

Water and Wastewater Topics

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WATER

1. Potable Water Supply Overview
2. Water Management Act
3. Water System Projects
4. New Water Treatment Plant Project

WASTEWATER

1. Sewer Rehab Project
2. Wastewater Treatment Plant (WWTP) NPDES Permit
3. WWTP Upgrade Project

Potable Water System Overview

Water Usage:

- **2017 Average day = 1.6 MGD**
- **2017 Maximum day= 2.12 MGD**

Water Supply:

- **10 active wells in 3 aquifers**
- **Carvers Pond Water Treatment Plant**
- **Current exploration**
- **Approved future well sites**
- **Vernon Street Rock Wells and Beach Street 0.75 MGD**

Water Storage:

- **Sprague Hill 3.8 MG**
- **Great Hill 1.0 MG**

Water Management Act

Current WMA Permit = 2.40 MGD

New WMA Permit – renewal beginning October 2018

**Expected New Permit = 1.83 MGD
(0.57 MGD reduction expected)**

Water System Projects

Current projects include:

➤ New Water Meters

- Phase I Summer 2016 – Commercial & college users (250 new meter meters)**
- Phase 2 Current – Residential (6900 new meters)**

➤ Hayward and Wall Street Water Mains; Bid Oct 3, 2018

➤ Replace Roofing at Carvers Pond WTP

Future project:

➤ High Street Water Treatment Plant

High St Water Treatment Plant Summary

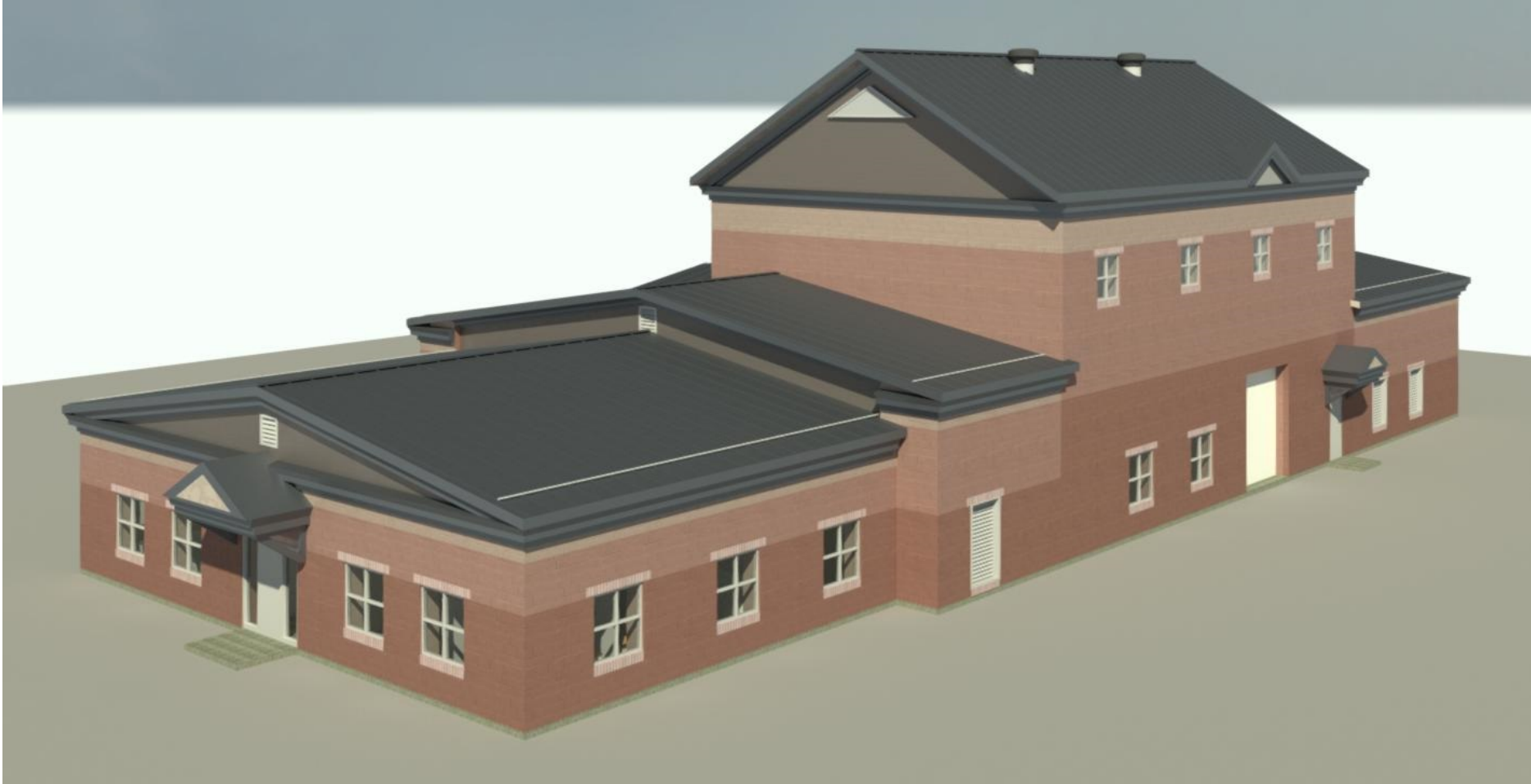
High St WTP will include:

- **Iron & Manganese Treatment and Disinfection**
- **New Water & Sewer Admin Office**
- **New WTP Garage Facility**
- **Upgrades to the Existing Maintenance Garage**

Cost:

- **Estimated at: \$10.4 M**
- **SRF Loan funding currently under review.**

High St WTP Rendering



High St WTP Design Schedule

DATE	ITEM
August 7 th	Project Kickoff – begin design
August 21 st	SFR PEF Application Submitted to MassDEP
October 12 th	Deliver 60% Design Deliverables to Town
October 18 th	60% Design Review Meeting with Town
December 21 st	Deliver 90% Design Deliverables to Town & MassDEP
January 10 th	90% Design Review Meeting with Town
January 25 th	Submit SRF Application w/ 90% plans
February 22 nd	Submit 100% Design to Town & MassDEP

Construction contract awarded/under contract end of April 2019

Anticipated construction complete by end of August 2020

Questions/ Potable Water



Thank You For Your Time



Wastewater Topics

- ❖ Sewer Rehab Project
- ❖ Wastewater Treatment Plant (WWTP) NPDES Permit
- ❖ WWTP Upgrade Project

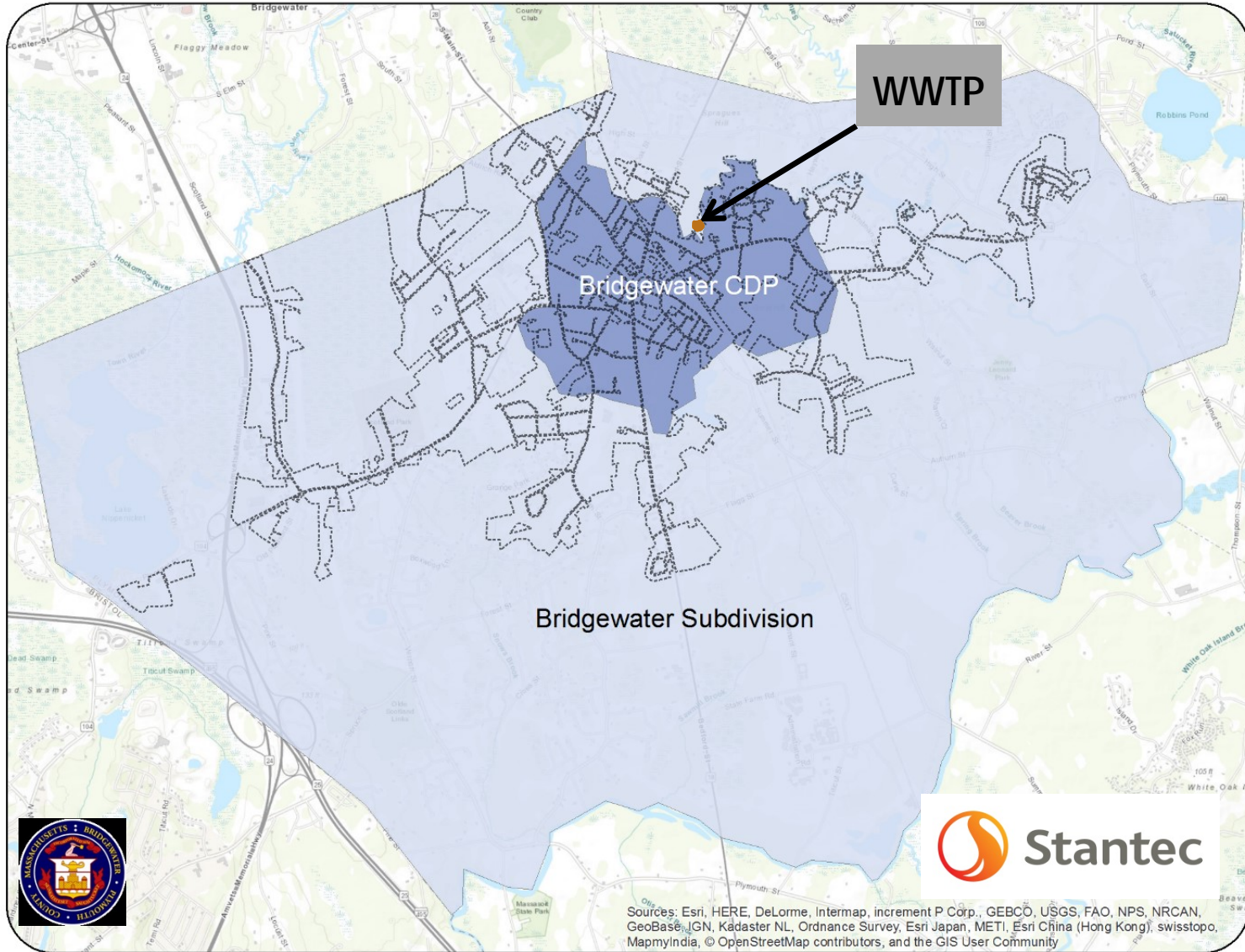


Town wastewater System Overview

- 35 miles of gravity sewers (6-in to 15-in Dia)
- 15 miles of low-pressure sewer mains
- 8 Town owned pump stations
- 7 Privately owned pump stations
- 1.44 MGD Wastewater Treatment Plant

TOWN OF BRIDGEWATER, MA

Sewer System Service Area



Sewer Rehab Project Goals

- #1 – Identify deteriorated sewer lines and get them rehabilitated.**
- #2 - Tighten up the system to remove as much I/I as practical.**
- #3 - Use proactive inspection and rehab to reduce reactive emergency repairs**



After Rehab

Examples of Pipe found in poor condition

- Heavy Cleaning to remove roots.
- CIPP Lined to seal off roots and infiltration.

Bridgewater Sewer Rehab Project

Project Summary

Project Cost

- Final cost at 2.45M vs 5.0 M budget.
- SRF funded.

Sewer Rehab

- 25,730 LF (4.87 Miles) CIPP lined.
- 550 LF new sewer by Open-Cut.

Manhole Rehab

- 79 MHs Rehabbed & 1 New MH.
- 50 MH frame and covers replaced.
- 24 MH Underdrains plugged.

I/I Removal

- Peaks reduced during rainfall events.
- Infiltration reduction difficult to quantify.

WWTP NPDES Permit Goals

- #1 – Get the permit renewed so the WWTP can continue to operate and to avoid fines and penalties.**
- #2 – Get the most favorable permit terms possible for the Town.**
- #3 – Extend the permit compliance schedule dates for improved implementation.**

WWTP NPDES Permit Summary

- **Permit renewed on 9/30/16 (no fines or penalties).**
- **Got reasonable Nitrogen and Phosphorus limits typical for the industry and this area of New England Total-N at 5 mg/L and Total-P at 0.2 mg/L**
- **Got permit full compliance extended from 5 yrs to 10 yrs with interim dates along the way.**

WWTP NPDES Upgrade Summary

- **Pre-engineering tasks will start in early 2019**
- **Plan to conduct pilot testing of various treatment processes to meet the Total-N and Total-P limits in the new permit.**
- **Total upgrade to be completed in two contracts.**
- **Total cost expected to be in the range of \$30M (SRF Loan program will be used to defray costs)**

Questions/ Wastewater



Thank You For Your Time

