduces this risk and is referred to as a "non-destructive" digging method. Once on top of a line or cable the vacuum tube simply cannot continue down and the line being sought is safely found. This process is being used by gas companies, water and wastewater utilities, telephone companies, and underground contractors doing work for all of the above. Past interest in the process of vacuum excavation was not what it is today because at the time there were not as many delicate underground utilities such as fiber-optic cable and small plastic lines that we now have.

Valve Exercising:

Water distribution valves of all sizes are installed underground and mostly kept open so that water is available to everyone on the system. If left unattended those valves will rust, suffer cathodic damage, get stuck in place, become covered in dirt and silt from the street above, get paved over, or even shift with freezing and thawing conditions. The act of valve exercising / valve operating begins with locating the valve. Once located chances are that the valve box will need to be cleaned just to give access to the top of the valve nut. Then, the act of operating the valve to ensure that it will work if necessary completes the task. In the act of operating the valve you sometimes find valves that were supposed to be open were somehow left closed by someone working on the system resulting in lower water pressure or flow. This is another benefit of the program. There are an enormous number of valves in any distribution system and the act of exercising needs to be documented to ensure that all of the valves get attention that need it and that inoperable valves are documented and scheduled for replacement.

Doing this project by hand is a chore that requires some muscle and some twisting motion that could leave your valve exerciser / valve operator at risk for lower back pain or injury. That is why most cities and towns have employed valve operating machines to assist with the task. Machines are equipped with revolution counters and torque read-out gauges or meters and some are connected to a computer with a GPS that confirms the location. Those computers capture data about the valve and can have other useful bits of information logged and documented as well. Machines can operate many more valves in a day than a person can manually and they can do it day after day after day.

Project Highlights

Purchasing the new Pacific Tek Vacuum Excavator w/Valve Exerciser would help tremendously with routine tasks such as valve/valve box maintenance, valve exercising, hydro excavating smaller service repairs, cleaning out meter boxes, potholing utilities and is a much more maneuverable unit for our crews to operate. The PV500 can be used dry to allow the excavated soil to be re-used as backfill or can be used with the attached water jetting system to "hydro" excavate. It will also have a class 2 hydraulic tool circuit kit installed to allow the use of our existing hydraulic tools in conjunction with the unit to complete tasks. The optional PT1000 valve exerciser has the option to add GIS management via the addition of their data logger.

Project Expenditures

Vacuum Excavator

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CAPITAL - EQUIPMENT	\$0	\$0	\$0	\$155,000	\$0	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$155,000	\$0	\$0	\$0

Object Code Description	FY33
Amount	
CAPITAL - EQUIPMENT	\$0
AMOUNT	\$0

Project Funding

Vacuum Excavator

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
OPERATING REVENUE	\$0	\$0	\$0	\$155,000	\$0	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$155,000	\$0	\$0	\$0

Itemization Description	FY33
Amount	
OPERATING REVENUE	\$0
AMOUNT	\$0

Operating Budget Impact

Vacuum Excavator

Object Code Description	FY2027	FY2028	FY2029
Amount			
CAPITAL - EQUIPMENT	\$0	\$0	\$155,000
AMOUNT	\$0	\$0	\$155,000



Electrical Upgrades at Water Treatment Plant

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Water Treatment Plant

Priority Rank

3

Project Description

Much of the electrical equipment at the water treatment plant has been in service since the early 1970s and is now considered to be obsolete and is prone to failure, expensive to repair, and dangerous to work on.

Project Justification

Staff will complete an evaluation of the existing water plant main electrical equipment in FY27 to help us prepare a scope and schedule for a future electrical upgrade project. Until the system evaluation is completed, it is impossible to know the scope or cost of the project. However, staff's best guess is that the system upgrade will likely cost about \$750,000, which includes the engineering, administration services, and construction.

Project Highlights

FY27 - Electrical System Evaluation (Operating Budget)
FY30 - Construction

Project Expenditures

Electrical Upgrades at Water Treatment Plant

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CONSTRUCTION	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0

Object Code Description	FY33
Amount	
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Electrical Upgrades at Water Treatment Plant

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM WATER AND SEWER FUND	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0

Itemization Description	FY33
Amount	
TRANSFER FROM WATER AND SEWER FUND	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Relocate Process Controls to SCADA

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

Water Treatment Plant

Priority Rank

1

Project Description

Relocate all equipment currently controlled and/or monitored through the old main control console into the new control console.

Project Justification

In FY26, a new control panel was installed to replace the antiquated old control panel. This year staff would like to relocate all critical chemical pumps, mixers, flocculators, flow meters, and analyzers to the new panel. This will provide monitoring, control, and data acquisition on the SCADA computer.

Due to the reliability issues of the old control panel, getting all the water plant equipment onto the new control panel is critical. Failure to make a successful transition in a timely manner could result in the plant not being able to successfully treat the drinking water.

Project Highlights

- Provides equipment status, control, alarms, and historical data
- Provides historical data trending
- Provides automation of processes
- Increases operations efficiency
- Reduces the chance of operational errors
- Greatly increases reliability of processes and monitoring

Project Expenditures

Relocate Process Controls to SCADA

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CAPITAL - EQUIPMENT	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0

Object Code Description	FY33
Amount	
CAPITAL - EQUIPMENT	\$0
AMOUNT	\$0

Project Funding

Relocate Process Controls to SCADA

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
OPERATING REVENUE	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0

Itemization Description	FY33
Amount	
OPERATING REVENUE	\$0
AMOUNT	\$0

Operating Budget Impact

Relocate Process Controls to SCADA

Object Code Description	FY2027	FY2028	FY2029
Amount			
CAPITAL - EQUIPMENT	\$300,000	\$0	\$0
AMOUNT	\$300,000	\$0	\$0



Sodium Hypochlorite Conversion

Capital Improvement Project (FY27-FY33)

Fund

69 - Water and Sewer Capital Improvements

Department

Water Treatment Plant

Priority Rank

2

Project Description

The water treatment plant currently utilizes chlorine gas for primary disinfection and to form chloramines for secondary disinfection. Due to the extreme toxic and corrosive nature of chlorine, and the large quantities of chlorine stored at the plant, the USEPA Risk Management Program Rule requires that a hazard assessment be completed. The hazard assessment for the water treatment plant (attached) estimates that in a worst-case scenario, a major chlorine leak at the water plant could be toxic to a population of 13,365.

A disinfection process analysis was completed in FY25 (attached). This was a comprehensive review of the existing disinfection system and considerations for conversion from chlorine gas to sodium hypochlorite. Utilizing sodium hypochlorite will eliminate the potential hazards of chlorine gas.

This project is for the engineering, management, and construction of new facilities needed to convert our existing chlorine gas feed system to sodium hypochlorite.

Project Justification

Chlorine is stored and shipped by the chemical supplier as a liquefied gas under pressure in one-ton cylinders. These are unloaded and stored in a covered outdoor area adjacent to the treatment plant administrative area. There are typically two one-ton cylinders at the water plant.

Chlorine gas is highly toxic and corrosive and has been placed in Toxicity Category I (indicating the highest degree of acute toxicity) for oral, dermal, eye and inhalation effects. When chlorine liquid converts to gas, it expands 457 times. Additionally, chlorine gas is 2.5 times heavier than air. In the event of a catastrophic chlorine leak at the water plant, a significant amount of the town will need to be evacuated. However, the Raleigh regional HAZMAT team is the dedicated responder, and it would take some time for them to arrive given the distance. Significant impacts are unlikely to be avoided.

The disinfection process analysis included recommendations to improve the safety, accuracy and efficiency of the existing chlorine system. The existing procedures for delivery drivers to unload the cylinders is not in accordance with standard practices. Improvements to the loading dock and cylinder handling devices are needed. Additionally, only having a sliding steel door in front of the cylinders to keep them from public view is a vulnerability.

The analysis also included recommendations to convert from a chlorine disinfection process to a sodium hypochlorite disinfection process. Conversion to a sodium hypochlorite disinfection system eliminates the safety concerns of using chlorine gas. This is likely the reason most water treatment facilities now use sodium hypochlorite for disinfection. Additionally, since the demand for chlorine gas is now so low, there is only one chlorine gas supplier in North Carolina. With only one supplier, the cost and availability are of concern. We have received several force majeure notices of shortages and price hikes during and since the COVID-19 pandemic.

The Hillsborough water treatment plant has been using chlorine gas for disinfection since the early 1970s and has had no major chlorine leaks. Major chlorine leaks that cause widespread injuries are rare. However, it can and does happen. Since utilizing sodium hypochlorite will eliminate the public health risk, staff is recommending conversion of the disinfection process to sodium hypochlorite.

Project Highlights

Conversion to sodium hypochlorite for disinfection:

- Safety concerns of using chlorine is eliminated
- Regulations are much less stringent
- Eliminates the need for a Risk Management Plan (\$4,200 per year for compliance management)
- Eliminates the need for a Hazard Assessment
- Additional operational costs anticipated to be minimal
- Chemical costs estimated to increase between \$20,000 and \$30,000 /year

Timeline:

- Design - February 2026

Project Expenditures

Sodium Hypochlorite Conversion

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
PROFESSIONAL SERVICES	\$375,000	\$0	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$240,600	\$1,350,000	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$615,600	\$1,350,000	\$0	\$0	\$0	\$0	\$0

Object Code Description	FY33
Amount	
PROFESSIONAL SERVICES	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Sodium Hypochlorite Conversion

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
PRIOR PROJECT REMAINING FUNDS	\$615,600	\$0	\$0	\$0	\$0	\$0	\$0
Empty Values	\$0	\$350,000	\$0	\$0	\$0	\$0	\$0
FEDERAL AWARD	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$615,600	\$1,350,000	\$0	\$0	\$0	\$0	\$0

Itemization Description	FY33
Amount	
PRIOR PROJECT REMAINING FUNDS	\$0
Empty Values	\$0
FEDERAL AWARD	\$0
AMOUNT	\$0

Operating Budget Impact

No FY27-29 operating impact.



Dam Repairs at West Fork Eno Reservoir

Capital Improvement Project (FY27-FY33)

Fund

Water and Sewer Fund

Department

West Fork Eno Reservoir

Priority Rank

1

Project Description

Investigate and remedy damages to the dam at the West Fork Eno reservoir resulting from Tropical Storm Chantal.

Project Justification

As a high hazard dam, the town is required to maintain its integrity. Further investigation is required to determine the extent of damage and identify appropriate remedies.

The West Fork on the Eno Reservoir, completed in 2000 and expanded in 2019, is inspected annually by a consultant specializing in dams as required for high hazard dams. The October 2025 inspection revealed damages from Tropical Storm Chantal and also some general maintenance issues that require immediate investigation to determine the exact extent of damages and remedy. The consultant in its inspection report details the recommendations and estimates the extent of the repairs to be around \$2,000,000 - \$3,000,000.

1) The auxiliary spillway chute, primarily downstream of the overlay installed in the 2019 dam modifications, is in generally fair to poor condition. The high flows through the spillway resulting from Tropical Storm Chantal in July 2025 likely caused the damage to the spillway downstream of the overlay. The observed offsets in the chute spillway slab joints, the water observed entering and exiting the chute slab joints, and the damage that appears to be from lifting of the furthest downstream chutes lab section, indicate that undermining of the slab sections could have occurred. 2) The wet area on the downstream slope of the earth embankment adjacent to the left auxiliary spillway sidewall and the seepage through the left spillway sidewall indicates that the drainage system behind the left spillway sidewall is no longer functional. It is likely that the existing wall drain is clogged, potentially by iron ochre. It is possible that the drain has been clogged but is more evident now with the increased driving head from the Phase 2 reservoir normal pool elevation.

Project Highlights

1. The existing drainage system behind the left auxiliary spillway sidewall should be observed via video inspection for obstructions, crushed pipe sections, or other deficiencies. The design for any modifications to the drainage system will need to be submitted to NC Dam Safety for their review and approval prior to construction.
2. The chute spillway downstream of the overlayed section should be further evaluated by a Professional Engineer for undermining and chute slab delamination. Nondestructive evaluation methods can be used to identify potentially undermined areas beneath the slab, delamination within the slab, and areas of concentrated leakage flow below the chute slab. It is recommended to confirm the nondestructive evaluation results with concrete coring for visual inspection of the slab and foundation conditions. If undermining of the chute spillway slab or delamination of the chute slab is confirmed, repairs will be needed that will potentially include re-construction of the chute spillway slab joints, repair to the damage slab sections, and overlaying the existing slab. The design for any repairs to the chute spillway will need to be submitted to NC Dam Safety for their review and approval prior to construction.
3. The damaged Tideflex check valves at the embankment closure section drainage system outlet, and the right control section drainage system outlet should be replaced.
4. The exposed/broken waterstop within the conduit should be repaired. If this joint continues to deteriorate, it could allow for the soil materials in the embankment to wash into the conduit. The other joints in between segments of the conduit and previously grouted cracks should continue to be monitored at least annually. Repair plans for the exposed/broken water stop would need to be submitted to NC Dam Safety for their review and approval prior to construction.

Project Expenditures

Dam Repairs at West Fork Eno Reservoir

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DESIGN	\$115,840	\$174,830	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$0	\$2,570,650	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$115,840	\$2,745,480	\$0	\$0	\$0	\$0	\$0

Object Code Description	FY33
Amount	
DESIGN	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Dam Repairs at West Fork Eno Reservoir

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
FEMA REIMBURSEMENTS	\$92,550	\$56,800	\$0	\$0	\$0	\$0	\$0
TRANSFER FROM WATER AND SEWER FUND	\$23,290	\$195,540	\$0	\$0	\$0	\$0	\$0
DEBT ISSUANCE PROCEEDS	\$0	\$2,547,660	\$0	\$0	\$0	\$0	\$0
AMOUNT	\$115,840	\$2,800,000	\$0	\$0	\$0	\$0	\$0

Itemization Description	FY33
Amount	
FEMA REIMBURSEMENTS	\$0
TRANSFER FROM WATER AND SEWER FUND	\$0
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$0

Operating Budget Impact

Dam Repairs at WFER

Itemization Description	FY2027	FY2028	FY2029
Amount			
DEBT SERVICE - PRINCIPAL	\$0	\$101,275	\$212,678
DEBT SERVICE - INTEREST	\$0	\$63,692	\$117,255
TRANSFER TO UTILITIES CAPITAL IMPROVEMENT FUND	\$195,540	\$0	\$0
AMOUNT	\$195,540	\$164,967	\$329,933

Stormwater Capital Improvement Plan



Stormwater Capital Improvement Plan Summary

Capital Improvement Plan (FY27-FY33)

Stormwater Capital Improvements Expenditures by Project

Stormwater CIP Expenditure Summary by Project

Worksheet Name	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
Elizabeth Brady Road Culvert Rehabilitation	\$195,000	\$75,000	\$50,000	\$50,000	\$0	\$0	\$0
JetVac Truck	\$0	\$0	\$0	\$0	\$608,010	\$1,000	\$1,000
AMOUNT	\$195,000	\$75,000	\$50,000	\$50,000	\$608,010	\$1,000	\$1,000

Worksheet Name	FY33
Amount	
Elizabeth Brady Road Culvert Rehabilitation	\$0
JetVac Truck	\$1,000
AMOUNT	\$1,000

Stormwater Capital Improvements Revenues by Type

Stormwater CIP Revenue Summary by Category

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$0	\$605,000	\$0	\$0
OPERATING REVENUE	\$0	\$0	\$0	\$0	\$3,010	\$1,000	\$1,000
AMOUNT	\$0	\$0	\$0	\$0	\$608,010	\$1,000	\$1,000

Itemization Description	FY33
Amount	
DEBT ISSUANCE PROCEEDS	\$0
OPERATING REVENUE	\$1,000
AMOUNT	\$1,000

Stormwater Capital Improvements Operating Budget Impact

Stormwater CIP Operating Impact by Project

Worksheet Name	FY2027	FY2028	FY2029
Amount			
Elizabeth Brady Road Culvert Rehabilitation	\$75,000	\$50,000	\$50,000
AMOUNT	\$75,000	\$50,000	\$50,000



Elizabeth Brady Road Culvert Rehabilitation

Capital Improvement Project (FY27-FY33)

Fund

Stormwater Fund

Department

Stormwater

Priority Rank

1

Project Description

Rehabilitate the existing culverts under Elizabeth Brady Road at Cates Creek using spincasting.

Project Justification

The existing culverts are corrugated metal. Corrugated metal pipes have a functional age and the culverts are starting to deteriorate. Public Works staff has completed some maintenance work on the pipes to ensure they are clear and the downstream side (outlet side) is stabilized. This work has prolonged the life of the existing culverts, but within the next few years, the culvert pipes will need to be repaired. Rehabilitation through spincasting will reduce the risk of a failure similar to what occurred on Valley Forge Road and Cates Creek. The impact of a failure would be greater in that Elizabeth Brady Road serves more property owners, including the only ingress/egress to the town's wastewater plant.

Spincasting is a technique where the inside of existing pipes are sprayed with concrete. This process fixes damaged/aging pipes without having to replace them. This is a cost effective solution and has been utilized with smaller stormwater pipes in town. Based on the current status of the pipes, work already completed by Public Works, and recent discussions with Public Works staff, we believe the project can be pushed to FY29. Public Works will continue to monitor the culverts, and if necessary adjust project timing.

Project Highlights

- An alternative would be to replace the pipes with a bridge or bottomless culvert. This would most likely be more expensive, but would improve the aquatic ecosystem in the area. It is possible to combine replacement with additional riparian buffer enhancement, which would mean a portion of the project cost would qualify for the joint compliance program currently approved for the Falls Lake rules.
- NuPipe is a unique contractor that provides spincasting services in our area. The NuPipe website gallery that shows before and after photos of various projects (<https://nu-pipe.webflow.io/gallery>).

Project Expenditures

Elizabeth Brady Road Culvert Rehabilitation

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
PROFESSIONAL SERVICES	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0
CONSTRUCTION	\$175,000	\$75,000	\$50,000	\$50,000	\$0	\$0	\$0
AMOUNT	\$195,000	\$75,000	\$50,000	\$50,000	\$0	\$0	\$0

Object Code Description	FY33
Amount	
PROFESSIONAL SERVICES	\$0
CONSTRUCTION	\$0
AMOUNT	\$0

Project Funding

Elizabeth Brady Road Culvert Rehabilitation

Itemization Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
TRANSFER FROM STORMWATER FUND	\$195,000	\$75,000	\$50,000	\$50,000	\$0	\$0	\$0
AMOUNT	\$195,000	\$75,000	\$50,000	\$50,000	\$0	\$0	\$0

Itemization Description	FY33
Amount	
TRANSFER FROM STORMWATER FUND	\$0
AMOUNT	\$0

Operating Budget Impact

Elizabeth Brady Road Culvert Rehabilitation

Itemization Description	FY2027	FY2028	FY2029
Amount			
TRANSFER TO STORMWATER CAPITAL IMPROVEMENT FUND	\$75,000	\$50,000	\$50,000
AMOUNT	\$75,000	\$50,000	\$50,000



JetVac Truck

Capital Improvement Project (FY27-FY33)

Fund

Stormwater Fund

Department

Stormwater

Priority Rank

2

Project Description

JetVac Truck for cleaning stormwater infrastructure such as catch basins and pipes.

Project Justification

The town is required to have a stormwater infrastructure maintenance program pursuant to the town's NPDES Phase II MS4 stormwater permit. The JetVac would allow Public Works to clean, collect and dispose of sediment, debris, etc.

Currently, the town uses a contractor to do catch basin/pipe cleaning. This approach is workable for now, but having a JetVac truck would improve efficiency in maintaining the town's stormwater infrastructure and allow the town to respond to problems that arise in a more timely manner.

Project Highlights

The Water & Sewer Department is considering replacing their JetVac truck with a larger capacity model. If this happens, it is possible that the existing JetVac truck could be utilized by Public Works for stormwater maintenance.

A quote has been included for a GapVax 2024 MC1007-3S3X Combination Jet/Vac. Currently the price of the truck is listed in FY27.

Project Expenditures

JetVac Truck

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
CAPITAL - VEHICLES	\$0	\$0	\$0	\$0	\$605,000	\$0	\$0
GASOLINE	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$1,000
MISC - TAX, TAGS, ETC	\$0	\$0	\$0	\$0	\$2,010	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$608,010	\$1,000	\$1,000

Object Code Description	FY33
Amount	
CAPITAL - VEHICLES	\$0
GASOLINE	\$1,000
MISC - TAX, TAGS, ETC	\$0
AMOUNT	\$1,000

Project Funding

JetVac Truck

Object Code Description	Current Project Budget	FY27	FY28	FY29	FY30	FY31	FY32
Amount							
MISCELLANEOUS	\$0	\$0	\$0	\$0	\$3,010	\$1,000	\$1,000
DEBT ISSUANCE PROCEEDS	\$0	\$0	\$0	\$0	\$605,000	\$0	\$0
AMOUNT	\$0	\$0	\$0	\$0	\$608,010	\$1,000	\$1,000

Object Code Description	FY33
Amount	
MISCELLANEOUS	\$1,000
DEBT ISSUANCE PROCEEDS	\$0
AMOUNT	\$1,000

Operating Budget Impact

No FY27-29 operating impact.