



28 Vannah Avenue
Portland, Maine 04103
Tel: 207.781.5242
Fax: 207.781.4245

October 21, 2013
File: 13105

Ms. Jean Fraser
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

RE: STORMWATER SYSTEM, 133 YORK STREET

Dear Jean,

Attached is a revised stormwater maintenance report. We have added the annual inspection and reporting criteria that is in Chapter 38.

Also attached is the HydroCad Report for the tree wells. We have reduced the infiltration rate to 0.02 cfs. As a result of the reduced rate, we have added an infiltrator to the system, increasing the storage and the available infiltration area.

Let me know in you have any questions.

Sincerely,

PINKHAM & GREER

A handwritten signature in black ink, appearing to read "Thomas S. Greer". The signature is stylized and overlaps the printed name below it.

Thomas S. Greer, P.E.

Enclosures

cc: Jeremy Benn/Joe Flynn, File

TSG/rjs

Summary for Pond 37P: TREE WELL

Inflow Area = 0.127 ac, 100.00% Impervious, Inflow Depth > 0.98"
 Inflow = 0.15 cfs @ 12.07 hrs, Volume= 0.010 af
 Outflow = 0.06 cfs @ 12.27 hrs, Volume= 0.010 af, Atten= 56%, Lag= 12.1 min
 Discarded = 0.02 cfs @ 11.70 hrs, Volume= 0.010 af
 Primary = 0.04 cfs @ 12.27 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 33.62' @ 12.25 hrs Surf.Area= 31 sf Storage= 122 cf

Plug-Flow detention time= 38.7 min calculated for 0.010 af (100% of inflow)
 Center-of-Mass det. time= 37.7 min (790.2 - 752.4)

Volume	Invert	Avail.Storage	Storage Description
#1	32.00'	275 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
32.00	120	0	0
34.00	10	130	130
36.00	10	20	150
38.00	10	20	170
39.00	200	105	275

Device	Routing	Invert	Outlet Devices
#1	Discarded	32.00'	0.02 cfs Exfiltration at all elevations
#2	Primary	33.50'	6.0" Round Culvert L= 6.0' Ke= 0.500 Inlet / Outlet Invert= 33.50' / 33.25' S= 0.0417 '/' Cc= 0.900 n= 0.010
#3	Primary	38.50'	4.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Discarded OutFlow Max=0.02 cfs @ 11.70 hrs HW=32.08' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.04 cfs @ 12.27 hrs HW=33.61' (Free Discharge)

↑ **2=Culvert** (Inlet Controls 0.04 cfs @ 1.15 fps)

↑ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)