

INTERESTING FACTS ABOUT THE EAST END WASTEWATER TREATMENT FACILITY



Processes nearly
20 MILLION GALLONS
of wastewater a day.

Generates **3.5** tractor-trailer
loads of biosolids a day.
Roughly **20%** is converted
into compost and energy.



Prevents **8,700,000 POUNDS**
of pollution from entering the bay per year.



Processes **OVER 60,000**
samples a year to monitor water
quality and ensure compliance
and regulatory controls.

Captures and **REMOVES ODORS** through
three dedicated odor control systems.

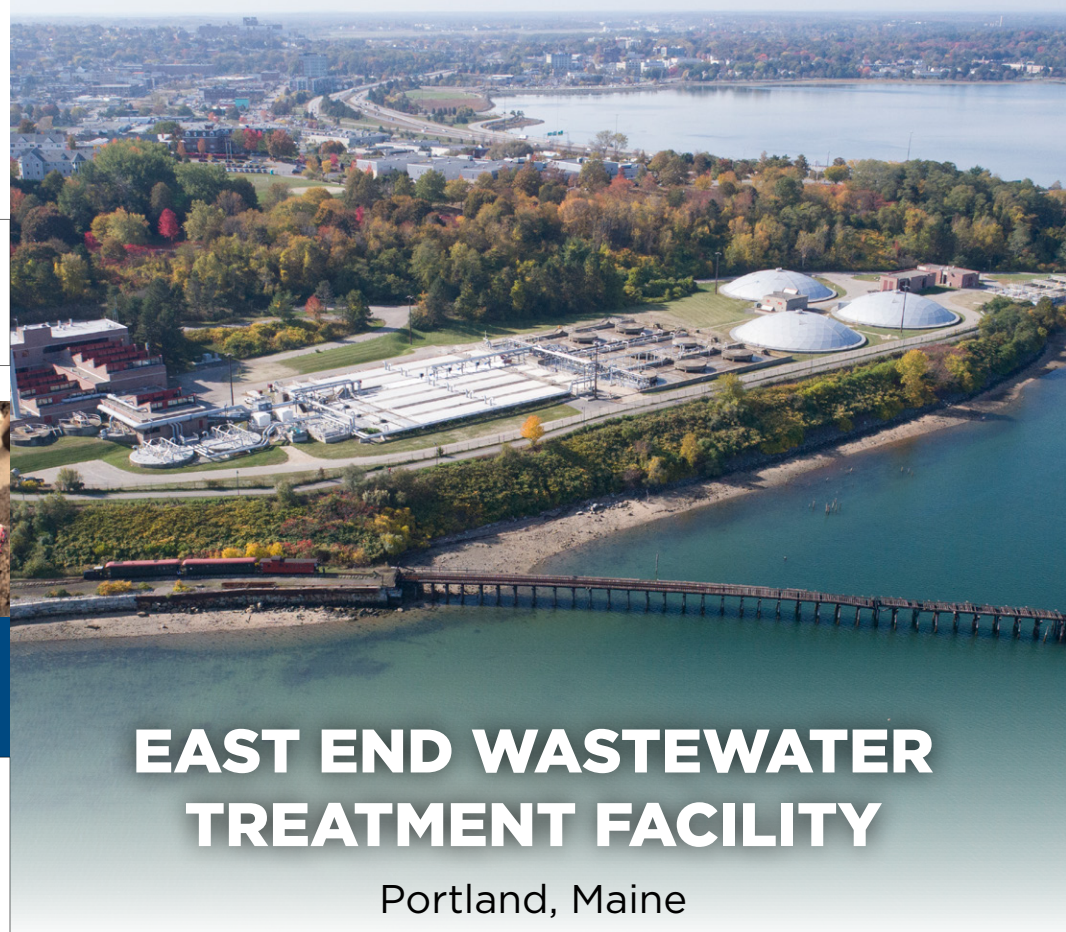


WANT TO SUPPORT OUR LOCAL WASTEWATER SYSTEMS?

You can make a difference! Keep grease, disposable wipes,
and toxic chemicals out of the wastewater system.



Find more ways you can make a difference here:
www.pwd.org/what-you-can-do.



EAST END WASTEWATER TREATMENT FACILITY

Portland, Maine

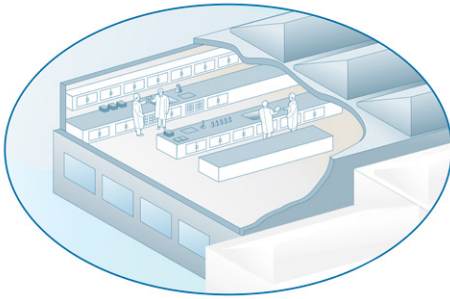
Wastewater treatment is a vital community service which
protects public health and our environment. Constructed in 1979,
the East End Wastewater Treatment Facility (EEWWTF) has
played an integral role in the revitalization of Casco Bay.



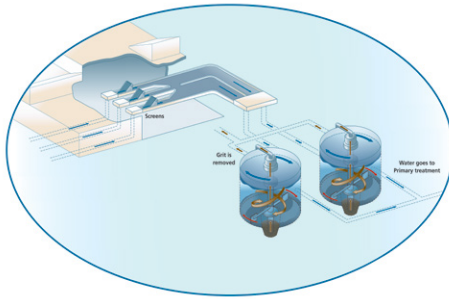
**PORTLAND
WATER
DISTRICT**

From Sebago Lake to Casco Bay
www.pwd.org

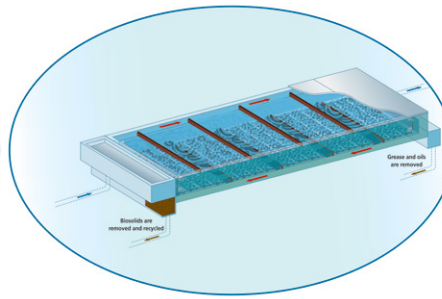
PROCESS BUILDING



1 SCREENS AND GRIT REMOVAL



2 PRIMARY SEDIMENTATION



On a typical day, Portland residents and businesses generate 20 million gallons of wastewater. It enters a system of pipes and ends up here at the plant.

PUMP STATION

Wastewater from homes and businesses is collected in a series of pipes called a Collection System. These pipes empty into structures called pump stations where wastewater is held in wet wells. Once the wells are full, pumps push the waste to the treatment plant.

1) SCREENING AND GRIT REMOVAL

Cleaning wastewater begins with screens that remove debris, like sticks and trash, that could be detrimental to downstream processes. Then the water flows through chambers that separate and remove inorganic material, such as sand and stones, from the wastewater. Because treatment is biological in nature, inorganic material cannot be processed.

2) PRIMARY SEDIMENTATION

These covered tanks are designed to slow the flow to a rate that allows heavy solids to settle to the bottom of the tank. Grease and oil in the wastewater rise to the surface and are removed.

3) AERATION

Aeration is at the heart of the biological process that is wastewater treatment. Air is bubbled up into tanks of wastewater to increase the naturally occurring and helpful microorganisms. In an oxygen-rich environment, the microorganisms multiply and consume organic material. After aeration, more than 90% of organic material has been removed from the wastewater.

4) SECONDARY CLARIFICATION

In this step the microorganisms encouraged to grow in the aeration process settle to the bottom of the three domed tanks. The settled material, known as biosolids, is removed, treated, and recycled as inexpensive, organic fertilizer, landfilled, or digested to create energy.

5) DISINFECTION

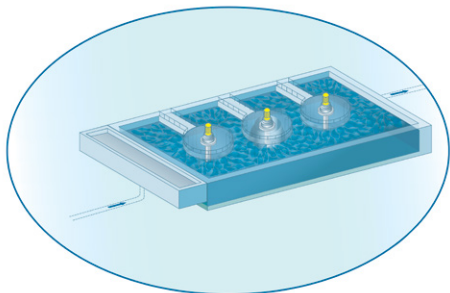
Water flowing from the secondary clarification tanks is disinfected by adding a small amount of chlorine solution to it. The chlorine kills any remaining microorganisms that may be present in the water. The final step before discharging the water into Casco Bay is to remove any residual chlorine. At this point the water is clean, safe, and ready to be released into Casco Bay.

PROCESS BUILDING

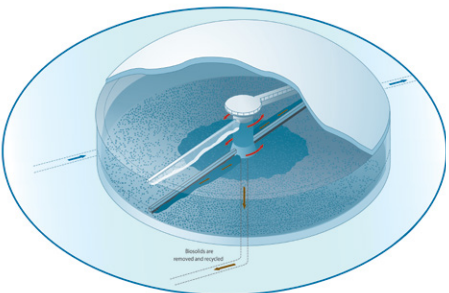
The process building houses odor control and biosolids processing equipment as well as the laboratory, which ensures clean, safe water is released into Casco Bay.



3 AERATION



4 SECONDARY CLARIFICATION



5 DISINFECTION

