

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,
55 Portland Street,
Portland, Maine 04101-2991



Bradley Roland, P.E.
Water Resources Division

Date: _____

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: _____ Chart Block Lot Number: _____

Proposed Use: _____
 Previous Use: _____
 Existing Sanitary Flows: _____ GPD
 Existing Process Flows: _____ GPD
 Description and location of City sewer that is to receive the proposed building sewer lateral.

Site Category	Commercial (<i>see part 4 below</i>)	<input type="checkbox"/>
	Industrial (<i>complete part 5 below</i>)	<input type="checkbox"/>
	Governmental	<input type="checkbox"/>
	Residential	<input type="checkbox"/>
	Other (<i>specify</i>)	<input type="checkbox"/>

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: _____ Phone: _____
 Owner/Developer Name: _____
 Owner/Developer Address: _____
 Phone: _____ Fax: _____ E-mail: _____
 Engineering Consultant Name: _____
 Engineering Consultant Address: _____
 Phone: _____ Fax: _____ E-mail: _____

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: _____ GPD
 Peaking Factor/ Peak Times: _____
 Specify the source of design guidelines: (*i.e.* __ "Handbook of Subsurface Wastewater Disposal in Maine," __ "Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, Other (*specify*) _____)

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: _____
Size of External Grease Interceptor: _____
Retention Time: _____
Peaking Factor/ Peak Times: _____

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: _____ GPD
Do you currently hold Federal or State discharge permits? Yes _____ No _____
Is the process wastewater termed categorical under CFR 40? Yes _____ No _____
OSHA Standard Industrial Code (SIC): _____ (<http://www.osha.gov/oshstats/sicser.html>)
Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

Wastewater Design Flow Calculations

Expansion of Industrial Development

Jake's Development

314 Presumpscot Street

Portland, Maine

The project consists of the construction of two additional industrial buildings with footprints of 9,000 and 1,600 square feet, respectively. The buildings will likely be utilized by trades contractors and for office, storage, and warehousing. The existing site has two buildings, both occupied by contractors. Analysis of the past year's water and sewer bills indicates that existing water use is approximately 113 GPD, which currently drains to a private pump station on the property and is then pumped to the sewer main in Presumpscot Street. It is anticipated that the uses in the new buildings will result in an increase in wastewater flow of approximately 180 GPD. Adding the additional wastewater flow to the current wastewater flow results in a total wastewater demand of 293 GPD for the site.

A grease trap is not proposed as there are currently no kitchens or food preparation areas proposed inside the building.

Wastewater Flow Calculations

Existing Conditions:

- Existing wastewater flow = 113 GPD (from previous year's water bills)

Proposed conditions:

- Trades operations with office, storage and warehousing
 - Assumed 15 employees per day
 - No showers proposed at this time
 - No kitchens proposed at this time

Design flows from Maine Subsurface Wastewater Disposal Rules, Table 4C

- 12 GPD/employee (at place of employment without showers)

Increase in Average Daily Flow $Q_{ave} = (12 \text{ GPD})(15 \text{ employees}) = \mathbf{180 \text{ GPD}}$

Total Average Daily Flow $Q_{ave} = 113 \text{ GPD} + 180 \text{ GPD} = \mathbf{293 \text{ GPD}}$

Peaking Factor = 2.2

Per TR-16 Guides for the Design of Wastewater Treatment Works, Figure 1, pop. = 70,000

Maximum Daily Flow $Q_{max} = 3293 \text{ GPD} (2.2) = \mathbf{645 \text{ GPD}}$