

## Section 1

### Introduction

#### 1.1 Background

The Water Pollution Control Authority (WPCA), City of Bridgeport collects and treats wastewater generated in Bridgeport, the sewer portion of Trumbull, and a small number of users in both Stratford and Fairfield on the Bridgeport line. The system consists of nearly 290 miles of sewer pipe, nine pumping stations and two wastewater treatment plants (WWTPs): the 30 million gallon per day (mgd) West Side plant and the 10 mgd East Side plant. Because of the age of the collection system, a portion of the collection system is served by combined sewers – where wastewater and stormwater are conveyed in a common pipe to the treatment plants. During rainfall events, when the capacity of the combined sewer pipes and/or treatment facilities are exceeded, a combination of wastewater and stormwater can be discharged through the 25 combined sewer overflows (CSOs) located throughout Bridgeport, or can be partially treated and discharged at the two treatment plant sites.

In July 2011, as required under an Administrative Order, the WPCA submitted a Long-Term CSO Control Plan (LTCP), to address the CSOs in Bridgeport. The LTCP provided a plan to control CSOs to the 1-year, 24-hour storm including the following actions and plans: an illicit connection elimination program, sewer separation, static weir control, storage tanks, green infrastructure, a tunnel, and a continuous water quality monitoring and modeling program. The LTCP was approved by Connecticut’s Department of Energy and Environmental Protection (CT DEEP) in January 2018. The WPCA then entered into a superseding Administrative Order (WRMU18002) in June 2018 which defines the schedule for implementation of improvements recommended in the LTCP. In March 2019, the WPCA entered into a second Administrative Order requiring the WPCA to submit a Wastewater Treatment Facilities Plan to the Commissioner of CT DEEP on or before November 30, 2020. This Wastewater Facility Plan fulfills the requirement of the Administrative Order and presents an assessment of all critical components at both treatment plants and a long-term vision of the capital needs of the WPCA’s West Side and East Side WWTPs to improve the performance and reliability of the treatment systems. This Facilities Plan is designed to dovetail with recommendations presented in the LTCP and provide a holistic view of the collection and treatment systems to result in the most cost-effective solutions to improve water quality in the receiving waters. The schedule included in the wastewater treatment Administrative Order is presented in **Table 1.1-1**. The two Administrative Orders are included in **Appendix A** for reference.

**Table 1.1-1 WWTP Administrative Order Compliance Schedule**

Date	Action
On or before November 30, 2020	Submit Facilities Planning Report
On or before May 31, 2022	Submit 100% design plans and specifications for WWTP upgrades
No later than August 2023	Commence construction of remedial actions
No later than August 2026	Complete construction of remedial actions

## 1.2 Goals of the Wastewater Facilities Plan

The scope of the wastewater treatment improvements presents challenges in maintenance, rehabilitation, and replacement. Capital projects across the plants must be implemented while facilities are on-line, posing operational challenges. Decisions to replace aging assets with more efficient, up-to-date treatment processes must be appropriately vetted, and phased to ensure continued operation of the facility. The improvements at the two WWTPs must move forward in a logical fashion, ensuring integration with the LTCP. In addition to complying with the requirements of the Administrative Order, the WPCA is taking this opportunity to move the utility toward a culture of Effective Utility Management where the following desired, overarching Facility Planning outcomes are achieved:

- Protect public health and safety
- Preserve (and restore) natural resources and a healthy environment through permit compliance
- Provide reliable, resilient, and high-quality service
- Contribute to economic prosperity through cost-effective treatment

Desired outcomes and performance measures related to the treatment plants and collection system are presented in **Table 1.2-1**.

**Table 1.2-1 Desired Outcome and Performance Measures for WWTPs**

Desired Outcome	Performance Measures
Protect Public Health and Safety	Frequency and Volume of Primary Effluent Discharges at WWTPs
	Frequency and Volume of CSOs
	Frequency and duration of street flooding
	Number of fecal coliform violations annually
	Number of air quality violations annually
	Number of odor complaints annually
	Number of water quality complaints annually
Preserve (and Restore) Natural Resources and a Healthy Environment	kWh/MG treated
	kWh/lb BOD <sub>5</sub> removed
	Volume of Chemicals used annually
	Natural Gas used annually
	MG potable water used annually
	Pounds of TN discharged annually
	Pounds of BOD <sub>5</sub> discharged annually
	Pounds of TSS discharged annually
Number of TRC violations annually	

Desired Outcome	Performance Measures
Maintain Reliable, Resilient, High Quality Service	Influent Pumps out of service for long-term maintenance
	Screens out of service for long-term maintenance
	Primary Clarifiers out of service for long-term service
	Aeration Tanks out of service for long-term maintenance
	Secondary Clarifiers out of service for long-term maintenance
	Number of Permit Violations Annually
	Pounds of Residuals removed annually
Contribute to Economic Prosperity	Unit cost per MG of wastewater treated
	Chemical use/MG treated
	kWh/MG treated
	Annual Cost for Emergency Repairs
	Annual Cost for Asset Management
	Staff employed by WPCA
	Development supported in community
	Improved cooperation with local industry (e.g. acceptance of high strength waste for treatment process, use of reclaimed water)

Major goals for the WWTP improvements include:

- Replacement of aging assets, including support systems, to meet current codes and standards
- High flow management at the WWTPs to help reduce remaining untreated CSOs, and maximize flow to secondary treatment
- Improved preliminary and primary treatment to reduce downstream operation and maintenance (O&M) costs, improve system performance and improve quality of wet weather discharges
- Improved biological nutrient removal to optimize nitrogen credits
- Development of a long-term residuals management plan
- Providing system resiliency to account for climate change, including sea level rise
- Updating instrumentation and controls (I&C) for more efficient operations

## 1.3 Plant History

The West Side WWTP is located at 205 Bostwick Avenue and discharges into Long Island Sound via Cedar Creek (Black Rock Harbor). Construction of the original interceptors began in the early 1900s. Collected wastewater was conveyed to the site on Bostwick Avenue. In the 1910s the original gate house, grit chamber, pumping station and settling tanks were constructed at the Bostwick Avenue site. Partially treated effluent was discharged through the effluent outfall.

Sludge was discharged to sludge beds on-site. In the late 1930s additional construction took place at the site with the construction of a bypass chamber and second outfall, a new screenings building, the settling basins were removed and replaced with new primary settling tanks, and a chlorine detention chamber. Six sludge digesters were constructed at this time. In 1948 upgrades were made to the pumping station, grit and screening, and the primary settling tanks and the effluent outfall was constructed. The plant as it exists today was designed in 1969 to include new primary settling tanks and a secondary treatment system using a conventional activated sludge process with six aeration tanks and three final settling tanks. The existing primary settling tanks were converted to chlorine contact tanks at this time. Gravity thickeners were also constructed at this time, as well as a new control building. Mechanical upgrades were completed between 1993 and 2001, and in the early 2000s the activated sludge system was converted to a Modified Ludzack Ettinger (MLE) process for interim nitrogen reduction. Dechlorination was also added in the early 2000s. No major upgrades have been completed since that time and most equipment has reached the end of its useful life. The process flow schematic for the West Side WWTP is presented in **Figure 1.3-1**.

The West Side WWTP was designed to achieve secondary effluent quality at annual average design flow capacity of 30 mgd and a peak secondary treatment capacity of 58 mgd. All wet weather flow in excess of the secondary treatment capacity, up to 90 mgd, receives primary treatment before recombining with secondary effluent prior to effluent disinfection.

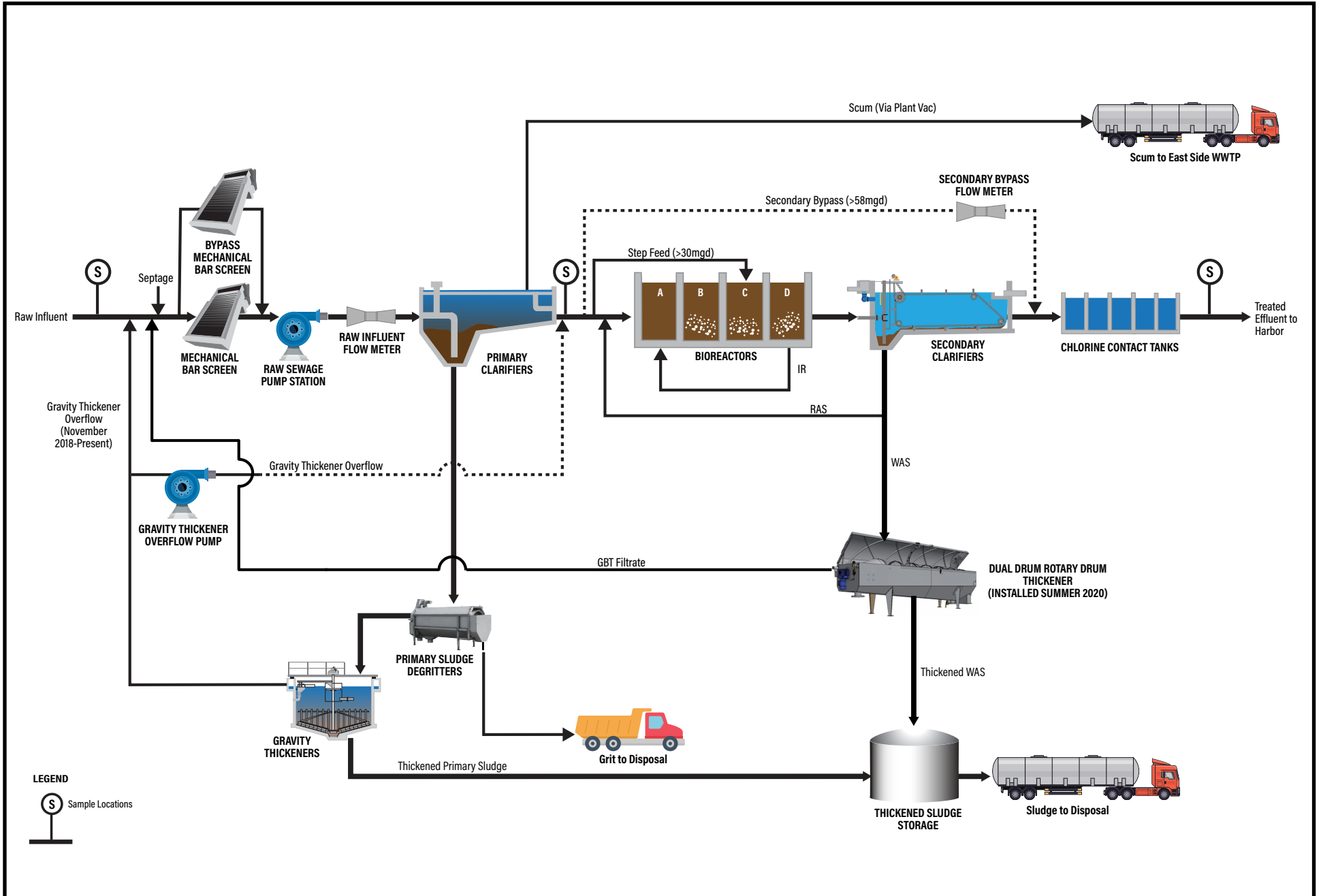


Figure 1.3-1  
West Side Process Flow Diagram

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The East Side WWTP is located at 695 Seaview Avenue and discharges into Long Island Sound via Bridgeport Harbor. A portion of the collection system serving the East Side plant is also served by combined sewers. The East Side WWTP was originally designed as a primary treatment facility in the 1950s and then later between 1969 and 1971 was upgraded to secondary treatment. The East Side plant is a sister plant to the West Side plant consisting of similar unit processes: influent screens, pumping station, three rectangular primary settling tanks, six aeration tanks, three rectangular secondary settling tanks, and chlorine contact tanks. Primary sludge is thickened with gravity thickeners and waste activated sludge is thickened on a gravity belt thickener. As with the West Side plant, the East Side plant was modified for interim nitrogen reduction in the early 2000s and dechlorination added. Limited mechanical improvements have been made since that time. The process flow schematic for the East Side WWTP is presented in **Figure 1.3-2**.

The East Side WWTP was designed to achieve secondary effluent quality at annual average design flow capacity of 10 mgd and a peak secondary treatment capacity of 24 mgd. All wet weather flow in excess of the secondary treatment capacity, up to 40 mgd, receives primary treatment before recombining with secondary effluent prior to effluent disinfection.

## 1.4 Plant Permits

The treatment facilities operate, and discharge treated effluent under the terms and conditions of the National Pollutant Discharge Elimination System (NPDES) permit Nos. CT0100056 (West Side WWTP) and CT0101010 (East Side WWTP). The West Side plant permit expires June 30, 2024. The East Side WWTP permit expires October 28, 2020 (the WPCA submitted the East Side WWTP permit renewal application in April 2020). Conventional permit requirements are presented in **Table 1.4-1** and **Table 1.4-2** for each plant. The two NPDES permits, as well as the General Permit for Nitrogen, are included in **Appendix B**.

**Table 1.4-1 NPDES Permit Limits for West Side WWTP**

West Side WWTP				
Constituent	Average Monthly Limit	Daily Limit	Sampling Frequency	Sample Type
BOD <sub>5</sub>	30 mg/L	50 mg/L	3x/week	Daily Composite
TSS	30 mg/L	50 mg/L	3x/week	Daily Composite
Residual Chlorine	0.05 mg/L	0.10 mg/L	4x/workday	Grab
Copper	NA	NA	NA	NA
pH	NA	6-9	workday	Grab
Fecal Coliform	88 per 100 mL	800/2,400	3x/week	Grab
Enterococci	35 per 100 mL		3x/week	Grab

In addition to the conventional limits listed above, both plants are required to perform an Acute Aquatic Toxicity Test on a quarterly basis. In addition, the West Plant is required to perform a Chronic Aquatic Toxicity Test for Estuarine or Marine Discharges on an annual basis during July, August, or September.

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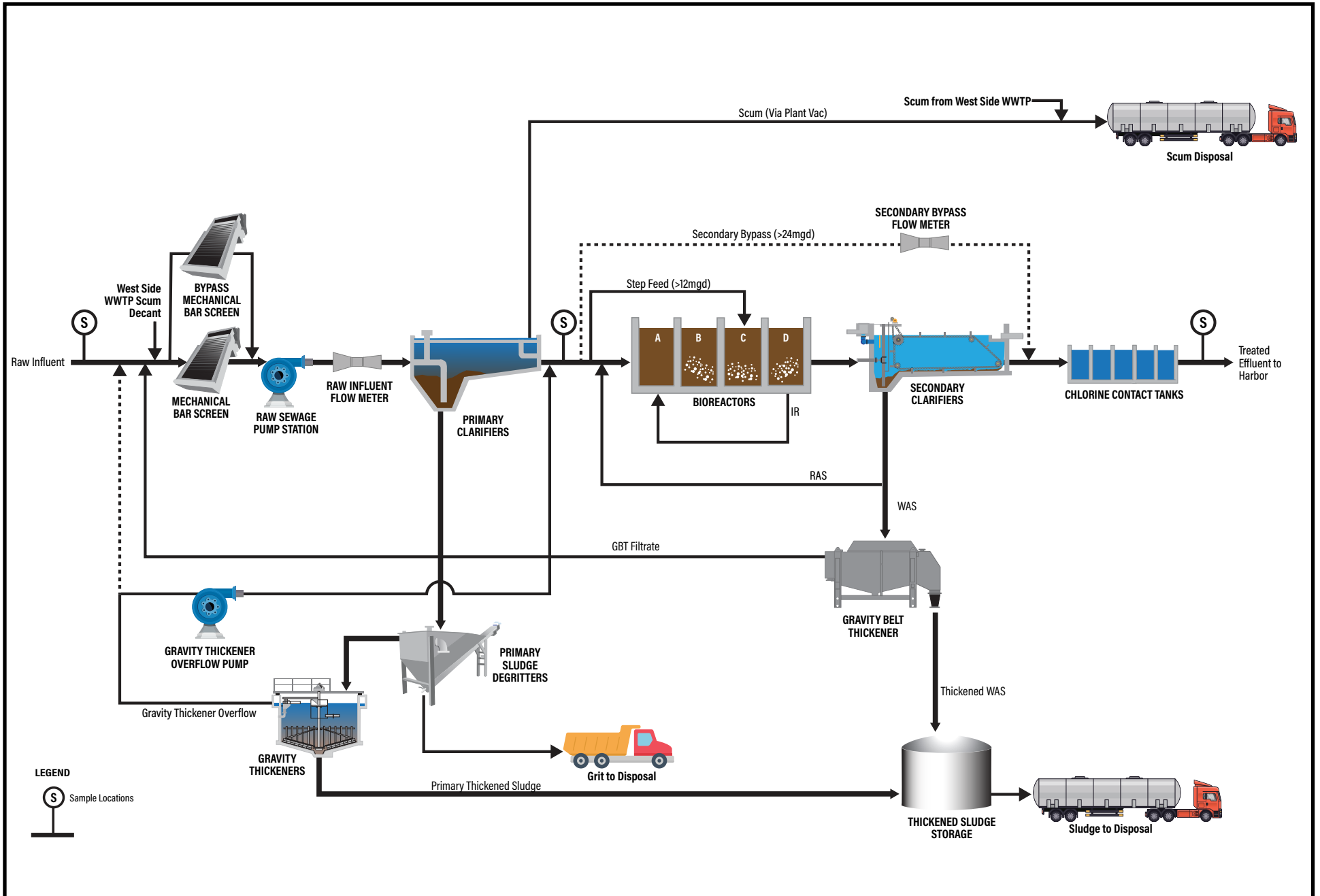


Figure 1.3-2  
East Side Process Flow Diagram

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Table 1.4-2 NPDES Permit Limits for East Side WWTP

East Side WWTP				
Constituent	Average Monthly Limit	Daily Limit	Sampling Frequency	Sample Type
BOD <sub>5</sub>	30 mg/L	50 mg/L	3x/week	Daily Composite
TSS	30 mg/L	50 mg/L	3x/week	Daily Composite
Residual Chlorine	0.05 mg/L	0.10 mg/L	4x/workday	Grab
Copper	2.514 kg/d	6.781 kg/d	weekly	Daily Composite
pH	NA	6-9	workday	Grab
Fecal Coliform	88 per 100 mL	800/2,400	3x/week	Grab
Enterococci	35 per 100 mL		3x/week	Grab

Under high flow conditions, when influent flow exceeds the capacity of the secondary treatment system (58 mgd at the West Side plant and 24 mgd at the East Side plant) excess primary effluent flow bypasses secondary treatment and recombines with secondary effluent ahead of the chlorine contact tanks. All flow is disinfected and dechlorinated prior to discharge. During bypass events the plant is required to report effluent limits, but the maximum daily Five-day Biochemical Oxygen Demand (BOD<sub>5</sub>) and total suspended solids (TSS) permit limits are waived during this time.

The most recent General Permit for Nitrogen Discharges became effective on January 1, 2019 and expires on December 31, 2023. This permit defines the annual mass loading of total nitrogen for each Publicly Owned Treatment Works (POTW) in the State discharging to Long Island Sound. The waste load allocation for WPCA's West Side and East Side WWTPs are 1,041 and 362 pounds per day (lb/day), respectively, with an equivalency factor of 0.85 based on the geographic location of the facilities. This equates to an average discharge concentration of 4.16 milligrams per Liter (mg/L) for the West Side plant and 4.34 mg/L for the East Side plant under the permitted average annual flow of 30 mgd and 10 mgd, respectively. Since both plants are operating at an average annual flow well below the permit limit, the concentration of TN discharged can be higher than these values. The General Permit requires sampling of plant effluent Total Nitrogen (TN) at both facilities twice per week using a composite sampler, as well as monitoring of the daily flow volume.

The NPDES permits also regulate CSOs in the service area. The WPCA is required to report the date, time and duration of each precipitation event resulting in a CSO discharge and the date, time, duration, and estimated volume for each discharge event for each CSO structure. **Table 1.4-3** and **Table 1.4-4** present the permitted CSO discharges tributary to each treatment facility. Dry weather overflows are prohibited.

**Table 1.4-3 West Side NPDES Permitted CSO Regulators**

NPDES #	Mnemonic	Location	Receiving Water
91	DEW	State St & Dewey St	Ash Creek
38	SEAB	Brewster St & Seabright Ave	Black Rock Harbor
87	ANTH	St Stephens Rd & Anthony St	Burr Creek
40	WORD	Howard Ave & Wordin Ave	Cedar Creek
84	ARBOR	Admiral St & Harbor St	Cedar Creek
145	TIC	Henry St & Atlantic St	Bridgeport Harbor
207	STATE A&B	State St & Water Street	Pequonnock River
49	WALL	John St - west of Water St	Pequonnock River
50	FAIR	Water St & Fairfield Ave	Pequonnock River
51	HILL <sup>1</sup>	Water St & Golden Hill St	Pequonnock River
195	OVER	Congress St @foot of Crescent St	Pequonnock River
80	CON	Congress St & Main St	Pequonnock River
79	EWAS	East Washington Ave & Housatonic Ave	Pequonnock River
78	YARD <sup>1</sup>	Housatonic Ave & City Yard	Pequonnock River
77	GRAND	Housatonic Ave & Grand St	Pequonnock River
75	COND <sup>1</sup>	Housatonic between Commercial & Grand	Pequonnock River
76	HOUS	Housatonic Ave & N. Washington Ave	Pequonnock River
33	HUNT	Huntington Rd & Vernon St	Pequonnock River
67 66	CREP/CREW <sup>1</sup>	Pulaski St, Congress St & Crescent Ave	Pequonnock River
101	CAP	Main St & Capitol Ave	Island Brook
196	FAIM <sup>1</sup>	Main St & Fairview Ave	Island Brook
48 47	TERN&TERS	Water St & Union Square	Pequonnock River
192	RAIL	Broad St & Railroad Ave	Bridgeport Harbor
93	CEM/MAPE	Mt. Grove Cemetery & Dewey St.	Ash Creek

<sup>1</sup> Although listed in NPDES permit these regulators are no longer active

**Table 1.4-4 East Side NPDES Permitted CSO Regulators**

NPDES #	Mnemonic	Location	Receiving Water
153	WANN 153	Waterview & Ann Street	Yellow Mill Channel
22	CHUR 22	Church Street West of Waterview	Yellow Mill Channel
17	WASH 17 <sup>1</sup>	Seaview & Crescent	Yellow Mill Channel
16	DEAC 16	Seaview & Deacon Street	Yellow Mill Channel
12	STRAT	Connecticut & Stratford	Yellow Mill Channel
6	BAYEL 6	Bay Street & Mildner Dr	Johnson's Creek
18	BARN 18	Seaview & Barnum	Yellow Mill Channel

<sup>1</sup> Although listed in NPDES permit this regulator is no longer active

## 1.5 Plant Operations

The WPCA currently contracts with Inframark (the Company) for the operations of the wastewater treatment system defined as the collection system, collection system sites, and the two treatment plants. On October 8, 2013 the WPCA entered into a 10-year Agreement (with two, 5-year renewable options) with Severn Trent Environmental Services, Inc for the operation and maintenance of the wastewater treatment systems. In 2017, Severn Trent – North American changed its name to Inframark, following the separation from the parent company in the United Kingdom. Prior to this contract, the system was operated by KGI Bridgeport Company as assignee of the service agreement from Aquarion Services Company of Connecticut.

The current operations contract requires the Company to procure and provide all necessary materials, supplies, consumables, labor, etc. to continuously operate and maintain the System 24 hours per day, 7 days a week, 52 weeks per year in accordance with applicable law, the operations and maintenance (O&M) manual, and the conditions of the NPDES permits, the General Permits for Nitrogen Discharges, the Consent Agreement, and the Consent Order. The Company is responsible for payment of the following utility costs: fuel for generators, vehicles and collection system equipment, water, and telecommunications. The WPCA pays directly for electricity and natural gas costs. Sludge from the wastewater treatment system is processed and properly disposed of by the Company and is the Company's sole cost and expense in accordance with the contract and all applicable law. Should sludge quantities be plus or minus 5 percent of the base estimate of 4,850 dry tons per year (dt/year) an adjustment for cost of sludge disposal is made. A chemical allowance limit of \$450,000 is included in the service fee. Chemical costs are tracked monthly and at the end of each year any unused amount is reimbursed to WPCA. If the amount exceeds the limit WPCA reimburses the Company for the excess chemical costs.

The operations contract includes performance guarantees, including meeting average monthly BOD<sub>5</sub> and TSS at the West Side plant of 20 mg/L and at the East Side plant of 15 mg/L, respectively. These are target goals with no associated penalties. With respect to Total Nitrogen limits, WPCA pays the Company 50 percent of the direct cash payment received from the CT DEEP Nitrogen Credit Exchange Program. The Company is required to pay for all nitrogen credit costs with a limit of liability in any given billing year of one million dollars.

## 1.6 Related Projects

### 1.6.1 Long Term CSO Control Plan

The WPCA completed and submitted a Long-Term CSO Control Plan in July 2011 in accordance with their Administrative Order. As part of the LTCP, several CSO control alternatives were evaluated to prevent overflows from occurring during wet weather events corresponding to the 1 year, 24-hour storm. A wide range of technologies were evaluated including low impact "green" technologies, solids and floatables control, collection system controls, sewer separation, regional storage systems, and regional wet weather technologies. Advantages and disadvantages were compiled for each technology evaluated. Those showing promise were further analyzed during the detailed evaluation of alternatives. Elements of several alternatives were included in the ultimate LTCP as described below:

- **Illicit Connection Elimination Program** – to resolve contamination issues in Johnson’s Creek, Yellow Mill Channel, the Pequonnock River, Cedar Creek and Ash Creek
- **Sewer Separation** – in four sewersheds
- **Real Time Control** – and inflatable dams to be installed at four regulators
- **Low Impact Technologies** – to be implemented throughout all phases of the LTCP
- **CSO Storage Tanks** – a 1.5 million gallon (MG) storage tank at Ellsworth Park to capture flows from the SEAB regulator and a 1.5 MG Ash Creek storage tank near the DEW regulator to capture flow from DEW and CEM/MAPE
- **CSO Relief Sewers** – to convey overflows from CSOs on the Pequonnock River to the TIC regulator which discharges into Bridgeport Harbor
- **Water Quality Monitoring and Modeling Program** – to demonstrate the effectiveness of the relief sewers
- **Deep Rock CSO Storage Tunnel** – to be constructed in two phases if water quality monitoring and modeling program indicates that the tunnel is necessary

As presented in Table 1.1-1 above, the WPCA entered into a subsequent Administrative Order for the implementation of the recommendations of the CSO LTCP.

### 1.6.2 Sludge Processing System Evaluation

In January 2012, the Sludge Processing Systems Evaluation study was submitted to CT DEEP to address the sludge processing needs for the two treatment facilities over a 20-year planning period (2010 to 2030). The goal of the study was to evaluate various alternative upgrades necessary to provide a cost-effective, sustainable and reliable means for processing the biosolids at both plants. The scope of the report included the following four phases:

1. Evaluation of existing facilities and sludge outlets
2. Identification and screening of sludge processing technologies
3. Development and evaluation of viable alternatives
4. Recommended alternatives and conceptual design

The preliminary evaluation considered alternatives to thicken sludge at both facilities: thicken and dewater sludge at both facilities; hauling thickened sludge from East to West for dewatering; and sludge drying with energy recovery. Baseline improvements recommended included upgrades to the existing gravity thickeners, scum handling facilities, sludge storage tanks, solids handling pumps, main screens (at the West Side plant), control systems, odor control systems, and associated electrical improvements. The overall plan recommended phased implementation of improvements to give the WPCA the maximum flexibility and allow costs to be spread over several years. The initial phase included installation of new thickening equipment and baseline improvements. The next phase would include improvements to accommodate combination thickening/dewatering units at the East Side and West Side plants including new sludge storage

tanks and truck loading bays. The long-range plan would include the construction of sludge dryers and an energy recovery system at the West Side plant.

### 1.6.3 Low Level Nutrient Removal Study

In November 2013, WPCA submitted the Low Level Nutrient Removal Study to CT DEEP. The objective of this study was to evaluate process upgrades and enhancements that could be implemented in the short-term and long-term to improve nitrogen removal performance for 2014 and beyond, since more stringent total nitrogen limits were coming into effect in 2014. The report presented the following conclusions for each plant.

The West Side plant was operating at approximately 75 percent of its 30 mgd flow capacity, yet still does not have adequate aeration basin volume to reliably maintain nitrification in the winter. In addition, the orientation of the influent screens as well as the screen bar spacing results in problems in reliability, screenings pass through, and downstream O&M problems. Since there is no grit removal, during peak flow events, grit can overwhelm the primary clarifier sludge collection system. The plant is operated in an MLE configuration to meet multiple objectives – remove as much nitrogen as practical, minimize sludge production and avoid biomass washout during wet weather events. This resulted in an unconventional mode of operation characterized by very high mixed liquor suspended solids (MLSS), high sludge blankets in the secondary clarifiers, and low internal recycle rates. Because of the ragging problem, the biological nutrient removal (BNR) mechanical equipment was out of service frequently. It was surmised in this report that the plant was achieving some level of simultaneous nitrification/denitrification in the aeration basins and/or denitrification in the secondary clarifiers. Short-term recommendations suggested considering chemically enhanced primary treatment during the winter months and implementing step feed when influent flow reached 38 mgd.

The East Side plant was operating at 65 percent of its flow capacity. At the time the East Side plant was experiencing high variability in sludge volume index (SVI) which resulted in loss of solids during high flow events, and had trouble maintaining nitrification in the winter months. The East Side WWTP experiences similar issues as the West Side WWTP related to screenings pass-through and no grit removal. The East Side plant is also operated in an MLE configuration with a high operating MLSS, high sludge inventory, and moves to a step feed operation when flow increases to 12-15 mgd. Short-term recommendations for this facility was to move to step feed operation at 20 mgd.

To improve nitrogen removal at each plant the following was recommended: providing mixing chimneys, baffle walls, de-ox chimneys, deep contact stabilization zones, improved process controls and scum management in the existing BNR basins.

With respect to long-term improvements, Integrated Fixed Film Activated Sludge (IFAS), step-feed denitrification, and post denitrifying Moving Bed Biofilm Reactor (MBBR) were analyzed. Only Step-feed was selected for further evaluation. The BioMag process was also considered as an emerging technology. In the end it was recommended that step feed denitrification would be the most favorable alternative in the long-term.

## 1.7 Report Organization

This Facilities Plan is organized in the following ten Sections:

### **Section 1 – Introduction**

This section provides background and goals of the Facilities Plan as well as a brief history of the wastewater treatment system, permits, regulatory orders and related projects.

### **Section 2 – Basic Planning Criteria**

Presents the planning criteria used in the development and evaluation of alternative treatment solutions for the West Side and East Side WWTPs including siting considerations. This section also includes the framework used in the screening and evaluation of alternatives as well as cost estimating standards used in the analysis.

### **Section 3 – Collection System Evaluation**

Presents the assessment of the existing collection system including a history of the collection system, a condition assessment of interceptors and pump stations, potential future expansion of the system, as well as a review and update of the existing collection system modeling.

### **Section 4 – Wastewater Treatment Plants – Existing Conditions**

Presents the assessment of all critical components of the two existing treatment plants, including not only the treatment process equipment but all ancillary equipment, structures and facilities, along the existing WWTPs' abilities to protect against sea level rise. Current plant performance is summarized in this section. This section also summarizes the site environmental evaluation conducted as a part of this work.

### **Section 5 – Wastewater Flows and Loads**

This section summarizes current flows and loads to the WWTPs, breaks down existing flows by flow type, projects populations to predict flows and loads, and recommends flow and loading design criteria for long-term upgrades.

### **Section 6 – Development and Screening of Alternatives**

In this section, alternative technologies for each unit process that could be implemented at the two facilities are assessed and screened based on established screening criteria, as well as the feasibility of plant consolidation and alternatives plant capacities to reduce the frequency and duration of CSOs in the system.

### **Section 7 – Detailed Evaluation of Alternatives**

Preferred technologies identified in Section 6 are carried forward to develop alternative treatment trains for each WWTP at various design plant flows. These treatment trains are evaluated in detail for each WWTP, site layouts for each treatment train are established, and cost estimates are developed.



## **Section 8 – Financial Capability Analysis**

This section outlines the WPCA finances and the ability to pay for the improvements outlined.

## **Section 9 – Recommended Plan Development**

This section further develops the recommended plan for both the West Side and East Side WWTPs including ancillary facilities and presents an opinion of probable project cost of the recommended improvements, a schedule for implementation, and the environmental reviews and permitting required for implementation.

## **Section 10 – Stakeholder Participation**

Documents public meetings conducted over the course of the planning process.

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