

# Eastern Shore

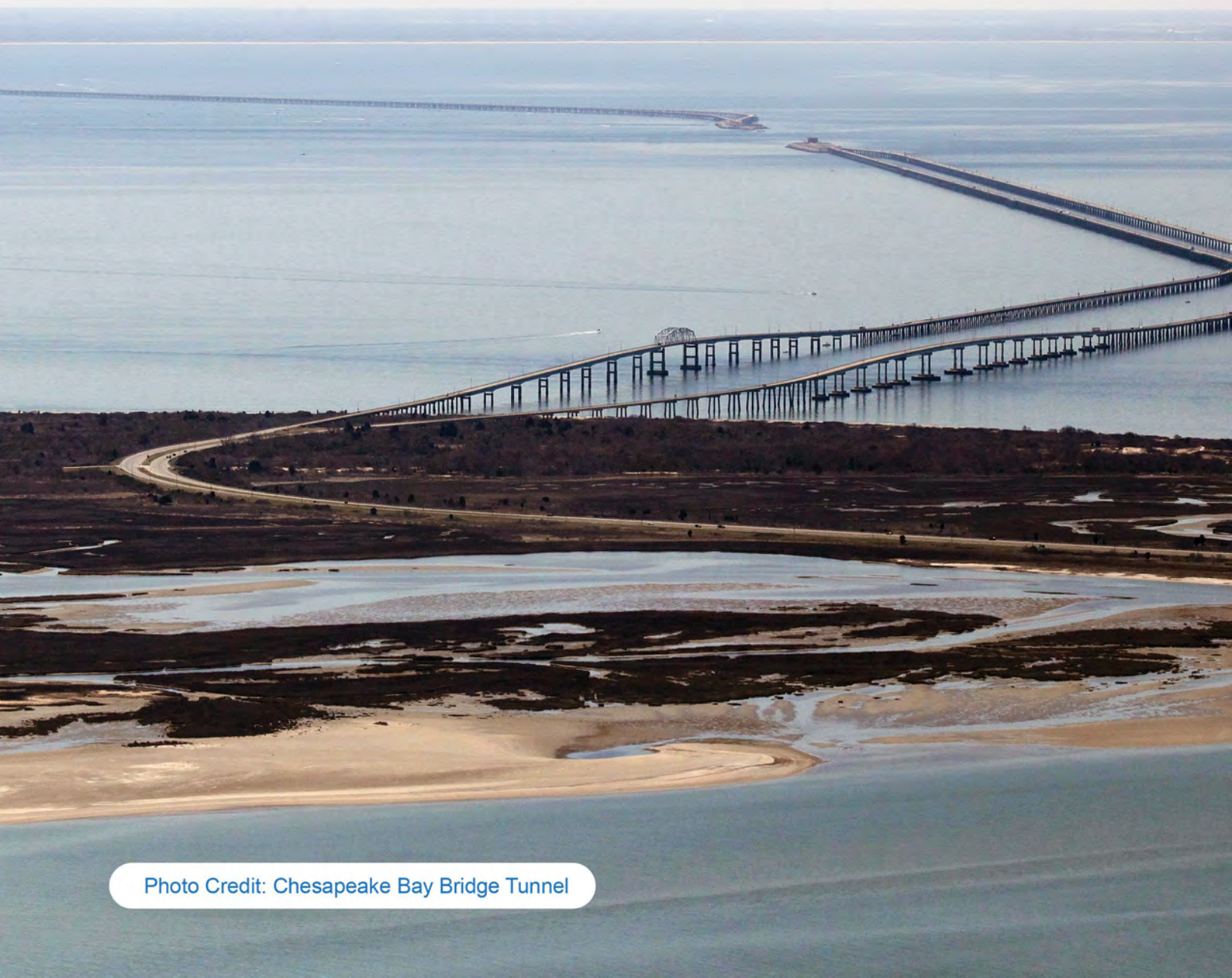
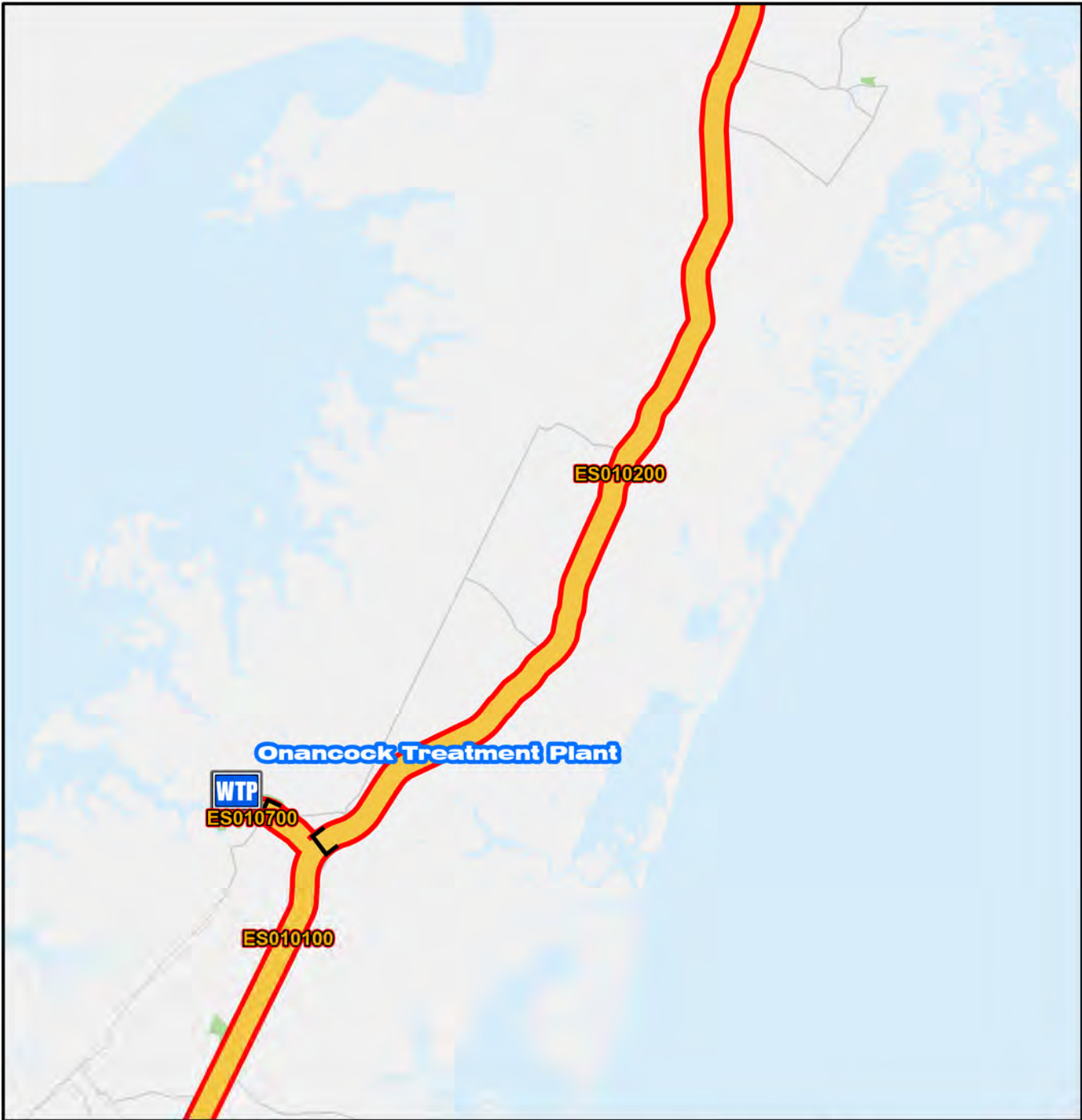
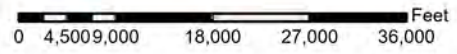


Photo Credit: Chesapeake Bay Bridge Tunnel



**Legend**

- Eastern Shore**
- CIP Interceptor Point**
- CIP Pump Station Point**
- CIP Interceptor Line**
- CIP Abandonment**
- Treatment Plant Service Area**
- HRSD Interceptor Force Main**
- HRSD Interceptor Gravity Main**
- HRSD Treatment Plant**
- HRSD Pressure Reducing Station**
- HRSD Pump Station**



**Eastern Shore Service Area CIP Projects**

**Treatment Plant Projects**

- ES010000
- ES010300
- ES010500
- ES010600

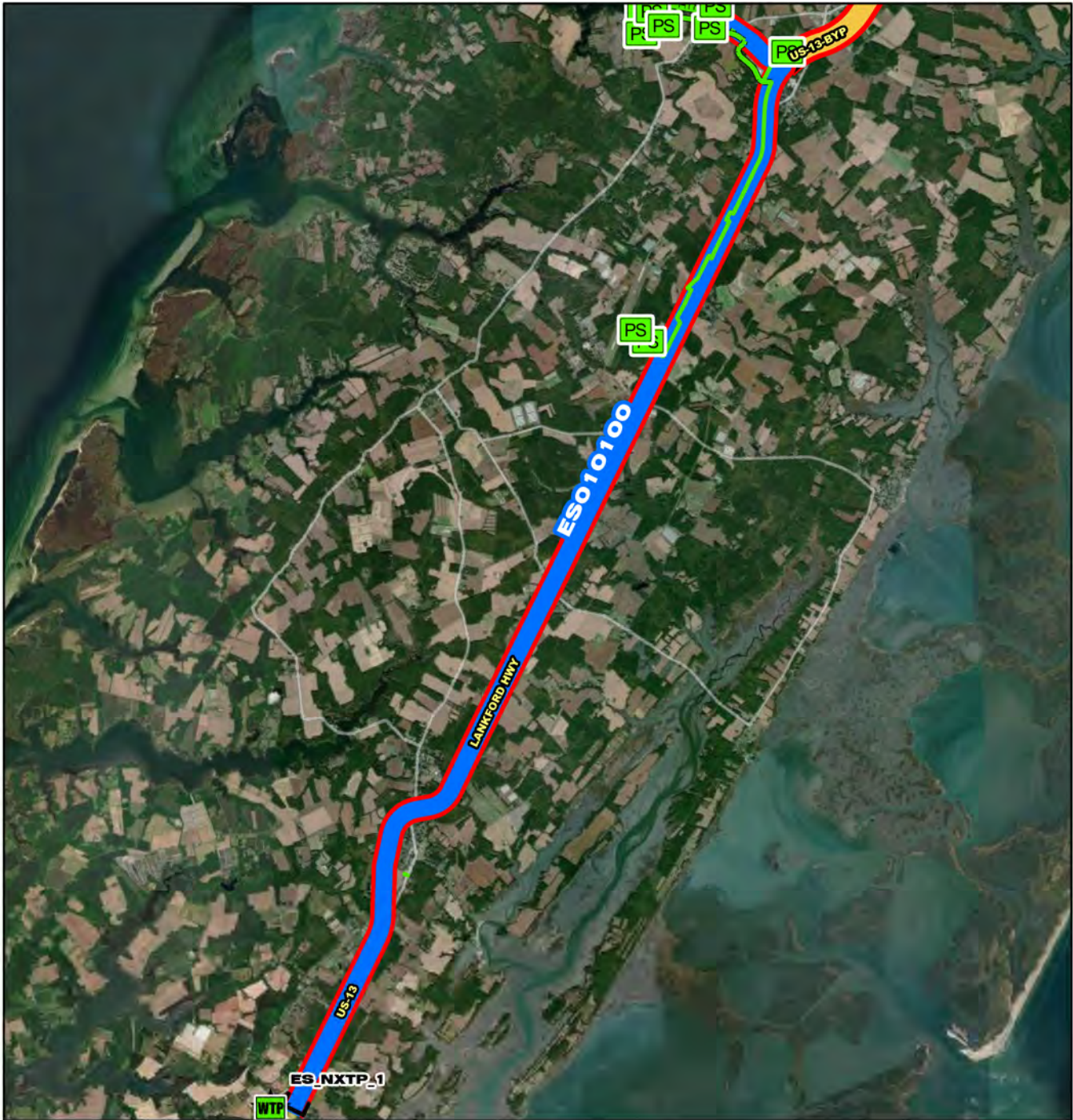


**CIP Location**



Service Area



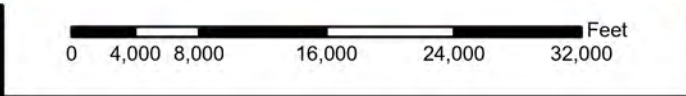


**ESO10100**

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

**Legend**

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station



# ESO 1 0 1 0 0

## Eastern Shore Infrastructure Improvements - Transmission Force Main Phase I

**CIP Location**



**Eastern Shore Infrastructure Improvements -  
Transmission Force Main Phase I**

PR\_ES010100

System: Eastern Shore  
Type: Pipelines

Driver Category: Capacity Improvements  
Project Phase: Proposed  
Regulatory: None

**PROGRAM CASH FLOW PROJECTION (\$,000)**

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$45,454	\$23,002	\$18,091	\$4,361	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

This project will install three pumping stations in Nassawadox, Exmore and Onancock Hartman Avenue replacement. This project will install approximately 110,000 linear feet (LF) of 4, 6, 8, 10 and 12-inch force main (FM). The Industrial Park in Melfa will be connected to the FM, as well. Accomack County sewer systems will be incorporated into the HRSD service area. The force main will be installed in the Railway right-of-way from Nassawadox to Exmore and then to Onley, then it will be installed in the VDOT right-of-way and discharge to existing Accomack County gravity sewer, which flows to Hartman Avenue Pump Station. This Project will also install force main from Onley to the Town of Accomac, to service the Accomack County facilities. A Pumping Station will be built on Accomack County property along Front Street. Gravity sewer from County Facilities will need to be installed from the Courthouse Complex to the PS on Front Street. There will also be two miles of force main and a Pumping Station to be constructed in the Town of Wachapreague to service Virginia Institute for Marine Science (VIMS), as well as, businesses along Atlantic Avenue and Brooklyn Avenue to serve the businesses. An agreement will be needed prior to this work being accomplished.

**PROJECT JUSTIFICATION**

This project will provide all flow to the Onancock Treatment Plant which has excess capacity to handle the additional approximately 450 gallons per minute (GPM).

**FUNDING TYPE**

Funding Type: VCWRLF

**CONTACTS**

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: Phil Hubbard  
Contacts-Managing Dept: Engineering

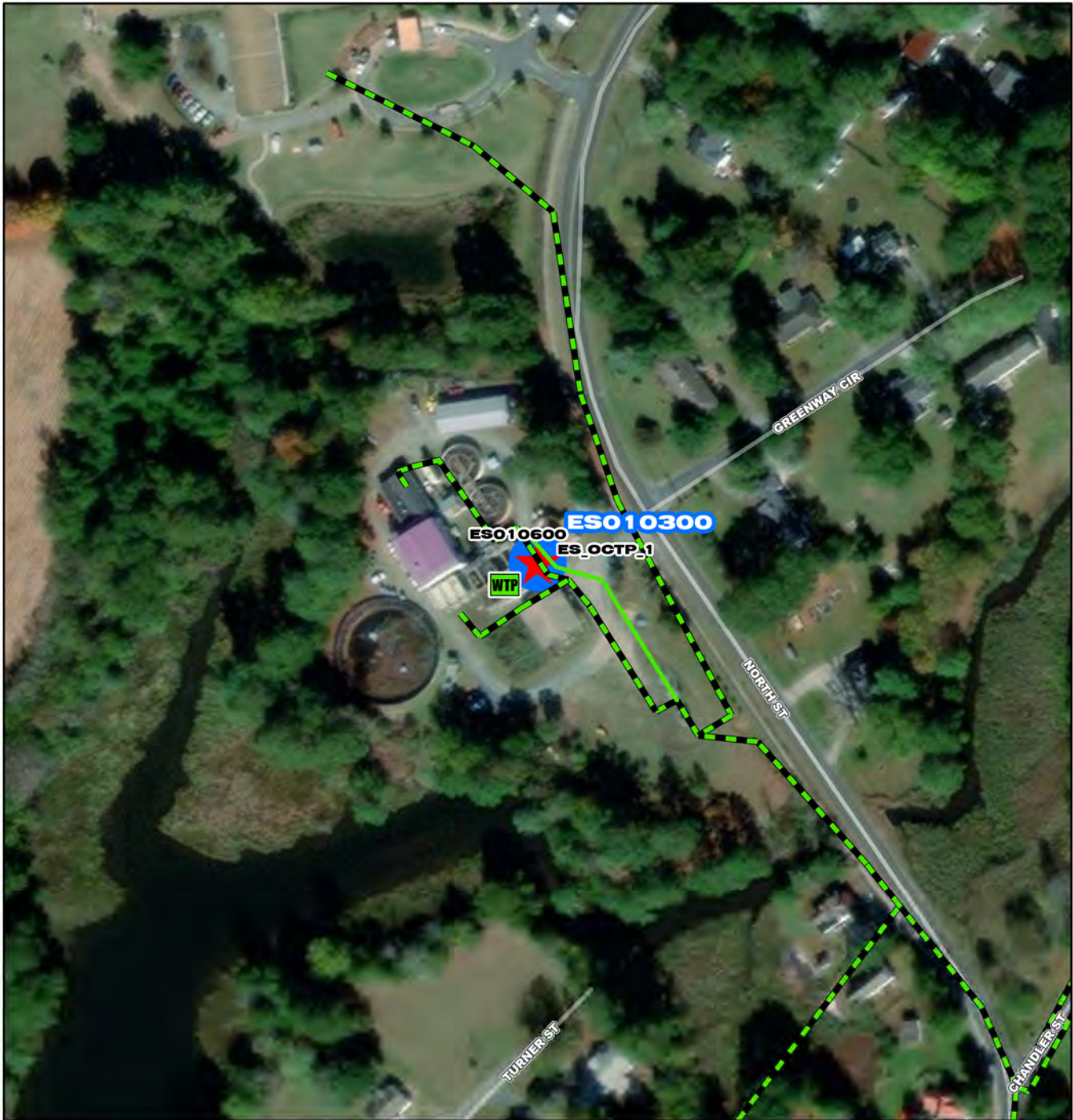
**PROPOSED SCHEDULE START DATE**

PrePlanning 10/07/2021  
PER 10/07/2021  
Design Delay 10/07/2021  
Design 10/07/2021  
Bid Delay 08/01/2022  
PreConstruction 06/01/2023  
Construction 10/01/2021  
Closeout 10/01/2024

**COST ESTIMATE**

**Cost Estimate Class: Class 1**  
PrePlanning \$0  
PER \$2,992  
Design \$4,952,422  
PreConstruction \$1,398,140  
Construction \$39,000,000  
Closeout \$100,000  
**Est. Program Cost \$45,453,554**  
Contingency Budget \$3,000,000  
**Est. Project Costs \$48,453,554**





**ESO 10300**

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

**Legend**

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station

0 55 110 220 330 440 Feet

**ESO 10300**

**Onancock Treatment Plant  
Administration Building Upgrade**

N  
W E  
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**CIP Location**



System: Eastern Shore  
Type: Facilities, Buildings and Capital Equipment

Driver Category: Aging Infrastructure/Rehabilitation  
Project Phase: Proposed  
Regulatory: None

**PROGRAM CASH FLOW PROJECTION (\$,000)**

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$4,341	\$0	\$193	\$177	\$3,971	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

Replacement of the Onancock Treatment Plant Administrative and Laboratory Building.

**PROJECT JUSTIFICATION**

The existing building is in poor condition and is not rated as a ride-out shelter. The office and lunch areas are on bare concrete floors with old cinderblock walls and deteriorated windows and doors. There is no shower or locker room and there are no private spaces or offices for supervisors. The proposed building will be built to HRSD standards and will provide offices for supervisors, a new laboratory space, a locker room with a shower and laundry area, and a conference room for meetings and apprenticeship courses. This proposed building will serve all Eastern Shore staff which will be increasing as additional infrastructure comes online and act as a ride-out shelter for all Eastern Shore Staff.

**FUNDING TYPE**

Funding Type: Revenue Bond

**CONTACTS**

Contacts-Requesting Dept: Operations-Treatment  
Contacts-Dept Contacts: Jeremiah Burford  
Contacts-Managing Dept: Engineering

**PROPOSED SCHEDULE START DATE**

PrePlanning  
PER 07/01/2023  
Design Delay  
Design 03/01/2024  
Bid Delay  
PreConstruction 03/01/2025  
Construction 07/01/2025  
Closeout 07/01/2026

**COST ESTIMATE**

**Cost Estimate Class:**  
PrePlanning \$0  
PER \$110,000  
Design \$250,000  
PreConstruction \$10,000  
Construction \$3,971,000  
Closeout \$0  
**Est. Program Cost \$4,341,000**  
Contingency Budget \$150,000  
**Est. Project Costs \$4,491,000**



**Northern Accomack Wastewater Conveyance,  
Treatment, and Disposal Study**

PR\_ES010400

System: Eastern Shore  
Type: Wastewater Treatment

Driver Category: Capacity Improvements  
Project Phase: Pre Planning  
Regulatory: None

**PROGRAM CASH FLOW PROJECTION (\$,000)**

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$430	\$186	\$244	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

Studies to evaluate strategies to address both short-term and long-term wastewater conveyance, treatment, and disposal needs for northern Accomack County. The studies will consider wastewater treatment demand, conveyance constraints, capacity constraints at existing facilities, disposal alternatives for treated effluent, environmental impacts, and permitting.

**PROJECT JUSTIFICATION**

Accomack and Northampton Counties were added to the HRSD service territory in October 2020. A regional initiative to provide centralized wastewater treatment to southern Accomack County and Northern Northampton County is underway. Accomack County and the Town of Chincoteague have requested HRSD provide investigate wastewater solutions for Northern Accomack County.

**FUNDING TYPE**

Funding Type: Cash

**CONTACTS**

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: Korey Kendall  
Contacts-Managing Dept: Engineering

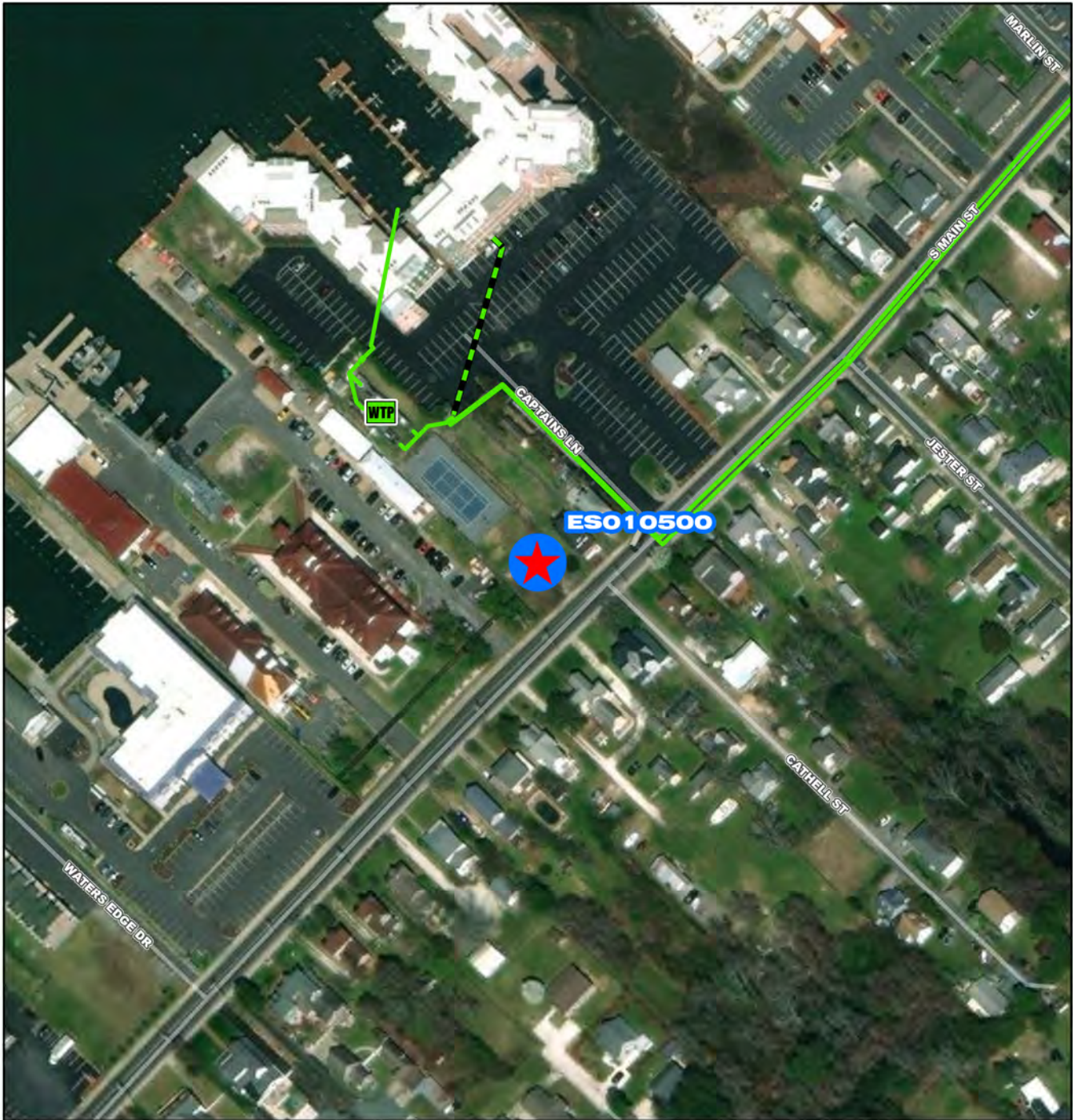
**PROPOSED SCHEDULE START DATE**

PrePlanning 11/01/2021  
PER 07/01/2024  
Design Delay 07/01/2024  
Design 07/01/2024  
Bid Delay 07/01/2024  
PreConstruction 07/01/2024  
Construction 07/01/2024  
Closeout 07/01/2024

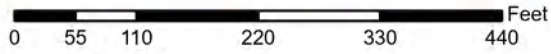
**COST ESTIMATE**

**Cost Estimate Class:**  
PrePlanning \$430,000  
PER \$0  
Design \$0  
PreConstruction \$0  
Construction \$0  
Closeout \$0  
**Est. Program Cost \$430,000**  
Contingency Budget \$20,000  
**Est. Project Costs \$450,000**





- ESO 10500**
- Project Interceptor Line
  - Project Interceptor Point
  - Project Pump Station Point
  - Project Area
- Legend**
- CIP Interceptor Point
  - CIP Pump Station Point
  - CIP Interceptor Line
  - CIP Abandonment
  - CIP Project Area
  - HRSD Interceptor Force Main
  - HRSD Interceptor Gravity Main
  - HRSD Treatment Plant
  - HRSD Pressure Reducing Station
  - HRSD Pump Station



# ESO 10500

**Chincoteague Treatment Plant**



**CIP Location**







System: Eastern Shore  
Type: Wastewater Treatment

Driver Category: Aging Infrastructure/Rehabilitation  
Project Phase: Proposed  
Regulatory: None

**PROGRAM CASH FLOW PROJECTION (\$,000)**

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$6,711	\$759	\$3,711	\$2,241	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

This project will include the installation of two packaged treatment plants, an outfall and appurtenances, the demolition of the two existing packaged treatment plants and site work needed to make new connections to the treatment plants.

**PROJECT JUSTIFICATION**

The two existing packaged treatment plants are at the end of their useful life and are at full capacity; permitted outfalls are located in multiple locations and run under private buildings and private property. Additional treatment capacity is needed to provide service to properties along Main Street and Maddox Boulevard in the Town of Chincoteague. The United States Coast Guard treatment facility is interested in connecting to the HRSD treatment plant. The permitted outfall capacity should be consolidated to an accessible outfall.

**FUNDING TYPE**

Funding Type: Revenue Bond

**CONTACTS**

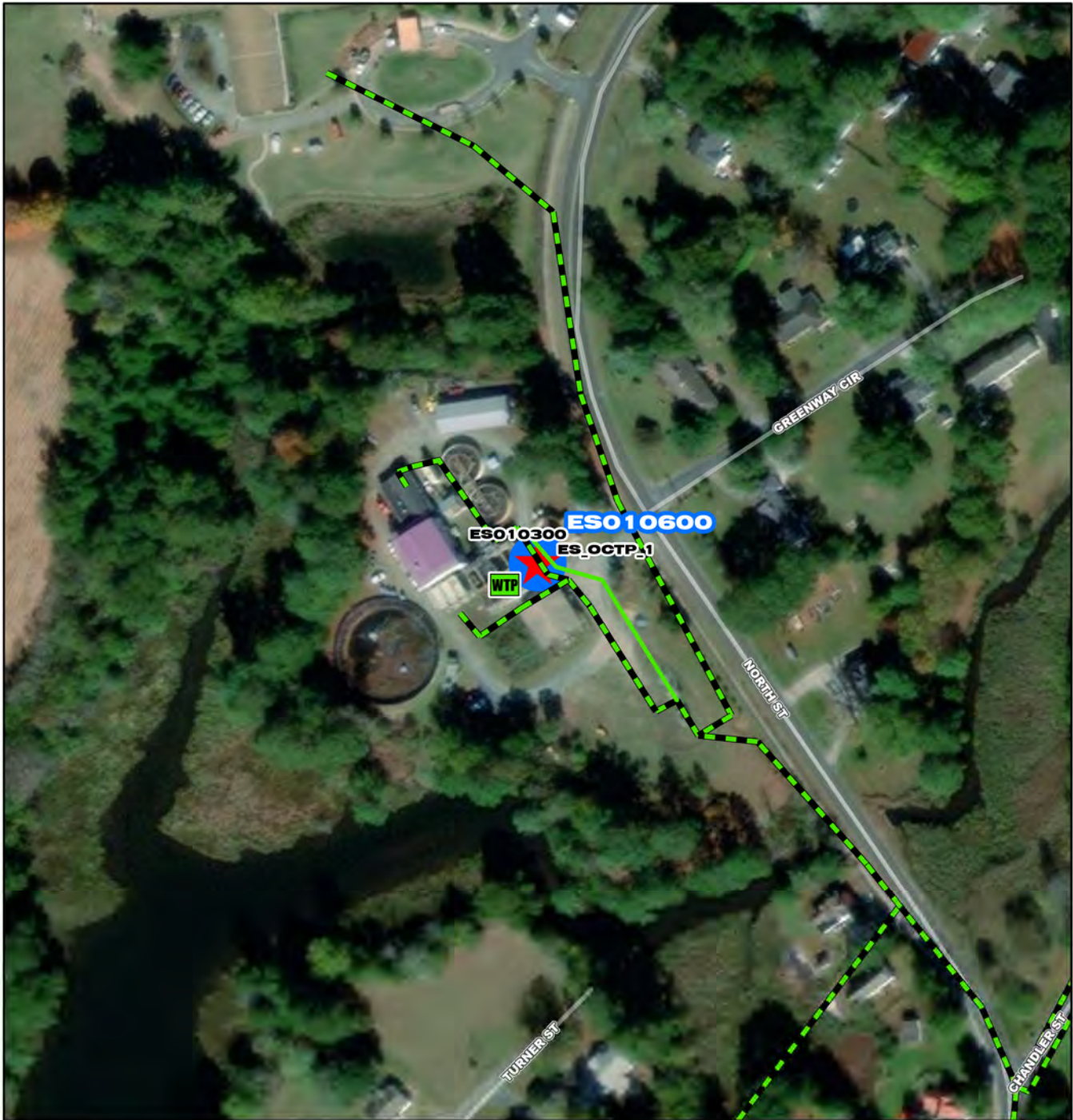
Contacts-Requesting Dept: Operations  
Contacts-Dept Contacts: Shirley Smith  
Contacts-Managing Dept: Engineering

**PROPOSED SCHEDULE START DATE**

PrePlanning	02/01/2022
PER	05/01/2022
Design Delay	11/01/2022
Design	11/01/2022
Bid Delay	08/01/2023
PreConstruction	08/01/2023
Construction	08/01/2023
Closeout	01/01/2025

**COST ESTIMATE**

<b>Cost Estimate Class:</b>	
PrePlanning	\$0
PER	\$0
Design	\$910,600
PreConstruction	\$0
Construction	\$5,500,000
Closeout	\$300,000
<b>Est. Program Cost</b>	<b>\$6,710,600</b>
Contingency Budget	\$0
<b>Est. Project Costs</b>	<b>\$6,710,600</b>



**ESO 10600**

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

**Legend**

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- WTP HRSD Treatment Plant
- PRS HRSD Pressure Reducing Station
- PS HRSD Pump Station

0 55 110 220 330 440 Feet

## ESO 1 0600

### Onancock Meter Replacement

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**CIP Location**





System: Eastern Shore  
Type: Locality and Private Property

Driver Category: Performance Upgrades  
Project Phase: Proposed  
Regulatory: None

**PROGRAM CASH FLOW PROJECTION (\$,000)**

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$2,307	\$200	\$1,852	\$254	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

This project includes locating, inspecting, and potentially replacing approximately 800 water meters in the Town of Onancock.

**PROJECT JUSTIFICATION**

The existing water meters are assumed to be outdated and in questionable condition. Upon confirming during inspection, HRSD has agreed to replace the water meters with new meters with automated reading features to ensure accurate billing moving forward.

**FUNDING TYPE**

Funding Type: Cash

**CONTACTS**

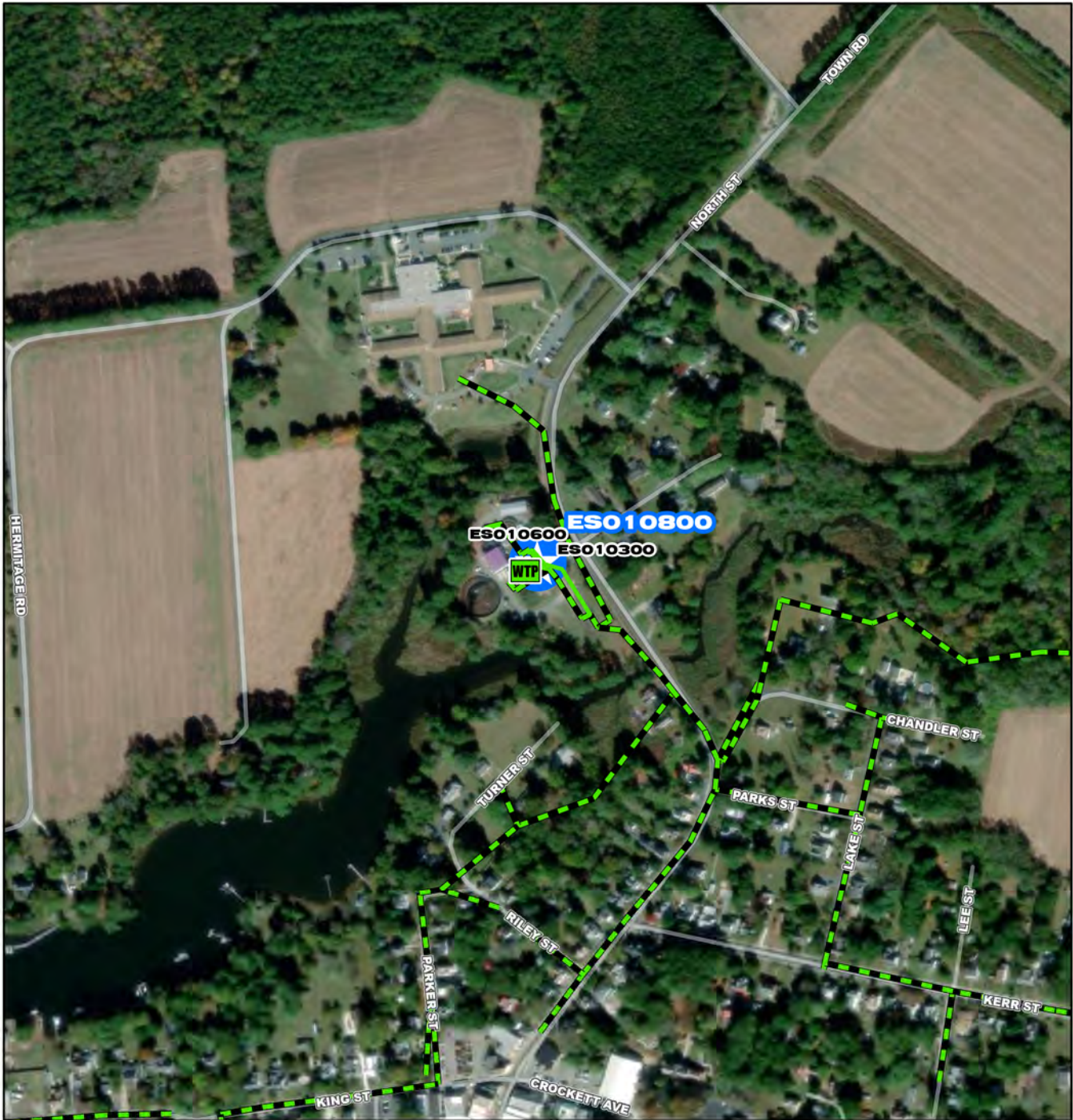
Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: Shirley Smith  
Contacts-Managing Dept: Engineering

**PROPOSED SCHEDULE START DATE**

PrePlanning	01/01/2023
PER	04/02/2023
Design Delay	05/01/2023
Design	05/02/2023
Bid Delay	10/01/2023
PreConstruction	10/01/2023
Construction	01/02/2024
Closeout	07/01/2024

**COST ESTIMATE**

<b>Cost Estimate Class:</b>	
PrePlanning	\$33,920
PER	\$84,800
Design	\$203,520
PreConstruction	\$33,920
Construction	\$1,696,000
Closeout	\$254,400
<b>Est. Program Cost</b>	<b>\$2,306,560</b>
Contingency Budget	\$461,100
<b>Est. Project Costs</b>	<b>\$2,767,660</b>

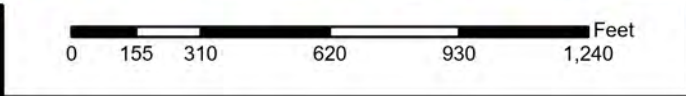


**ESO 10800**

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

**Legend**

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station



**ESO 10800**

**Onancock Treatment Plant Solids Handling Improvements**

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**CIP Location**





# Onancock Treatment Plant Solids Handling Improvements

PR\_ES010800

System: Eastern Shore  
Type: Biosolids

Driver Category: Aging Infrastructure/Rehabilitation  
Project Phase: Proposed  
Regulatory: None

## PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$6,938	\$244	\$1,667	\$4,616	\$411	\$0	\$0	\$0	\$0	\$0	\$0	\$0

## PROJECT DESCRIPTION

This project will utilize the completed PER for the Onancock Solids Handling Upgrades project (Former CIP ES010000) and carry this project through Design and Construction. This project will include the construction of a new 100,00 gallon Aerobic Digester with Coarse Bubble Aeration and associated infrastructure, new belt filter press with polymer feed system and cake storage, new surface wasting system, and yard piping upgrades. This project will also incorporate a DCS system for the entire plant.

## PROJECT JUSTIFICATION

The existing solids handling components have reached their end of useful life. The equipment being utilized cannot keep up with the existing solids accumulating in the plant and will require periodic contracted dewatering to alleviate treatment strain. Flows to the Onancock Treatment Plant are expected to double by FY 2025 and this will greatly exacerbate this problem.

## FUNDING TYPE

Funding Type: Revenue Bond

## CONTACTS

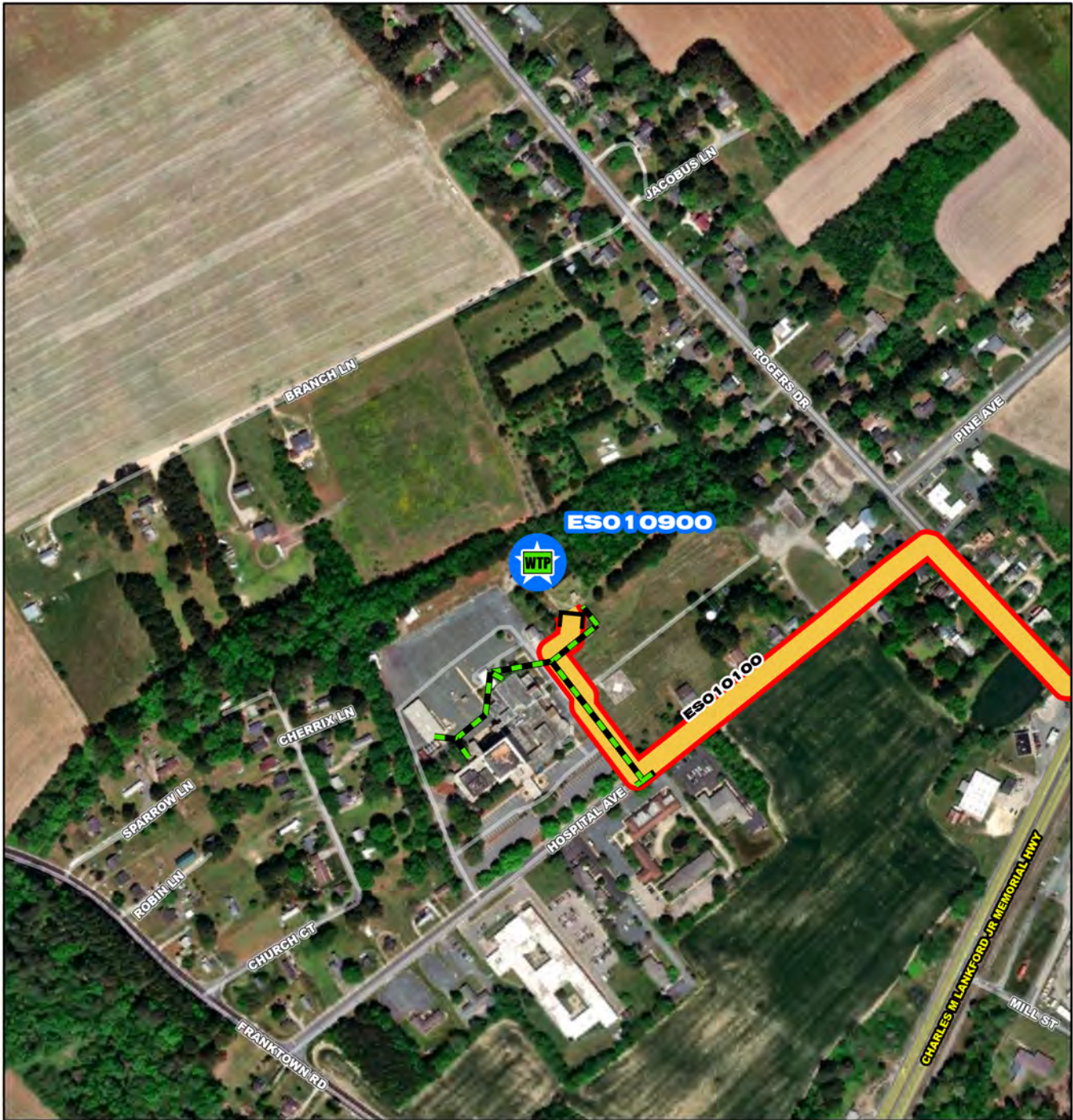
Contacts-Requesting Dept: Operations-Treatment  
Contacts-Dept Contacts: Sam McAdoo  
Contacts-Managing Dept: Engineering

## PROPOSED SCHEDULE START DATE

PrePlanning  
PER  
Design Delay  
Design 05/01/2023  
Bid Delay 02/01/2024  
PreConstruction 02/01/2024  
Construction 05/01/2024  
Closeout 08/01/2025

## COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$0
PER	\$0
Design	\$1,095,953
PreConstruction	\$45,114
Construction	\$5,770,460
Closeout	\$26,500
<b>Est. Program Cost</b>	<b>\$6,938,027</b>
Contingency Budget	\$1,420,000
<b>Est. Project Costs</b>	<b>\$8,358,027</b>



**ESO 10900**

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

**Legend**

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station

Feet

0    155    310    620    930    1,240

## ESO 10900

### Riverside Nassawadox Treatment Plant Decommissioning

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**CIP Location**





**Riverside Nassawadox Treatment Plant  
Decommissioning**

PR\_ES010900

System: Eastern Shore  
Type: Wastewater Treatment

Driver Category: Aging Infrastructure/Rehabilitation  
Project Phase: Proposed  
Regulatory: None

**PROGRAM CASH FLOW PROJECTION (\$,000)**

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$970	\$0	\$138	\$566	\$267	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

This project will demolish the facilities at the Riverside Nassawadox Plant. This project will also look at other potential uses of the site after the plant has been decommissioned. This project will include a Closure Plan that is required to be submitted to DEQ. Demolishment or abandonment needed at the treatment plant may include, but is not limited to, influent lift station and junction box, concrete holding tank (aerated lagoon), emergency lagoon, secondary lift station, and junction box, aeration and secondary clarifier tanks, electrical room (houses VFD and electrical equipment), effluent channel, chemical storage building, and the digester tanks, and the administration building. The underground piping may be demolished in place and or removed. Lights and potable water are not to be demolished.

**PROJECT JUSTIFICATION**

The Riverside Nassawadox Treatment Plant Feasibility Study conducted by HRSD resulted in taking the plant offline and diverting the flow to the Onancock Treatment Plant (ONTP). A new pipeline and pump stations are being installed with the Eastern Shore Infrastructure Improvements-Transmission Force Main Phase 1 (ES010100) CIP and is projected to be in service by the end of 2023. The Transmission Force Main Phase 1 CIP does not address the abandonment of the Nassawadox Treatment Plant and once offline, the existing plant will fill up with rainwater and will need to be addressed routinely. This project will properly sanitize and demolish the abandoned treatment plant.

**FUNDING TYPE**

Funding Type: Cash

**CONTACTS**

Contacts-Requesting Dept: Operations  
Contacts-Dept Contacts: Jeremiah Burford  
Contacts-Managing Dept: Engineering

**PROPOSED SCHEDULE START DATE**

PrePlanning 07/01/2023  
PER 07/01/2023  
Design Delay  
Design 02/01/2024  
Bid Delay  
PreConstruction 10/01/2024  
Construction 03/01/2025  
Closeout 09/01/2025

**COST ESTIMATE**

**Cost Estimate Class: Class 5**  
PrePlanning \$0  
PER \$75,000  
Design \$100,000  
PreConstruction \$15,000  
Construction \$770,000  
Closeout \$10,000  
**Est. Program Cost \$970,000**  
Contingency Budget \$77,000  
**Est. Project Costs \$1,047,000**