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Coventry Wastewater Facilities Plan Update

Presented by:

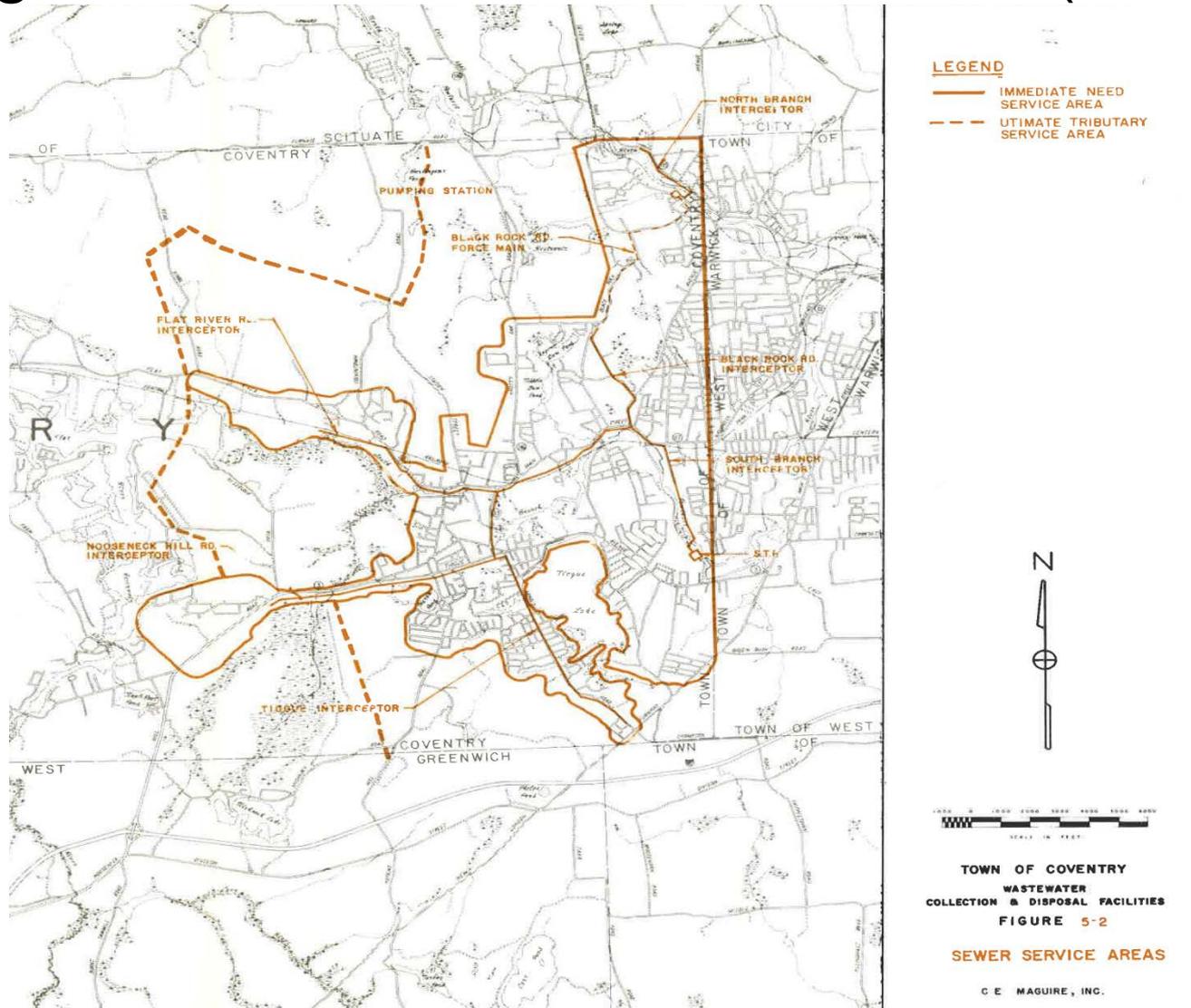
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September 25, 2017

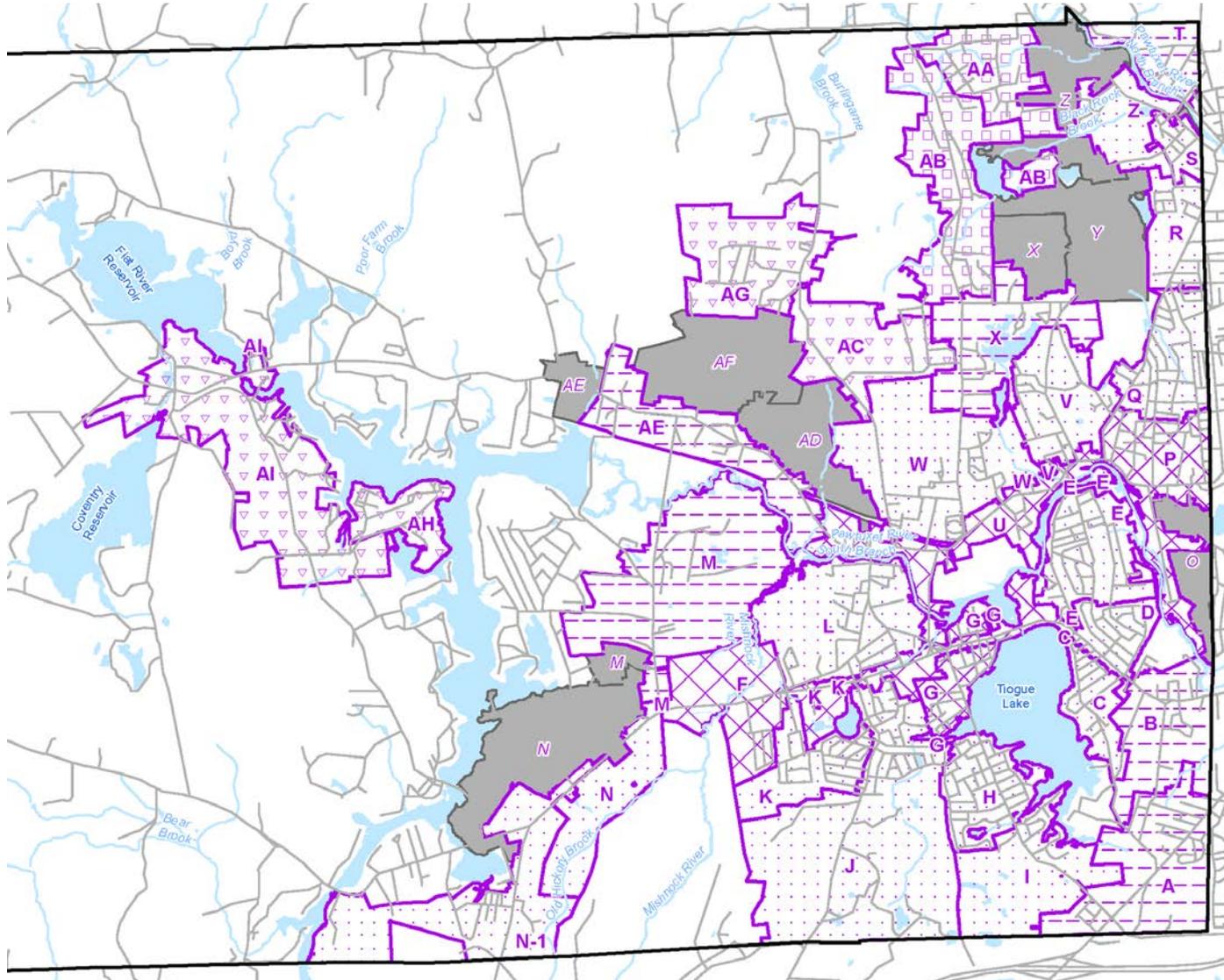
Facility Plan Introduction

- Facility Plan (FP) to be updated every 5-years for a 20-year future planning period.
 - Last Update in 2016.
- Original Wastewater Studies began in late 1960s to early 1970s
- History of this Facility Plan
 - 1995 Facilities Plan
 - 2003 Facilities Plan Reaffirmation
 - 2010 Facilities Plan Update
 - 2016 Facilities Plan Update
- Approved FP is required to be eligible for the SRF program.

Original Town Sewer Service Areas (1977)



Existing Town Planning Areas (2016)



Changes Included in the 2016 FP Update

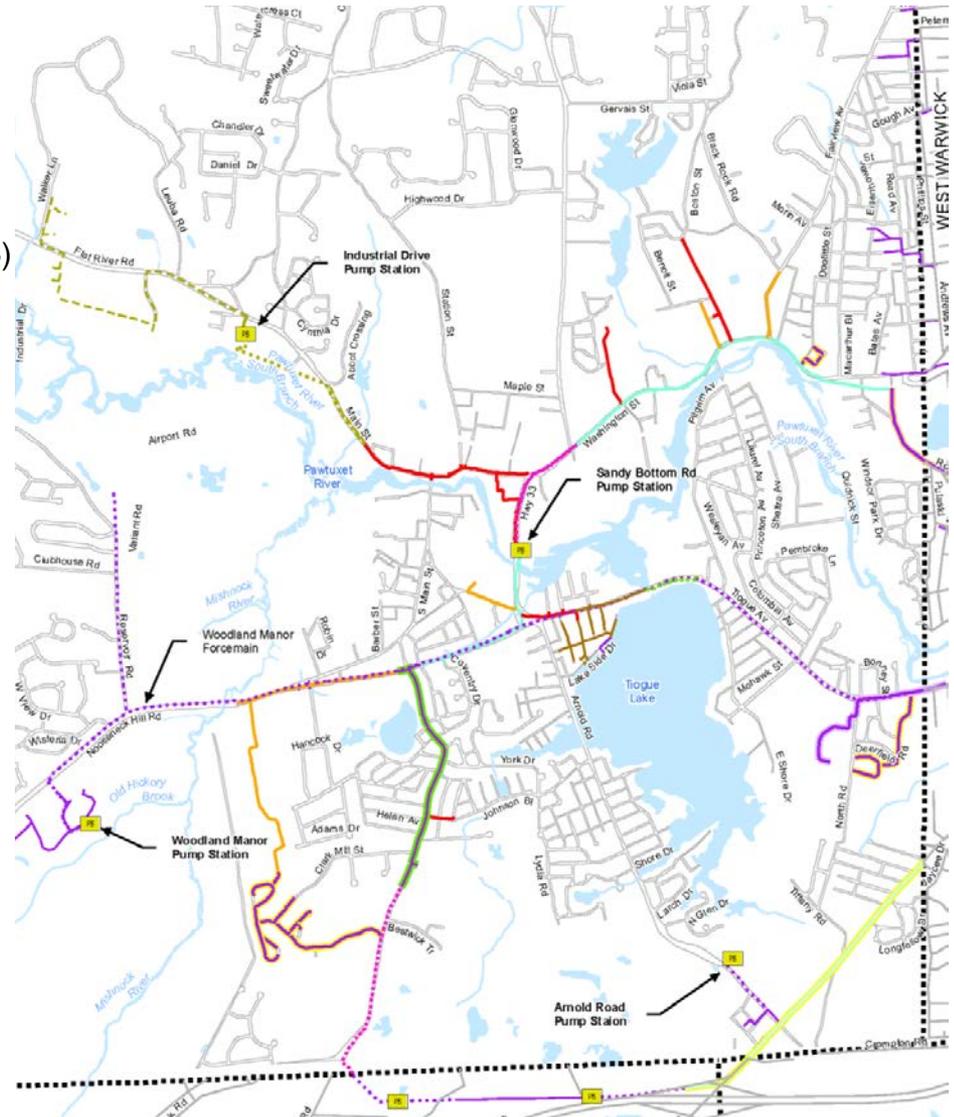
- Update/Confirm information from the previous FP document (2010 FP Update).
- Update Wastewater Flow Estimates for the 20-year Planning Period.
- Update the FP to include recently constructed and/or acquired sewer infrastructure.
 - Sewer Contract 6/6A (Lakeside Drive Area).
 - Sewer Contract 7/7A (Industrial Drive Area).
 - Woodland Manor System (Pump Station and Forcemain).
- Proposed utilization of additional capacity in the Woodland Manor System to include additional areas of need (i.e. Area N-1 – Nooseneck Hill Road/Mapleroot Village).
- Provide recommendations for the Town's wastewater system moving forward.

Sewer Program Needs

- Planning areas were prioritized for the sewer program based on physical characteristics and OWTS limitations of the area(s).
 - Shallow groundwater
 - OWTS systems in high groundwater have increased chance of causing groundwater pollution from leach field effluent.
 - Shallow bedrock
 - OWTS systems in areas with shallow bedrock do not allow the proper depth of soil for filtering/treatment of leach field effluent.
 - Steep ground slopes
 - OWTS leach field construction/reconstruction and layout difficult in steeper sloped areas.
 - Soil Suitability
 - Soil's ability to absorb and filter leach field effluent.
 - Lot sizes
 - Smaller lot sizes make the construction of new and replacement OWTS layout difficult.
 - Distance to surface water(s)
 - Close proximity to a surface water increase the likelihood of direct discharges from a failing OWTS system
 - Flooding concerns.
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History

- History of Existing Sewer System
 - New London Turnpike Sewer (early 1980s)
 - Broad Street Sewers (Harris)
 - Woodland Manor PS and FM (~1980)
 - Arnold Road Pumping Station and Force Main (Cal Chemical, ~1985)
 - North Road Terrace Sewers (CHA, ~1985)
 - North Branch Interceptor Sewer (Victor Elec.~1985)
 - Hopkins Hill Road Sewer (1989-1991)
 - Contracts 03-01 & 03-02 (2004)
 - Tiogue Ave & Washington St Areas and Sandy Bottom Rd PS
 - Contract 03-03 (2006)
 - Hopkins Hill Rd FM
 - Contract 4 (2007)
 - Tiogue Ave/Anthony St/ Fairview Ave/Ramblewood Estates
 - Contract 5 (2008)
 - Main St/Contentment Dr/Boston St Areas
 - Contract 2008A (2008)
 - Johnson Blvd
 - Contract 6/6A (2012)
 - Lakeside Drive Areas
 - Contract 7/7A (2014)
 - Industrial Drive Areas
 - Arnold Road
 - Northern Arnold Road (2016-17)
 - Southern Arnold Road (2017)



Sewer Program

- Northern Arnold Road
 - Extension of the existing Contract 6 – Lakeside Drive Project.
 - Served properties adjacent to Tiogue Lake.
 - Provided a discharge point for the proposed future Briar Point Area forcemain.
 - Fast tracked installation to be completed before final overlay of Arnold Road
- Southern Arnold Road
 - Dry gravity/low pressure lines installed as part of the service area for the future Briar Point area sewers.
 - Will become active once the Briar Point area is constructed.
 - Fast tracked installation to be completed before final overlay of Arnold Road.

Sewer Program

- Quidnick Village Area (Hazard Street) – Currently Ongoing.
 - Area is known to have shallow bedrock depths.
 - Steeper ground slopes in area
 - USGS soil mapping indicates soils which may not be able to adequately filter/treat the effluent.
 - Poor filtering capacity may result in the pollution of ground water, which increases with the density of housing
 - Multiple homes in the area with smaller lot sizes.
 - Proximity to surface water sources
 - Directly north of S. Branch of the Pawtuxet River.

Sewer Program

- Coventry Drive –Scheduled 2017-2018.
 - USGS soil mapping indicates soils which may not be able to adequately filter/treat the effluent
 - Poor filtering capacity may result in the pollution of ground water, which increases with the density of housing
 - Majority of properties in the Coventry Drive area are on smaller lots.
 - Proximity to surface water sources
 - West of Tiogue Lake and East of Huron Pond.

Sewer Program

- Wendell Avenue – Scheduled 2018.
 - Properties are close to River levels with known high groundwater.
 - Increased chance of ground water pollution.
 - USGS soil mapping indicates soils which may not be able to adequately filter/treat the effluent
 - Poor filtering capacity may result in the pollution of ground water, which increases with the density of housing
 - Multiple homes in the area with smaller lot sizes.
 - Proximity to surface water sources
 - Directly south of S. Branch of the Pawtuxet River.
 - Potential for direct discharges to surface water body.

Sewer Program

- Briar Point Area – Arnold Road completed; Remaining streets scheduled 2018
 - Properties are close to lake level with known high groundwater issues.
 - USGS soil mapping indicates soils in area known to be very wet, which may not be able to adequately filter/treat the effluent
 - Poor filtering capacity may result in the pollution of ground water, hazard of pollution increases with the density of housing
 - Lot sizes
 - Proximity to surface water sources
 - Directly adjacent to Tiogue Lake.

thank you
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