VIRGINIA AMERICAN WATER

Capital Investment Program: Cape Charles District

May 21, 2026

Agenda

- Introduction
- Completed/On-going Capital Investment Projects
- CPS Recommended Projects
- Q&A

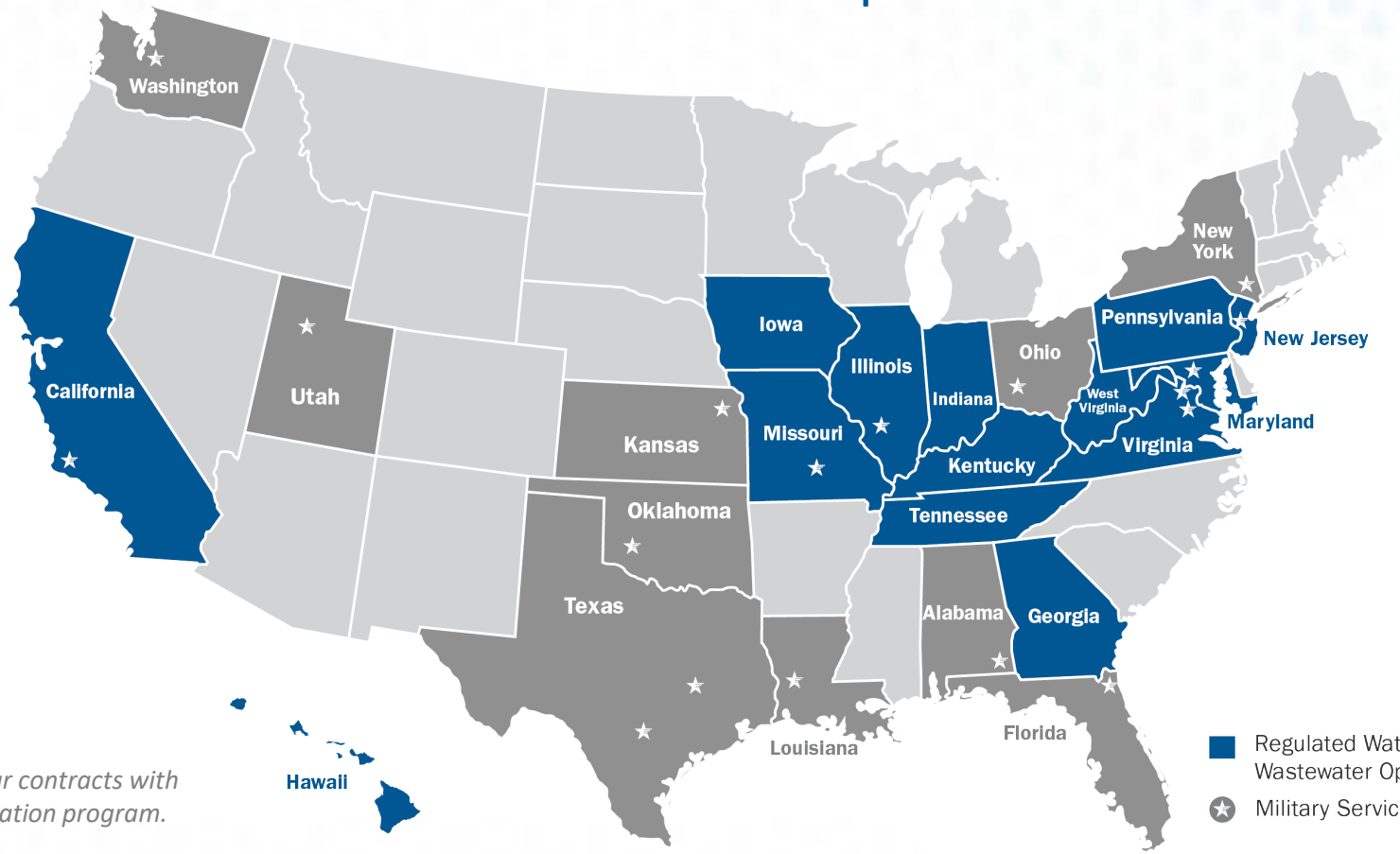
Introduction

American Water Operations

Regulated Operations

- **80** surface water treatment plants
- **520** groundwater treatment plants
- **170** wastewater treatment plants
- **55,000** miles of transmission, distribution and collection mains and pipes
- **1,200** groundwater wells
- **1,800** water and wastewater pumping stations
- **1,100** treated water storage facilities
- **75** dams

Our National Footprint



Military Services Group

Operates on 18 military installations under 50-year contracts with the U.S. government as part of its Utilities Privatization program.

- **12 Army**
- **5 Air Force**
- **1 Navy**

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VIRGINIA AMERICAN WATER:

175 YEARS OF SERVING VIRGINIA

384,000

Population Served

50,000,000 GALS

Water Delivered Each Day

17 YEARS

Without a Drinking Water or Wastewater NOV

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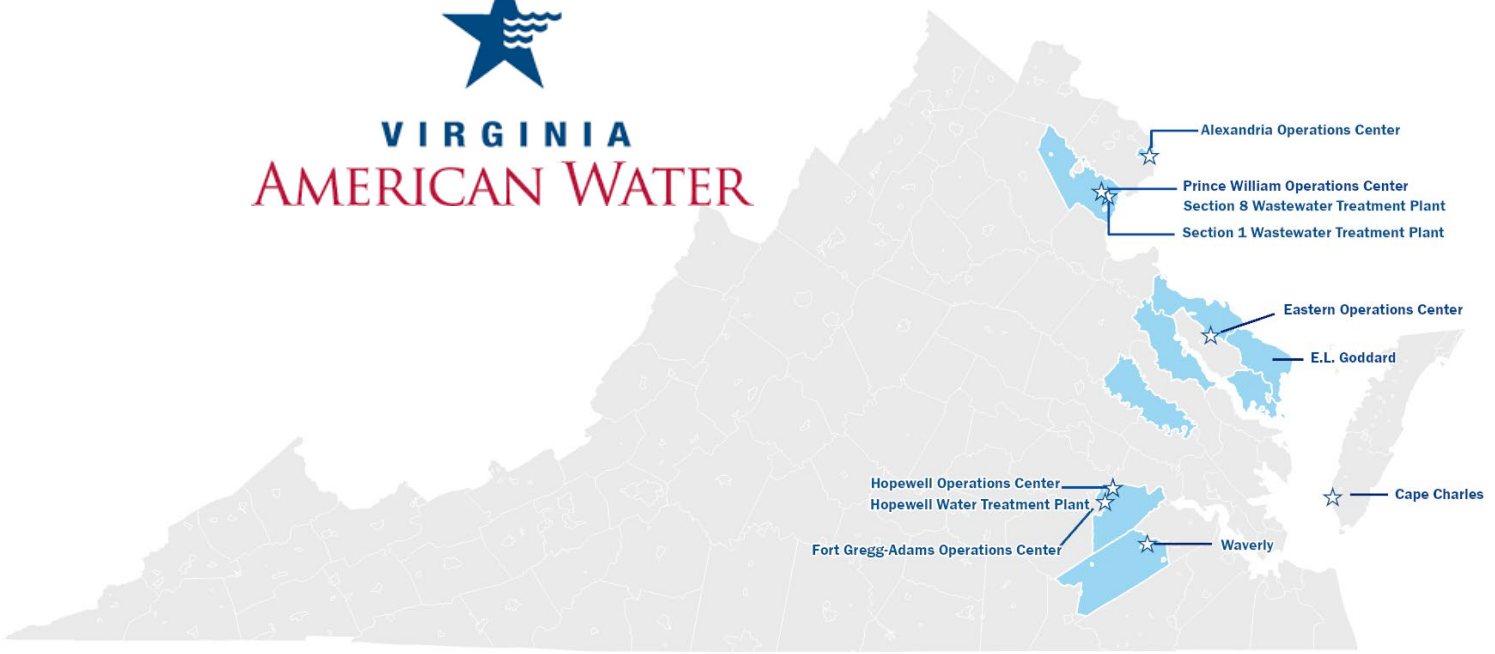

ALEXANDRIA SINCE 1850

HOPEWELL SINCE 1930

FORT LEE SINCE 2001 (➔MSG)

PRINCE WILLIAM SINCE 1966

NORTHERN NECK SINCE 2000

WAVERLY SINCE 2022

CAPE CHARLES SINCE 2024

Meet Our Leadership Team

Laura Runkle
President VA & MD
16 Years of Experience

Charlie Piekanski
VP of Operations VA & MD
31 Years of Experience

Christian Volk
Director of Operations & Water Quality
27 Years of Experience

Anna Kazasi, PE, ENV SP, CDT
Director of Engineering
16 Years of Experience

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Local Operations Team

Matt Elliott
Superintendent, Operations

Patrick Christman
Supervisor, Treatment

Jason Toadvine
Technician, Field Operations

Daniel Dabinett
Senior Technician, Maintenance and Relief Operator

Scotty Neville
Supervisor, Treatment

George Hall
Supervisor, Field Operations

Matthew Justice
Senior Operator, Water Treatment

Gerald Elliott
Technician, Field Operations

Alexander Pino
Senior Technician, Maintenance and Relief Operator

Freddie Meditz
Senior Operator, Water Treatment

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Key Milestones In Our Partnership

November 2020
Virginia American Water submits proposal to purchase the Town of Cape Charles water and wastewater utilities

January 2022
Cape Charles Town Council advances Virginia American Water to public review phase

February 2022
Town hosts two open town hall meetings to address residents' questions

October 2022
Town hosts two open town hall meetings to address residents' questions

November 2022
Town hosts formal public hearing to receive comments regarding proposed sale

January 2023
Virginia American Water and the Town of Cape Charles sign asset purchase agreement for the town's drinking water and wastewater assets

April 2024
Virginia State Corporation Commission approves acquisition

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American Water Funding Overview

Operations & Maintenance Expenses (OPEX) Budget

- **Expenses to run the business:** Treatment chemicals, power, labor, equipment maintenance, supplies, groundskeeping…etc.

Capital Expenses (CAPEX) Budget

- **Recuring (small) projects (RPs) run by the local operations:** install new or replace pipes, valves, hydrants, manholes, service lines and laterals, meters, computer systems, security equipment, vehicles, tools and equipment, process plant equipment improvement/replacement, tank rehabilitation and engineering studies.
- **Engineering (large) projects:** Larger projects such as new treatment step implementation, treatment process facility replacement, building construction…etc.

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Completed/Ongoing Capital Investment Projects

Capital Investments in Cape Charles

Complete comprehensive planning study
Strategic document identifying necessary capital projects to meet regulatory requirements, upgrade infrastructure and support growth.

Complete CAPEX projects: To address existing issues and start system upgrades

Water & Wastewater CAPEX Projects
Broken/obsolete equipment replacement, treatment plant upgrades, automation
Compliance with VDH regulations Compliance with DEQ regulations
Safety improvement
Equipment reliability and resiliency (back up) improvement to avoid outages
Operations, treatment and water quality improvements
Distribution system upgrades Sewer collection system leaks: Inflow and infiltration issues during precipitation events. Lift station upgrades
Source of supply improvement (resiliency, water quality and growth)

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Total Expenses

Total CAPEX for 2024 (May-Dec. 2024):

Wastewater : $1.0 M
Water: $1.1 M

Total CAPEX for 2025:

Wastewater: $1.3 M
Water: $1.7 M

Total CAPEX Budget for 2026:

Wastewater: $1.1 M
Water : $1.1 M

Mason Ave. Lift Station

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Wastewater: Completed/ Ongoing RP projects

Project	Purpose
Plant Upgrades Projects	
- Fine screen rehab (incl. programming)	- Reliability increase
- Membrane reactor relining	- membrane longevity increase
- Trojan Ultra Violet (UV) system upgrades	- Proper disinfection and reliability increase
- Belt filter press rehabilitation	- Treatment and reliability improvement
- Exterior/emergency lighting replacement, automated entry/exit gates, cameras, keyless entry	- Security
- Headworks Gas Monitoring System Upgrade	- Safety (continuous detection of toxic gases)
- Fall Davit Installation	- Safety (Fall protection)
- Miscellaneous spare parts & equipment	- Reliability and resiliency
- Misc. automation, actuators, grit system programing	- Automation
- Control System (SCADA) Improvements	- Automation and reliability improvement
- Blower Replacement, Non potable water system replacement	- Increase membrane longevity
HVAC/Ventilation Replacement/upgrades	
- HVAC – Main MCC, headworks MCC, solids processing MCC, admin building	- Equipment resiliency, building improvement
- Ventilation – solids processing, headworks buildings	- Safety improvement

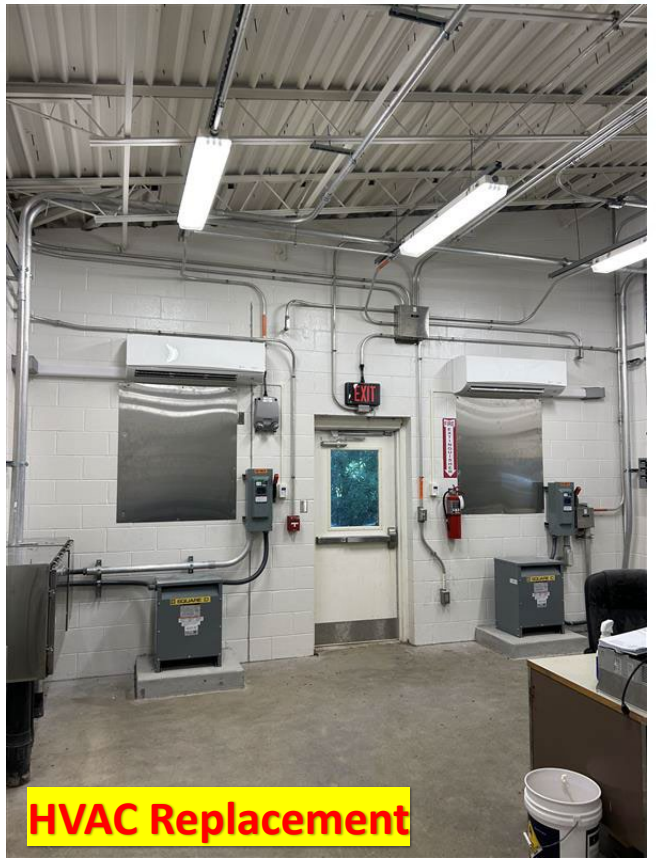
Wastewater: Completed/ Ongoing RP projects

Project	Purpose
Collection System Projects:	
- Vacuum truck and sewer lateral camera	- Inspection and cleaning
- Lift station door replacements	- Security
- Lift Station generator replacements (Washington/Pine St.)	- Reliability/Resiliency
- General electrical/lighting replacement and upgrades at lift stations	- Reliability
- Washington control panel replacement and Mission Communications alarm systems for Pine and Plum Lift Stations	- Automation, reliability improvement
- Vacuum station valve, vacuum tank replacement	- Reliability
- Mason Ave Lift Station upgrades & bypass pump rehab	- Reliability and resiliency
- Inflow and infiltration (&I) Study – Sewer metering, smoke testing, and camera Study	- Reliability
- Sewer lateral replacements, point repair for I&I, sewer main replacement	- Reliability and growth

Wastewater Projects


Membrane Liner Replacement


Pump Replacement


HVAC Replacement


Toxic Gas Continuous Monitoring

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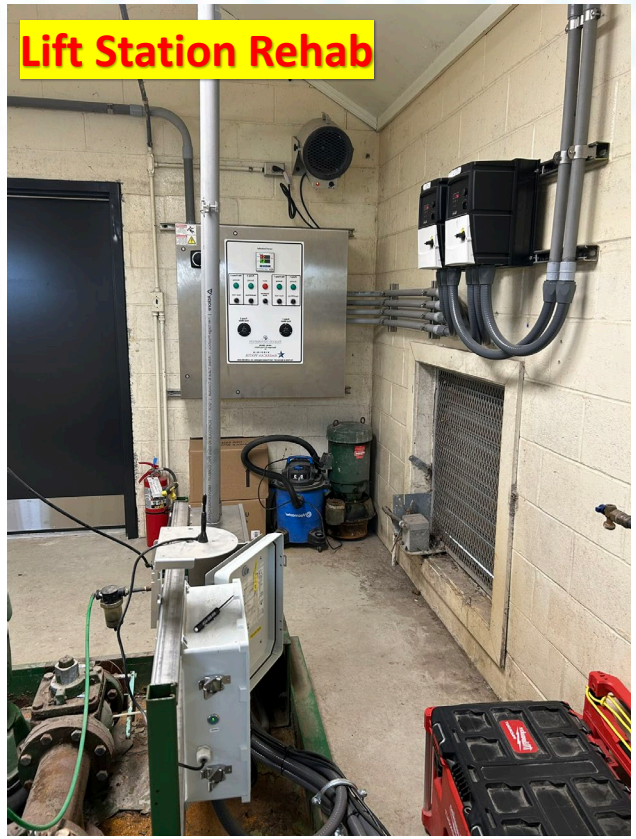
Wastewater Projects


Valve Replacement

Generator Replacement


Facility Improvements


Lift Station Rehab

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Water: Completed/ Ongoing RP projects

Project	Purpose
Plant Upgrades Projects:	
- Roof replacement, new office, chemical room floor drain replacement	- Building improvements
- Tower Lighting Replacement	- Safety
- Gate and fencing	- Security
- East and West Well Production meter and transducer installation, West Well rehab (incl. VFD)	- Accuracy and reliability improvement
- Filter media replacement (incl. filter internal parts)	- Treatment improvement
- Chemical feed system replacement, corrosion control treatment implementation	- Treatment & water quality improvement
- Plant flow meters and additional isolation valves	- Accuracy and resiliency improvements
- SCADA Conditioning (incl. UPS upgrades and Mission Communications unit) replacement of SCADA system, instrumentation upgrades	- Automation and accuracy
- pH and Post Chlorine analyzer installation	- Automation
- Keck Wells tie in	- Water quality improvement and growth
- Alternate source of supply study/West Well Replacement	- Resiliency and growth
- Backwash basin study	- Operations improvement

Water: Completed/ Ongoing RP projects

Project	Purpose
Water Distribution System Projects: - New tools and equipment (Wachs Valve Trailer/Dump Trailer) for distribution staff - Service Line Inventory -Lead/Copper Study - Leak Study - Meter Replacements throughout Distribution System (incl. AMI upgrade) - Service line installation and replacement - Strawberry St. main replacement - Various hydrant and valve replacements	- Operations improvement - Compliance requirement - System reliability, growth - Operations improvement, accuracy - System reliability and growth - Reliability - Reliability

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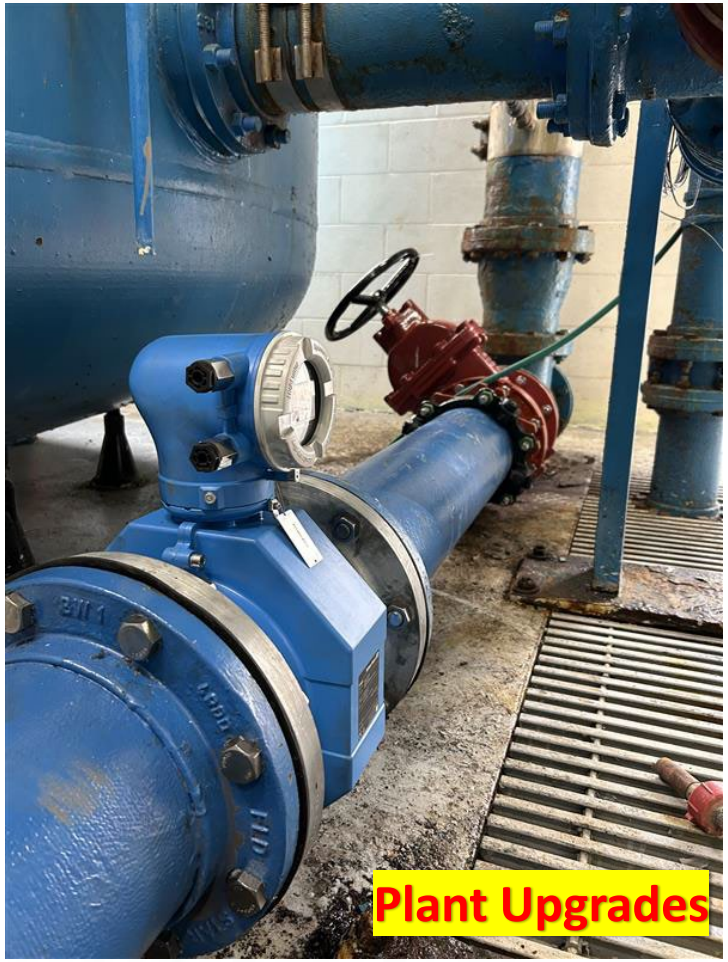
Water Projects



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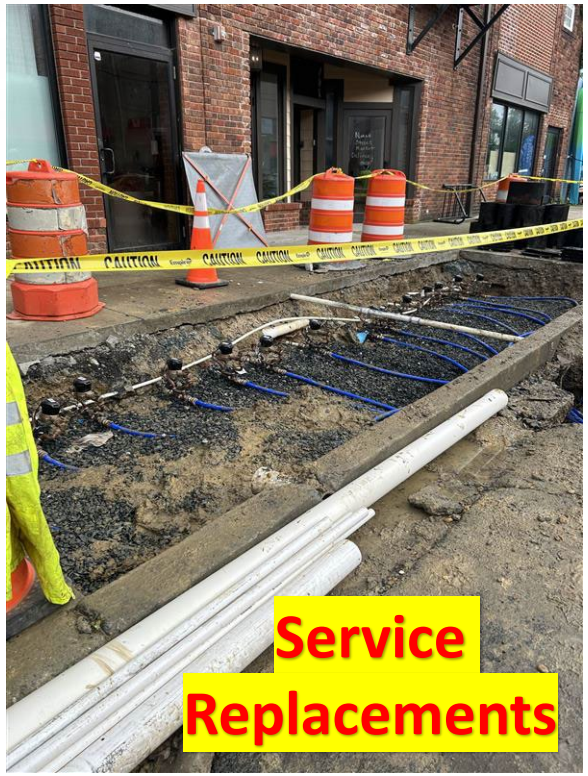
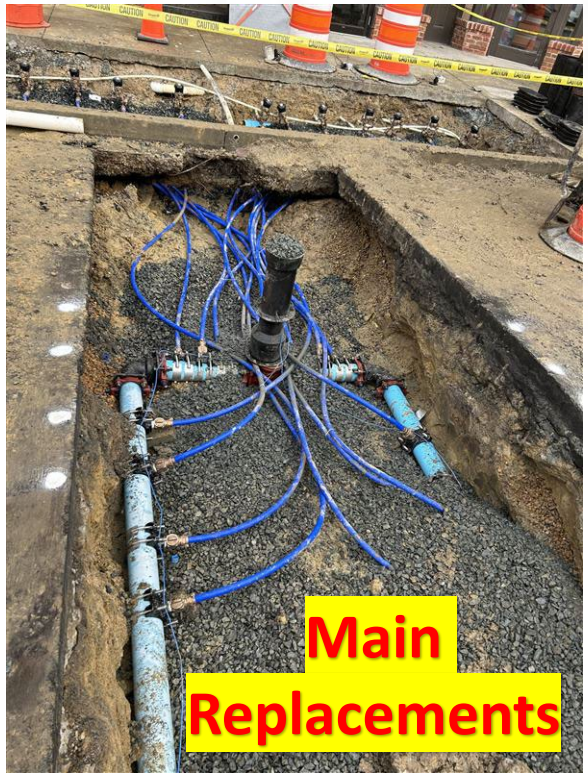
Water Projects


Well Rehab


Service Replacements


Main Replacements


Valve Replacement

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CPS Recommended Projects

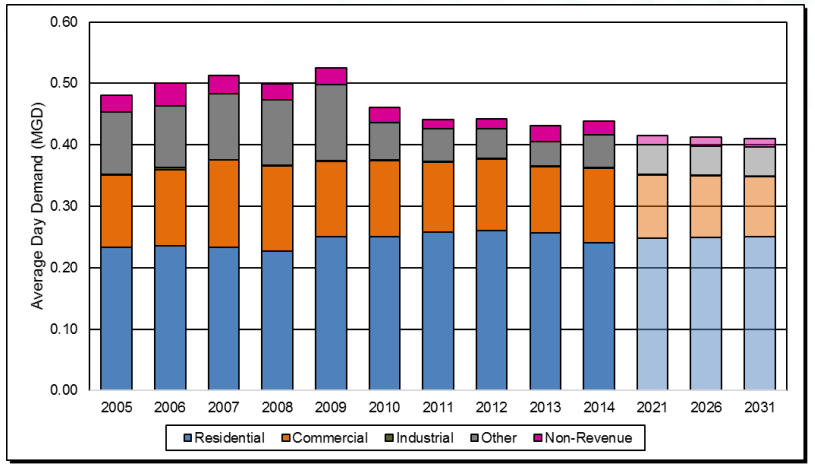
Virginia American Water intends to follow these priorities but may adjust investments or project sequencing if needed to address safety, compliance, reliability, or operational efficiency.

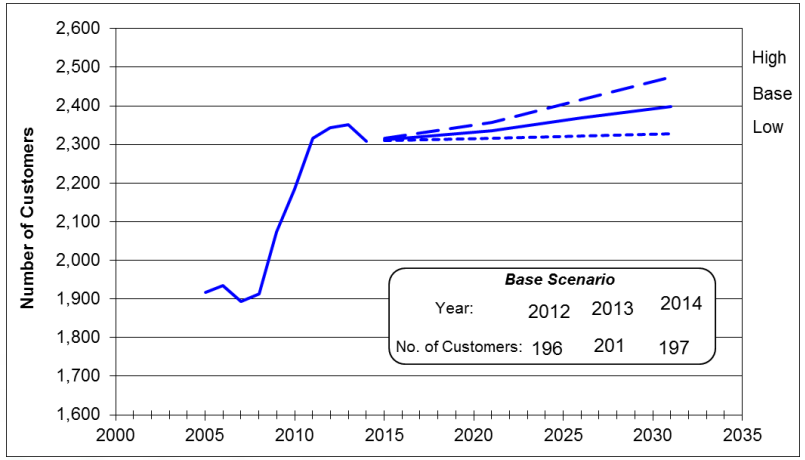
Comprehensive Planning Study (CPS)

- Thorough engineering assessment
- Conducted for the local service area individually
- Uses defined planning criteria
- Input from key internal stakeholders
- Includes assessment of:
  - Customer & Demand Projections
  - Source of Supply & Treatment adequacy
  - Pumping & Storage, Distribution/Collection System Analysis

Customer & Demand Analysis

- Critical path of planning studies
- Direct impacts on supply needs & water efficiency assessment
- Key aspects of customer categories:
  - Residential
    - Population projection and historic customer growth
    - Usage per customer (gpcd) trends
  - Commercial, Industrial, and “Other”
    - Top water users and their expected future demands
    - Expected new large users
  - NRW (Wastewater I&I from Wet-Day Flow Monitoring)
    - Metering is critical





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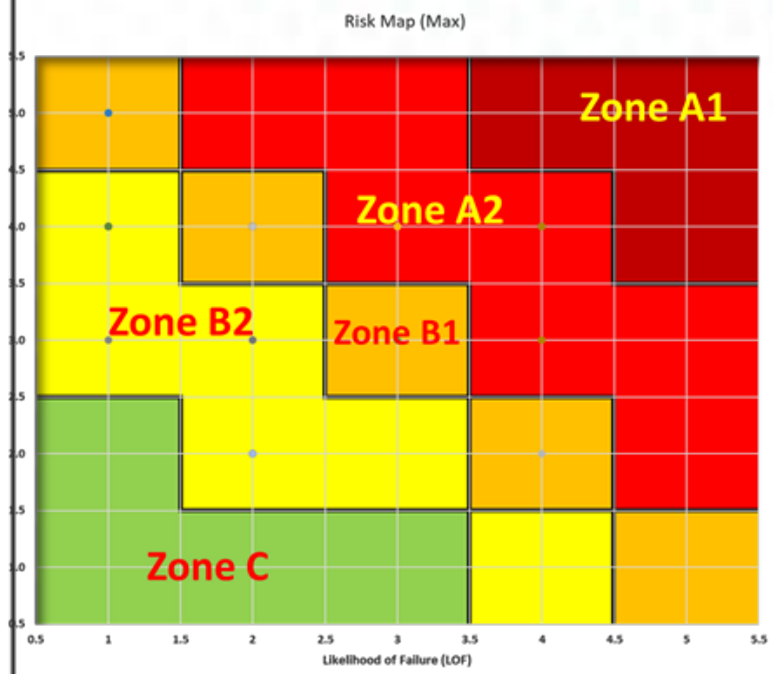
Source of Supply & Production Analysis

- Quantity and Quality Evaluation of Sources
- Capacity and Performance Evaluation by process
- Potentially requires most extensive study
  - with longest duration to resolve
  - affecting greatest number of stakeholders with competing interests
  - resulting in largest capital investment
- For Wastewater Treatment:
  - Performance (Regulatory Compliance, Energy Use, etc.)
  - Capacity, Condition, and Resiliency

Risk Register & Project Prioritization for Capital Planning

1) Asset Characterization	What assets do I have and which are critical?
2) Threat Characterization	What threats and hazards should I consider?
3) Consequence Analysis	What happens to my assets if a threat or hazard happens? How much money lost, how many lives lost, how many injuries?
4) Vulnerability Analysis	What are my vulnerabilities that would allow a threat or hazard to cause these consequences?
5) Threat Analysis	What is the likelihood that a terrorist, natural hazard, or dependency/proximity hazard will strike my facility?
6) Risk/Resilience Analysis	What is my risk and resilience? Risk = Consequences × Vulnerability × Threat Likelihood Resilience = Service Outage × Vulnerability × Threat Likelihood
7) Risk/Resilience Management	What options do I have to reduce risks and increase resilience? How much will each benefit in reduced risks and increased resilience? How much will it cost? What is the benefit–cost ratio of my options?



Reference: ANSI/ASME-ITI/AWWA J100-01 RAMCAP standard 2010

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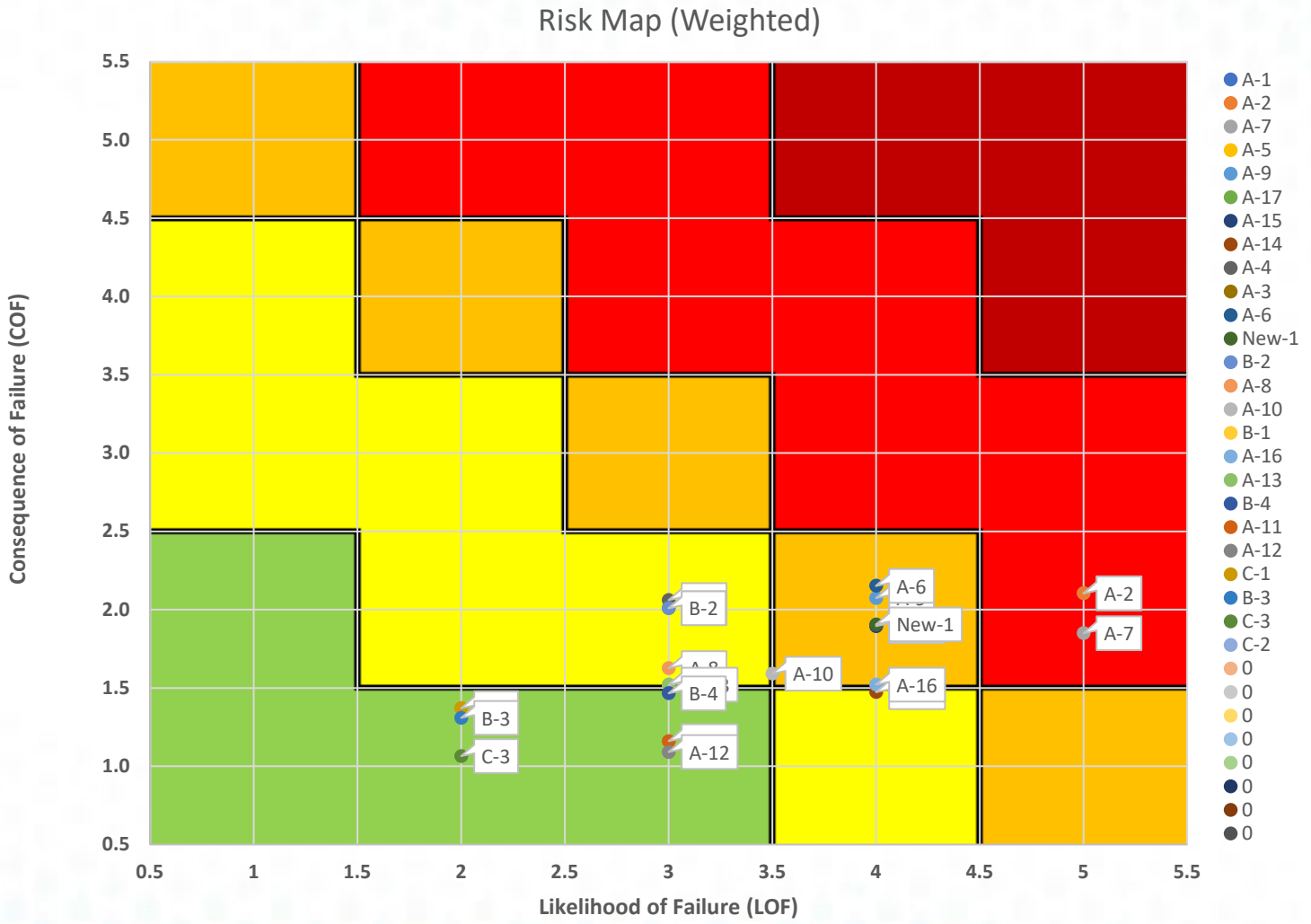
Cape Charles Water Projects

CPS Recommended Projects ($21.1M-$45.6M thru 2045)	
Chloride Study & Withdrawal Increase Request	Security & Safety Improvements
Surficial Aquifer & Deep Well Feasibility Study	Process Mechanical Improvements
Emergency Response plan to GWP Exceedance	Pilot Study for Brackish Groundwater Treatment
Process Wastewater Handling Improvements	Resiliency Improvements - Bay Creek South
Arc Flash/Power Study & Electrical Upgrades	East Well Inspection & Rehabilitation
New Storage Tank	Resiliency Improvements - Systemwide
Fire Flow Improvements	Softener Inspection & Media Change
Lighthouse Tank Vault Improvements	HVAC Improvements
Construction of Monitoring Wells	TTHM Reduction
Water Conservation & Management Plan Implementation	Aeration for Iron Removal
Chemical Room Upgrade	Lighthouse Tank Temperature & Coating Study
Tower Well Replacement	Managed Aquifer Recharge Feasibility Study
WTP Expansion	

Water Projects - Risk Map



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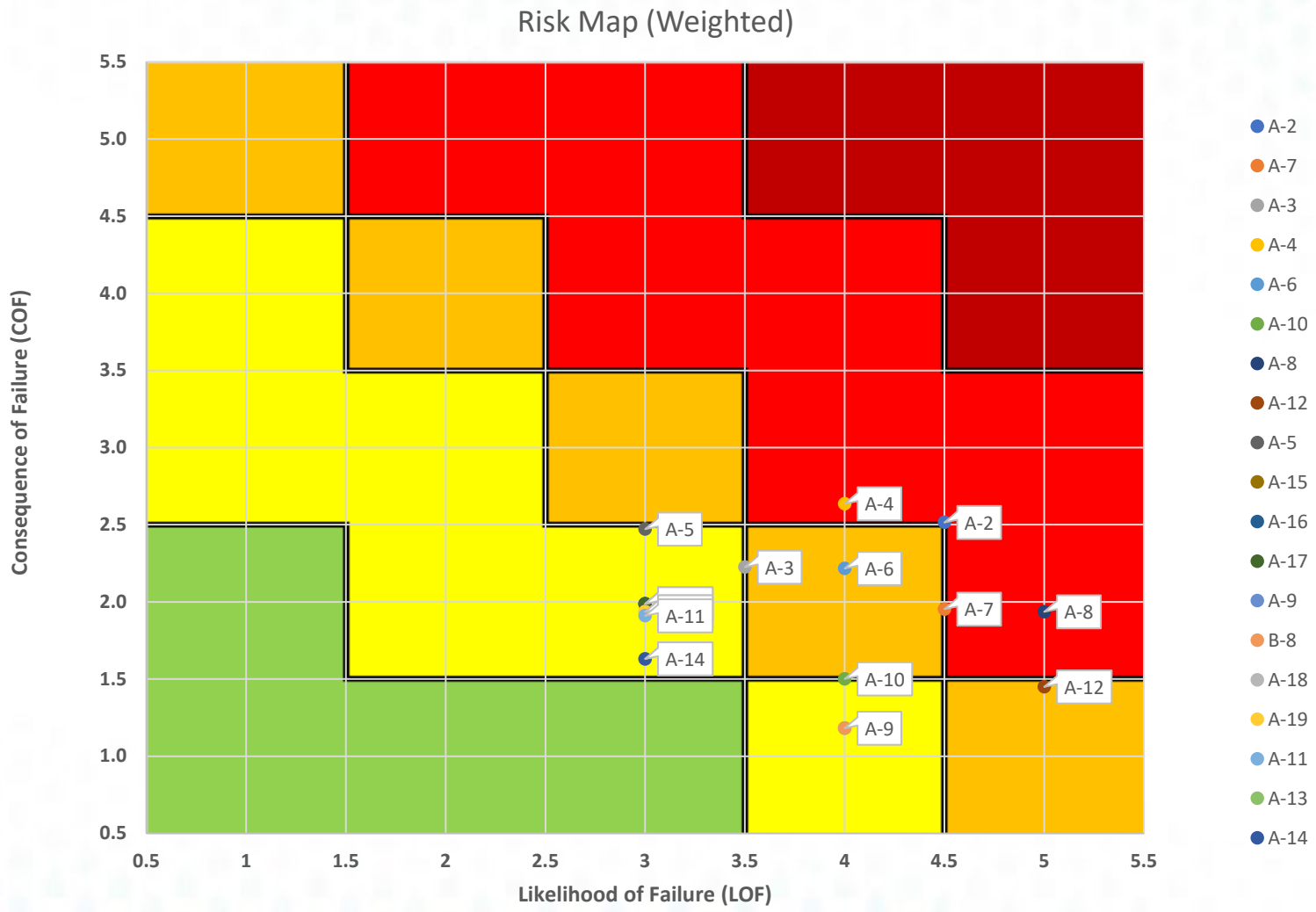
Cape Charles Wastewater Projects

CPS Recommended Projects ($39.6M-$74.9M thru 2045)	
Sanitary Sewer Evaluation & Survey (SSES) & I/I Study	Pine St Pump Station Improvements
UV Disinfection Rehabilitation & Upgrades	Plum Street Pump Station Improvements
Fig St Tank Replacement	Sludge Dewatering Process Improvements
Mason Ave Pump Station Improvements	Gravity Collection System Hydraulic Modeling & Capacity Study
Gravity Main & Manhole Rehabilitation/Replacement	Vacuum Collection System Hydraulic Modeling & Capacity Study
Instrumentation & SCADA Improvements	WWTP Expansion – Phase 2
Power Study & Electrical Upgrades	Plant Water System Rehabilitation
WWTP Expansion – Phase 1	Process Mechanical Improvements
Headworks Process Improvements	Influent Flow Box Odor Control
Washington Ave Pump Station Improvements	Site Improvements & Storage Expansion
Supplemental Carbon Storage & Feed Upgrades	Wet Well Diffusers for Gravity Pump Stations
Force Main Condition Assessments	Treatment Process Modeling & Optimization Study
New Quarter Vacuum Pump Station Improvements	Non-Potable Reuse of WWTP Effluent
Heron Pointe Vacuum Pump Station Improvements	Septage Receiving Station Study
Fig St Vacuum Pump Station Improvements	Managed Aquifer Recharge Study
HVAC Improvements	WWTP & Pump Station Improvements
Membrane Tank Safety Improvements	

Wastewater Projects - Risk Map



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Q & A

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Thank you!