MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

August 16, 2011

PERMIT NUMBER: **ME0102075**
LICENSE NUMBER: **W002671-5M-H-R**

NAME AND ADDRESS OF APPLICANT:

Portland Water District
East End WWTF
225 Douglass Street
Portland, Maine 04104-3553

COUNTY: **Cumberland County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

East End Wastewater Treatment Facility
500 Marginal Way
Portland, Maine 04108

RECEIVING WATER AND CLASSIFICATION: **Casco Bay/Class SC**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Scott Firmin, P.E.**
Director of Wastewater Services
(207) 774-5961 x 3077
sfirmin@pwd.org

1. APPLICATION SUMMARY

a. Application: The permittee has applied for renewal of combination Maine Pollutant Discharge Elimination System (MEPDES) Permit # ME0102075/Waste Discharge License (WDL) # W002671-5M-F-M ("permit," hereinafter), which was issued on January 10, 2006 and expired on January 10, 2011. The permit approved the discharge of secondary treated municipal waste water, an unspecified quantity of primary treatment waste water from a generic bypass structure to Casco Bay, Class SC, and untreated sanitary/storm water from 22 combined sewer overflow (CSO) structures to the Presumpscot River, Casco Bay, Back Cove, Portland Harbor and the Fore River. See **Attachment A** of the Fact Sheet for site location maps.

2. MODIFICATIONS REQUESTED

a. The permittee requests the Department review the conditions related to sampling during high flow events and to compare those conditions to the permit conditions of similar facilities for consistency.

b. The permittee requests the Department review the requirement for sampling during off-hours when qualified laboratory staff are not normally available.

c. The permittee requests the Department review the requirement for additional sampling of the secondary effluent.

3. PERMIT SUMMARY

a. Terms and conditions: This permit carries forward all terms and conditions of the January 10, 2006 MEPDES permit/WDL with the following exceptions that include:

1. Establishing water quality-based chronic Whole Effluent Toxicity (WET) numerical effluent limitations for the sea urchin (*Arbacia punctulata*).

2. Establishing a monthly average water quality-based mass limit for inorganic arsenic.

3. Establishing monitoring requirements for total arsenic based on *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005).

4. Establishing requirements to implement an Asset Management Plan and to establish a repair and replacement reserve account for five (5) years in accordance with the minimum requirements stated in Department guidance, *Minimum Requirements for an Asset Management Program and Reserve Account in Order to Qualify for CWSRF Principal Forgiveness.*

5. Revising sampling requirements at Outfall #001B to reflect when staff is on duty.

6. Clarifying the identification of CSOs and CSO outfall locations.

7. Removing Outfall #035 (Stroudwater Road) as a permitted CSO.

The Department has determined that the domestic, commercial, and industrial waste waters discharged from the permittee will receive best practicable treatment in accordance with secondary treatment standards for dry weather monthly average design flows of up to 19.8 MGD and a peak wet weather flow rate of 25,600 gpm (36.8 MGD) and best practicable treatment in accordance with primary treatment standards for flow rates greater than 36.8 MGD. The Department finds that combined sewer overflows (CSOs) are integral to the permittee's collection system also meet best practicable treatment standards based on an approved CSO Abatement Master Plan pursuant to *Combined Sewer Overflow Abatement*, 06-

3. PERMIT SUMMARY (cont'd)

a. Terms and conditions: (cont'd)

096 CMR 570 (effective February 5, 2000). The Department has determined that the discharge as permitted will meet State and Federal numeric and narrative water quality standards.

b. History: The most current relevant regulatory actions include the following:

May 23, 1991 – The USEPA issued a renewal of NPDES permit #ME0102075.

April 1995 – The permittee and USEPA entered into a Consent Order For Compliance (Docket #95-08). Corrective actions centered on CSOs and improvements to the treatment plant to maximize flows to the plant during wet weather events.

April 29, 1996 – The USEPA issued a letter to the permittee deeming their application for renewal of the NPDES permit complete for processing.

November 3, 1997 – The Department administratively modified the permittee's daily maximum fecal coliform bacteria limit from 15 colonies per 100 milliliters to 50 colonies per 100 milliliters to be consistent with the National Shellfish Sanitation Program.

May 23, 2000 – The Department administratively modified permittee's WDL by establishing interim average and maximum concentration limits of 35.3 part per trillion (ppt) and 53.0 ppt respectively, for mercury.

September 21, 2000 – The EPA issued a formal draft of NPDES permit renewal #ME0102075 for a 30-day comment period. The permit was never issued as a final document, therefore, the permittee has been operating the EEWTF pursuant to the terms and conditions the 5/23/91 permit and the 4/95 Consent Order.

December 8, 2000 – The Department issued WDL #W002671-5M-C-R for a five-year term.

April 11, 2002 – The permittee filed an application with the Department to modify and renew WDL #W002671-5M-C-R. The permittee requested the Department incorporate the terms and conditions of the MEPDES permitting program into the new MEPDES permit.

March 6, 2003 – The Department issued MEPDES permit #ME0102075/WDL #W002671-5M-E-M modification for a five-year term.

3. PERMIT SUMMARY (cont'd)

b. History: (cont'd)

November 17, 2004 – The Department and permittee entered into a Consent Agreement to address past violations of former WDLs.

January 10, 2006 – The Department issued combination MEPDES Permit #ME0102075/WDL #W002671-5M-F-M for a five-year term.

September 5, 2008 – The Department modified WDL #002671-5M-F-M to reflect the elimination of Footnote #12, fecal coliform monitoring requirement, at Outfall #001B (primary treatment and disinfection). The modification was assigned WDL # W002671-5M-G-M.

December 15, 2010 – The permittee submitted a timely waste discharge permit application for renewal. The application was deemed complete on 12/16/10 and was assigned WDL #W002671-5M-H-R.

c. Combined Sewer Overflows:

January 1991 - The permittee and the City of Portland (City) entered into an Administrative Consent Agreement and Enforcement Order with the Maine Board of Environmental Protection in order to address the discharge of untreated wastewater from the City's collection system through CSO's. The Consent Agreement set forth guidelines for the development and implementation of a long term program for evaluation and abatement of both permittee-maintained and City CSO discharges from their sewerage systems.

December 1993 - The permittee and City submitted a CSO Abatement Master Plan prepared by CH2M-Hill to the Department for review and approval. Approval of this plan was withheld pending more detailed project descriptions as well as design and construction schedules for the first two-to-three years of implementation. Among other recommendations, the CSO Abatement Master Plan called for pump station improvements and an increase in the waste water treatment plant flow capacity from 60 MGD to 80 MGD so that increased amounts of wet weather flow could be conveyed to and treated at the waste water treatment plant rather than being discharged untreated through CSOs. The Master Plan recommended that treatment plant flows up to 36.8 MGD receive full secondary treatment and that flows exceeding 36.8 MGD up to 80 MGD will be bypassed to disinfection facilities following primary treatment.

April 1995 - The permittee entered into a Consent Order For Compliance with the USEPA (Docket #95-08). This Consent Order established a schedule of compliance deadline for the design and completion of CSO abatement related upgrades to the East End WWTF and the India Street and Northeast Pump stations, including flume upgrade, increasing primary bypass piping size, and installation of high rate disinfection and mixing equipment and controls. The Consent Order also set forth interim CSO-related bypass monitoring conditions including monitoring of the primary bypass effluent and calculating a combined secondary and primary effluent. The upgrades specified in the Consent Order have been completed.

3. PERMIT SUMMARY (cont'd)

c. Combined Sewer Overflows: (cont'd)

January 1997 - A revised five-year CSO Abatement Plan and Schedule for the years 1997 through 2001, prepared by DeLuca-Hoffman Associates, Inc., was submitted to the Department. This plan together with the original CSO Master Plan was approved by both the USEPA and the Department on June 25, 1997.

July 3, 1997 - On behalf of the City, the permittee submitted the *Portland 1997 CSO Monitoring Plan*, which was approved by the Department.

May 31, 2005 – As required by the 11/17/04 Consent Agreement, the permittee submitted a report to the Department entitled, Operational Assessment Investigation and Improvement Plan For The East End Wastewater Treatment Facility.

May 2, 2011 – The Department, Maine Attorney General and the permittee entered into an Administrative Consent Agreement (EIS#2011-002-W) to resolve violations of the permittee's WDLs that occurred between August 3, 2004 and February 28, 2011.

d. Source Description: The permittee currently treats domestic, industrial, and commercial waste waters from the surrounding city and has the potential to accept flows from the Town of Falmouth by agreement. The permittee has significant industrial users currently contributing to the waste stream. The permittee has an approved pretreatment program developed in accordance with federal regulations found at 40 CFR Section 403. The largest categorical industrial user (CIU), based on flow and average BOD5 strength, is Oakhurst Dairy; the largest noncategorical significant industrial user (SIU), based on flow, is Ecomaine Landfill (landfill leachate); the largest noncategorical SIU, based on average BOD5 strength, is Shipyard Brewing. The permittee has noted that generally there is an increase in the BOD5 loading during the first quarter of the year.

The collection system does not have sufficient capacity to transport the volume of inflow and infiltration of water experienced during periods of rainfall and snow melt. The City of Portland ("City") and the permittee jointly operate and maintain the combined sewer collection system. The City owns and operates the sewer collection system and the permittee owns and operates the sewer interceptors and wastewater treatment facilities. The permittee has legal responsibility for 21 CSOs. During wet weather, the permittee is authorized to discharge untreated storm water/ sanitary waste water from the permitted CSOs to the Presumpscot River, Casco Bay, Back Cove, Portland Harbor and the Fore River. The waste water treatment facility is so configured as to maintain peak secondary treatment up to 36.8 MGD for short periods. If this sustained flow is exceeded, a CSO-related bypass can be activated onsite to allow for primary treatment and disinfection of the excess waste water up to 80 MGD (36.8 MGD through secondary plus 43.2 MGD through primary). The City is working on Tier II projects of their *CSO Long-Term Control Plan.* The permittee's High Flow Management Plan was last revised on December 15, 2010. It is noted that CSO Outfall #035 (Stroudwater Road) was closed in October 2007.

3. PERMIT SUMMARY (cont'd)

d. Source Description (cont'd)

The permittee receives transported wastes which are directly introduced into the headworks. Currently the permittee receives only septic tank wastes. The permittee does not accept transported wastes when influent flows exceed 36.8 MGD. This permitting action is carrying forward the 24,000 gallons per day transported wastes limitation from the previous permitting action.

e. Waste Water Treatment: Influent flow to the wastewater treatment plant comes from two major pump stations, India Street Pump Station and Northeast Pump Station. These flows combine on-site and enter the headworks building where the influent is initially screened and grit is removed. The flow then enters a distribution box where it is measured via two sonic level detectors and then split among three separate treatment trains each consisting of a rectangular primary settling basin, an aeration basin, and a circular secondary clarifier. The secondary effluent then combines and is chlorinated with sodium hypochlorite in two chlorine contact basins, then dechlorinated with sodium bisulfite before being discharged to Casco Bay through an outfall pipe measuring 48 inches in diameter with diffusers. Primary sludge is thickened in two circular tanks before the sludge is pumped to a holding tank. The primary sludge is then blended with thickened waste activated sludge and conveyed to two rotary presses for dewatering. The solids are then hauled to a landfill or to a composting site by a contractor.

When the secondary flow rate reaches 25,600 gpm (36.8 MGD), a valve opens and diverts up to 43.2 MGD out of the primary effluent channel to the CSO-related secondary bypass. That bypassed flow is then chlorinated and dechlorinated in two chlorine contact chambers and combined with secondary treated effluent before discharging to a common outfall pipe designated as Outfall #001A. See **Attachment B** of this Fact Sheet for a schematic of the waste water treatment facility.

Since the previous permitting action, the permittee has completed the installation of liquid disinfection and dechlorination facilities and associated improvements to the control systems; updated the primary treated effluent control system, installed a new traveling rake screen at the headworks and upgraded the following pump stations as described: India Street Pump Station: installed an odor control system, modified the wetwell, added new pumps and drives, upgraded the electrical system and added new programmable logic controllers; Northeast Pump Station: replaced internal piping and valves, replaced the wetwell isolation gates and installed a new pump and drives; Thompson's Point Pump Station: replaced the force main. The permittee is in the process of replacing nine (9) secondary aeration system gates.

4. CONDITIONS OF PERMITS

Conditions of Licenses, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, *Certain Deposits and Discharges Prohibited,* 38 M.R.S.A. Section 420 and *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005), require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

5. RECEIVING WATER QUALITY STANDARDS

Classification of Major River Basins, 38 M.R.S.A., Section 465-B, states that Casco Bay, Back Cove, Fore River, Presumpscot River and Portland Harbor, all of which are Class SC, shall be suitable for the designated uses of recreation in and on the water, fishing, aquaculture, propagation and restricted harvesting of shellfish, industrial process and cooling water supply, hydroelectric power generation and navigation and as habitat for fish and other estuarine and marine life. Discharges to Class SC waters may cause some changes to estuarine and marine life provided that the receiving waters are of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.

6. RECEIVING WATER QUALITY CONDITIONS

Table Category 5-B-1 entitled, *Estuarine and Marine Waters Impaired Only by Bacteria (TMDL Required)* in a document entitled, State of Maine Department of Environmental Protection 2008 Integrated Water Quality Monitoring and Assessment Report State of Maine Department of Environmental Protection, lists the Portland-Falmouth area (DMR area #14, Waterbody ID #804-1) Class SB/SC bacteria sources as: four (4) sewage treatment plant outfalls, storm water, elevated fecal coliforms and nonpoint source pollution. Attainment in this context is in regard to the designated use of harvesting of shellfish. An additional 768 acres are included in, *Category 5-A, Rivers and Streams Impaired by Pollutants Other Than Those Listed in 5-B Through 5-D (TMDL Required)*. Currently, DMR shellfish harvesting area #14 is closed to the harvesting of shellfish due to insufficient (limited) ambient water quality data to meet the standards in the National Shellfish Sanitation Program. Therefore, area #14 remains closed. Compliance with the fecal coliform bacteria limits in this permitting action which are being carried forward from the previous licensing action ensures that the permittee will not cause or contribute to the shellfish harvesting closure.

In addition, the East End area of Portland and Back Cove are listed on Table 5-B-2 entitled, *Estuarine and Marine Waters Impaired by Bacteria from Combined Sewer Overflows*, in the above referenced document. As a result, CSO discharges in these areas are authorized by this permitting action as the permittee has satisfied the criteria established in 06-096 CMR 570.

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

1. Flow – In the previous permitting action, the Department changed the permittee's monthly average flow limit to a "report" only requirement and established a new weekly average reporting requirement. This was due to the fact that the permittee historically violated its monthly average flow limitation because it was required to treat a minimum of 36.8 MGD during wet weather events. Regulating the discharge in this manner in no way shall be construed to represent any change to the 19.8 MGD dry weather design loading criteria of the waste water treatment facility.

   A summary of the monthly Discharge Monitoring Report (DMR) data for the period March 2006 – March 2011 (n=59) indicates the facility discharged monthly average effluent flows in the range of 8.7 MGD to 28.0 MGD with an arithmetic mean of 16.8 MGD. Daily maximum flows for the same period (n=59) ranged from 14.2 MGD to 53.1 MGD with an arithmetic mean of 31.7 MGD.

2. Dilution Factors - *Surface Water Toxics Control Program*, 06-096 CMR 530§4(2)(a) [effective date October 9, 2005] states that for discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE, CORMIX or another predictive model determined by the Department to be appropriate for the site conditions.

   In 1996, a dye study was performed by Camp Dresser and McKee, but due to certain water column stratification problems occurring during the dye study, the results were not conclusive. Camp Dresser and McKee performed another dilution study in 1997, and published the results in their May 1998 Report, *Dilution Study--Portland Water District Wastewater Treatment Facility Outfall.*

   The Department reviewed the Camp Dresser and McKee (CDM) report as part of the 12/08/00 WDL renewal and has used their findings to make a determination of the applicable dilutions for the permittee (East End WWTF). Based on adjustments to the findings in the CDM report on file with the Department and a more recent statistical analysis of the flows discharged by the treatment facility, the Department has determined the discharge is diluted by the following factors:

Acute = 21:1	**Chronic = 41:1**	**Harmonic mean [1] = 123:1**

Footnote:

(1) Pursuant to 06-096 CMR 530§4(2)(c), the harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by a factor of three (3).

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

3. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS): This permitting action is carrying forward the monthly and weekly average BOD5 and TSS best practicable treatment (BPT) concentration limits of 30 mg/L and 45 mg/L respectively, that were based on secondary treatment requirements in 06-096 CMR 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L were based on a Department best professional judgment of BPT. All three concentration limits are being carried forward in this permitting action.

   As for mass limitations, this permitting action is carrying forward the monthly average and weekly average limitations based on a monthly average design flow of 19.8 MGD.

   The limitations were calculated as follows:

   Monthly average = (30 mg/L) (19.8 MGD) (8.34) = 4,954 lbs/day

   Weekly average = (45 mg/L) (19.8 MGD) (8.34) = 7,431 lbs/day

   No daily maximum mass limitations (report only) for BOD5 or TSS were established in the previous permitting action as doing so may discourage the permittee from treating as much waste water through the secondary treatment system as possible during wet weather events.

   A review of the DMR data for the period March 2006 – March 2011 indicates the monthly average and daily maximum mass and concentration values for BOD5 & TSS have been reported as follows:

BOD_5 Mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)	Number of DMRs	Compliance
Monthly Average	4,954	495 – 3258	1,653	58	100%
Weekly Average	7,431	513 – 9,108	2,617	59	98%
Daily Maximum	Report	435 – 26,978	5,750	59	N/A

BOD_5 Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Monthly Average	30	2 – 26	11	59	100%
Weekly Average	45	5 – 68	16	59	98%
Daily Maximum	50	7 – 132	28	59	93%

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

3. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS) (cont'd)

TSS mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)	Number of DMRs	Compliance
Monthly Average	4,954	605 – 4,662	1,768	59	100%
Weekly Average	7,431	768 – 10,442	3,153	59	95%
Daily Maximum	Report	1,039 – 29, 323	7,678	59	N/A

TSS concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Monthly Average	30	5 – 25	12	59	100%
Weekly Average	45	6 – 38	17	59	100%
Daily Maximum	50	10 – 86	36	59	78%

The permittee's BOD5 and TSS percent removal rates for the period of March 2006 – March 2011 ranged from 86% - 98% (n=59) and from 86% - 98% (n=55), respectively.

This permitting action is carrying forward the requirement of 85% removal for BOD5 and TSS pursuant to 06-096 CMR 525(3)(III)(a&b)(3).

Monitoring frequencies for BOD5 and TSS of 5/Week are being carried forward from the previous permitting action and are based on Department guidance for facilities with a monthly average flow greater than 5.0 MGD.

4. Settleable Solids: This permitting action is carrying forward a daily maximum settleable solids concentration limit of 0.3 mL/L and is considered by the Department as a best professional judgment of BPT for secondary treated waste waters. A review of the DMR data for the period March 2006 – March 2011 (n=59) indicates the daily maximum settleable solids concentration values reported have ranged from 0 mL/L to 510 mL/L (88% compliance). This permitting action is carrying forward a monitoring frequency of 1/Day.

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

5. Fecal coliform bacteria – This permitting action is carrying forward year-round monthly average and daily maximum fecal coliform limits of 15 colonies/100 mL and 50 colonies/100 mL, respectively. The limits are based on the Water Classification Program criteria for the receiving waters (including standards in the National Shellfish Sanitation Program) and require application of the best practicable treatment.

   A review of the DMR data for the period March 2006 – March 2011 indicates the monthly average and daily maximum values have been reported as follows:

Fecal coliform bacteria

Value	Limit (#col/100 mL)	Range (#col/100 ml)	Arith. Mean (#col/100 mL)	Number of DMRs	Compliance
Monthly Average	15	1 – 13	3	59	100%
Daily Maximum	50	2 – >6,000	188	88	69%

This permitting action is carrying forward the 5/Week fecal coliform monitoring requirement from the previous permitting action based on Department guidance for facilities with a monthly average flow greater than 5.0 MGD. The September 5, 2008 permit modification eliminated the fecal coliform monitoring required at Outfall #001A during each bypass event.

6. Total Residual Chlorine (TRC): Best practicable treatment limitations for TRC are being carried forward in this permitting action. Limits on total residual chlorine are specified to ensure attainment of the in-stream water quality criteria for levels of chlorine and that the best practicable treatment technology is utilized to abate the discharge of chlorine. Total residual chlorine limits are based on the State's 2005 acute and chronic ambient water quality criteria for marine waters (0.013 mg/L and 0.0075 mg/L, respectively) and the applicable dilution factors of 21:1 (acute) and 41:1 (chronic).

   Calculated Water Quality-based Total Residual Chlorine limits:

   Maximum Daily = (marine acute criteria)(acute dilution)
   = (0.013 mg/L)(21) = 0.27 mg/L

   Monthly Average = (marine chronic criteria)(chronic Dilution)
   = (0.0075 mg/L)(41) = 0.31 mg/L

   To meet the water quality based limits calculated above, the permittee must dechlorinate the effluent prior to discharge. The Department has established a daily maximum best practicable treatment limitation of 0.3 mg/L for facilities that need to dechlorinate their effluent unless calculated water quality based limits are lower than 0.3 mg/L. This

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

6. Total Residual Chlorine (TRC) (cont'd)

permitting action is carrying forward the daily maximum TRC limitation of 0.27 mg/L from the previous permitting action as the water quality-based limits of 0.27 mg/L is lower than the technology-based limit of 0.3 mg/L. As for the monthly average limitation, the Department's best practicable treatment limitation is 0.1 mg/L. Being that the calculated water quality based limit is higher than 0.1 mg/L, the best practicable treatment limitation is being carried forward from the previous permitting action.

A review of the DMR data for the period March 2006 – March 2011 indicates the monthly average and daily maximum TRC concentration values have been reported as follows:

Total Residual Chlorine

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)	Number of DMRs	Compliance
Monthly Average	0.1	0 – 0.04	0.02	59	100%
Daily Maximum	0.27	0.02 – 0.26	0.1	59	100%

This permitting action is carrying forward the 2/Day TRC monitoring requirements from the previous permitting action and are based on Department guidance for facilities with a monthly average flows greater than 5.0 MGD

7. pH: This permitting action is carrying forward the BPT-based pH daily maximum limits of 6.0 – 9.0 standard units pursuant to 06-096 CMR 525(3)(III)(c). A review of the DMR data for the period March 2006 – March 2011 (n=59) indicates the pH range was 7.1 SU – 7.8 SU.

8. Mercury: On May 23, 2000, pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S.A. § 420, *Waste discharge licenses*, 38 M.R.S.A. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL # W002671 by establishing interim monthly average and daily maximum effluent concentration limits of 35.3 parts per trillion (ppt) and 53.0 ppt, respectively, and a minimum monitoring frequency requirement of four (4) tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through 38 M.R.S.A.§ 413 and 06-096 CMR 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

8. Mercury (cont'd)

38 M.R.S.A. §420 1-B,(B)(1) states that a facility is not in violation of the ambient water quality criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413, subsection 11. A review of the Department's database for the period March 2006 – March 2011 indicates mercury test results have ranged from 1.4 ppt to 25 ppt with an arithmetic mean (n=21) of 5.8 ppt.

9. Whole Effluent Toxicity (WET) & Chemical-Specific Testing: 38 M.R.S.A., § 414-A and 420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. 06-096 CMR 530 and 06-096 CMR 584 set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters. WET, priority pollutant and analytical chemistry testing as required by 06-096 CMR 530 are included in this permit in order to fully characterize the effluent. This permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment and receiving water characteristics.

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Priority pollutant and analytical chemistry testing is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health AWQC as established in 06-096 CMR 584.

06-096 CMR 530 establishes four categories of testing requirements based predominately on the chronic dilution factor. The categories are as follows:

1) Level I – chronic dilution factor of <20:1.
2) Level II – chronic dilution factor of ≥20:1 but <100:1.
3) Level III – chronic dilution factor ≥100:1 but <500:1 or >500:1 and Q ≥1.0 MGD
4) Level IV – chronic dilution >500:1 and Q ≤1.0 MGD

Based on the criteria, the permittee falls into the Level II frequency category as the permittee has a chronic dilution factor ≥20:1 but <100:1.

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

9. Whole Effluent Toxicity (WET) & Chemical-Specific Testing (cont'd)

06-096 CMR 530 (D)(1) specifies that default screening and surveillance level testing requirements are as follows:

Screening level testing – Beginning 12 months prior to expiration of the permit and every five years thereafter.

Level	WET Testing	Priority pollutant testing	Analytical chemistry
II	2 per year	1 per year	4 per year

Surveillance level testing – Beginning upon issuance of the permit and lasting through 12 months prior to permit expiration.

Level	WET Testing	Priority pollutant testing	Analytical chemistry
II	1 per year	None required	2 per year

See **Attachment C** of this Fact Sheet for a summary of the WET test results and **Attachment D** of this Fact Sheet for a summary of the chemical-specific test dates.

06-096 CMR 530 (3)(c) states, in part, *Dischargers in Level II may reduce surveillance testing to one WET or specific chemical series every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E).*

06-096 CMR 530 §(3)(E) states "*For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*"

06-096 CMR 530 (3) states, "*In determining if effluent limits are required, the Department shall consider all information on file and effluent testing conducted during the preceding 60 months. However, testing done in the performance of a Toxicity Reduction Evaluation (TRE) approved by the Department may be excluded from such evaluations.*"

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

9. Whole Effluent Toxicity (WET) & Chemical-Specific Testing (cont'd)

WET evaluation

On 6/16/11, the Department conducted a statistical evaluation on the most recent 60 months of WET data. The evaluation showed that on 3/07/07 and on 5/09/07, the discharges exceeded the **chronic** ambient water quality criteria (AWQC) threshold of 2.4% (the mathematical inverse of the chronic dilution factor of 41:1). As a result, this permitting action is establishing a chronic (C-NOEL) WET limit of 2.4% for the sea urchin along with a default surveillance level monitoring frequency of 1/Year. The Department has made the determination that the three (3) subsequent in-compliance chronic WET test results on the sea urchin since the most recent test result of concern constitutes a Phase I TRE and no further action on the TRE is required at this time.

The WET statistical evaluation indicated the discharge does not exceed or have a reasonable potential to exceed the critical acute AWQC threshold of 4.8% (the mathematical inverse of the acute dilution factor of 21:1). As a result, this permitting action is carrying forward the reduced surveillance monitoring frequency of once every 2 years (1/2 Years) for the mysid shrimp.

In summary, this permitting action is establishing surveillance level WET testing as follows.

Surveillance level testing – Beginning upon issuance of the permit and lasting through 12 months prior to permit expiration.

Level	WET Testing
II	Sea urchin – 1 per year
II	Mysid shrimp – 1 per 2 years

Pursuant to 06-096 CMR 530 (1)(D), screening level testing is being carried forward as follows:

Screening level testing – Beginning 12 months prior to expiration of the permit and every five years thereafter.

Level	WET Testing
II	2/Year

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

9. Whole Effluent Toxicity (WET) & Chemical-Specific Testing (cont'd)

Chemical specific testing evaluation

06-096 CMR 530 §(3)(E) states "*For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*"

06-096 CMR 530 §3 states, "*In determining if effluent limits are required, the Department shall consider all information on file and effluent testing conducted during the preceding 60 months. However, testing done in the performance of a Toxicity Reduction Evaluation (TRE) approved by the Department may be excluded from such evaluations.*"

Chapter 530 §4(C), states "*The background concentration of specific chemicals must be included in all calculations using the following procedures. The Department may publish and periodically update a list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. In doing so, the Department shall use data collected from reference sites that are measured at points not significantly affected by point and non-point discharges and best calculated to accurately represent ambient water quality conditions." The Department shall use the same general methods as those in section 4(D) to determine background concentrations. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations.* The Department has very limited information on the background levels of metals in the water column in Casco Bay. Therefore, a default background concentration of 10% of the applicable water quality criteria is being used in the calculations of this permitting action.

06-096 CMR 530 4(E), states, "*In allocating assimilative capacity for toxic pollutants, the Department shall hold a portion of the total capacity in an unallocated reserve to allow for new or changed discharges and non-point source contributions. The unallocated reserve must be reviewed and restored as necessary at intervals of not more than five years. The water quality reserve must be not less than 15% of the total assimilative quantity".* Therefore, the Department is reserving 15% of the applicable water quality criteria in the calculations of this permitting action.

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

9. Whole Effluent Toxicity (WET) & Chemical-Specific Testing (cont'd)

06-096 CMR 530 §(3)(E) states *"... that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*

On 6/16/11, the Department conducted a statistical evaluation on the most recent 60 months of analytical chemistry and priority pollutant test results on file with the Department in accordance with the statistical approach outlined in 06-096 CMR 530. The statistical evaluation indicates the discharge from the permittee had one test result of 12 ug/L (3/07/07) that possibly exceeds or has a reasonable potential to exceed the human health (organisms only) criteria for inorganic arsenic. It is noted test results submitted to the Department to date for arsenic are expressed in total and not inorganic arsenic making it impossible to determine actual exceedences or reasonable potential to exceed AWQC for either or both pollutants. Eight (8) subsequent test results for total arsenic were reported below the Department's reporting level of 5.0 ug/L; therefore, the Department is not requiring the permittee to conduct a TRE for total arsenic.

06-096 CMR 530 §(3)(D) states *"Expression of effluent limits. Where the need for effluent limits has been determined, limits derived from acute water quality criteria must be expressed as daily maximum values. Limits derived from chronic or human health criteria must be expressed as monthly average values."*

Pursuant to 06-096 CMR 530 §(3)(D) & (E), the Department is establishing a water quality based mass limit for arsenic as follows:

Arsenic (Inorganic)

HH AWQC (organisms only) = 0.028 ug/L
Harmonic mean dilution factor = 123:1

End-of-pipe (EOP) concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]
EOP = [123 x 0.75 x 0.028 ug/L] + [0.25 x 0.028 ug/L] = 2.6 ug/L

Based on a monthly average design flow of 19.8 MGD, EOP mass limits are as follows:

Parameter	Calc. EOP Concentrations	Mo. Avg. Mass Limit
Inorganic Arsenic	2.6 ug/L	0.43 lbs/day

Calculation, Inorganic Arsenic: $\frac{(2.6 \text{ ug/L})(8.34)(19.8 \text{ MGD})}{1000 \text{ ug/mg}} = 0.43$ lbs/day

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

9. Whole Effluent Toxicity (WET) & Chemical-Specific Testing (cont'd)

06-096 CMR 530 (C)(6) states:

All chemical testing must be carried out by approved methods that permit detection of a pollutant at existing levels in the discharge or that achieve detection levels as specified by the Department. When chemical testing results are reported as less then, or detected below the Department's specified detection limits, those results will be considered as not being present for the purposes of determining exceedences of water quality criteria.

The USEPA has not approved a test method for inorganic arsenic as of the date of issuance of this permit. Therefore, there is no way for the permittee to formally demonstrate compliance with the monthly average water quality based mass and concentration limits for inorganic arsenic established in this permitting action. Therefore, beginning upon issuance of this permit and lasting through the date in which the USEPA approves a test method for inorganic arsenic, the permittee is being required to monitor for total arsenic. Once a test method is approved, the Department will notify the permittee in writing and the limitations and monitoring requirements for inorganic arsenic become effective thereafter.

As of the date of this permitting action, the Department has limited data on the percentage of inorganic arsenic (approximately 50%) in total arsenic test results reported statewide. Based on a literature search conducted by the Department, the inorganic fraction can range from 1% - 99% depending on the source of the arsenic. Generally speaking, ground water supplies derived from bedrock wells will likely tend to have higher fractions of inorganic arsenic (As^{+3}-arsentite and/or As^{+5}- arsenate) than one may find in a food processing facility where the inorganic fraction is low and the organic fraction (arsenobetaine, arsenoribosides) is high. Until the Department and the regulated community in Maine develop a larger database to establish statistically defensible ratios of inorganic and organic fractions in total arsenic test results, the Department is making a rebuttable presumption that the effluent contains a ratio of 50% inorganic arsenic and 50% organic arsenic in total arsenic results.

Being that the only approved test methods for compliance with arsenic limits established in permits is for total arsenic, the Department converted the water quality based end-of pipe monthly average concentration value of 2.6 ug/L for inorganic arsenic calculated on the previous page of this Fact Sheet into an equivalent total arsenic threshold (assuming 50% of the total arsenic is inorganic arsenic). This results in a total arsenic end-of-pipe monthly average concentration threshold of 5.2 ug/L. The calculation is as follows:

$$\frac{\text{2.6 ug/L inorganic arsenic}}{\text{0.5 ug/L inorganic arsenic/ 1.0 ug/L total arsenic}} = \text{5.2 ug/L total arsenic}$$

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

9. Whole Effluent Toxicity (WET) & Chemical-Specific Testing (cont'd)

Therefore, a total arsenic value greater than 5.2 ug/L is potentially exceeding the water quality based end-of pipe monthly average concentration value of 2.6 ug/L for inorganic arsenic. It is noted the Department's current RL for total arsenic is 5.0 ug/L.

Schedules of Compliance, 38 M.R.S.A., §414-A(2) states, "*Within the terms and conditions of a license, the department may establish a schedule of compliance for a final effluent limitation based on a water quality standard adopted after July 1, 1977. When a final effluent limitation is based on new or more stringent technology-based treatment requirements, the department may establish a schedule of compliance consistent with the time limitations permitted for compliance under the Federal Water Pollution Control Act, Public Law 92-500, as amended. A schedule of compliance may include interim and final dates for attainment of specific standards necessary to carry out the purposes of this subchapter and must be as short as possible, based on consideration of the technological, economic and environmental impact of the steps necessary to attain those standards.*" Special Condition G, *Schedule of Compliance*, of this permit establishes a schedule as follows:

> *Beginning upon issuance of this permit and lasting through a date on which the USEPA approves a test method for inorganic arsenic, the limitations and monitoring requirements for inorganic are not in effect. During this time frame, the permittee is required by Special Condition A, Effluent Limitations and Monitoring Requirements, of this permit to conduct 1/Year sampling and analysis for total arsenic.*
>
> *Upon receiving written notification by the Department that a test method for inorganic arsenic has been approved by the USEPA, the limitations and monitoring requirements for inorganic arsenic become effective and enforceable and the permittee is relieved of their obligation to sample and analyze for total arsenic.*

The schedule of compliance reserves the final date for compliance with the limit for inorganic arsenic. This reservation stems from the fact the EPA has no schedule for approving a test method for inorganic arsenic nor does the Department have any authority to require the EPA to do so. Therefore, the Department considers the aforementioned schedule for inorganic arsenic to be as short as possible given the technological (or lack thereof) issue of not being able to sample and analyze for inorganic arsenic with an approved method.

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

9. Whole Effluent Toxicity (WET) & Chemical-Specific Testing (cont'd)

Waste Discharge License Conditions, 06-096 CMR 523, Section 7, *Schedules of Compliance* sub-§3, *Interim dates*, states in part, "*if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.*

(i) The time between interim dates shall not exceed 1 year, except that in the case of a schedule for compliance with standards for sewage sludge use and disposal, the time between interim dates shall not exceed six months.

(ii) If the time necessary for completion of any interim requirement (such as the construction of a control facility) is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

Special Condition A, *Effluent Limitations and Monitoring Requirements*, of this permit requires that beginning upon issuance of this permit and lasting through USEPA approval of a test method for inorganic arsenic, the permittee shall conduct 1/Year monitoring for total arsenic. Should the test method approval for inorganic arsenic extend more than one year from the date of the issuance of this permit, the sampling and analysis for total arsenic will serve to satisfy the interim requirements specified by *Waste Discharge License Conditions*,06-096 CMR 523, Section 7, *Schedules of Compliance*, Sub-section 3, *Interim dates.*

06-096 CMR 530 does not establish specific monitoring frequencies for parameters that exceed or have a reasonable to exceed AWQC. This permitting action is establishing the monitoring frequencies for arsenic based on a best professional judgment given the timing, frequency and severity of the exceedence or reasonable potential to exceed AWQC. Given the fact that eight subsequent test results reported total arsenic results below the Department's reporting level, the Department is establishing a monitoring frequency of 1/Year for total arsenic.

06-096 CMR 530 (2)(D)(3)(c) states "*Dischargers in Level II may reduce surveillance testing to one WET or specific chemical series every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E).*" The Department has determined that, **with the exception of total arsenic**, the permittee qualifies for the reduction in analytical chemical testing. Therefore, with the exception of total arsenic, this permitting action is carrying forward reduced surveillance level analytical chemistry and priority pollutant testing as follows:

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

a. OUTFALL #001A - Secondary Treated Effluent: [See Special Condition A(1)]

9. Whole Effluent Toxicity (WET) & Chemical-Specific Testing (cont'd)

Surveillance level testing – Beginning upon issuance of the permit and lasting through 12 months prior to permit expiration.

Level	Priority pollutant testing	Analytical chemistry	Total arsenic
II	N/A	1 per 2 years	1/year

Special Condition H, *06-096 CMR 530 (2)(D)(4) Statement for Reduced/Waived Toxics Testing,* of this permitting action requires the permittee to file an annual certification with the Department.

Pursuant to 06-096 CMR 530 (1)(D), screening level testing is being carried forward as follows:

Screening level testing – Beginning 12 months prior to expiration of the permit and every five years thereafter.

Level	Priority pollutant testing	Analytical chemistry
II	1 per year	1 per quarter

It is noted however that if future chemical testing results indicate the discharge exceeds any of the acute, chronic or human health ambient water quality criteria established in 06-096 CMR 584, this permit will be reopened pursuant to Special Condition R, *Reopening of Permit For Modifications*, to establish applicable limitations and monitoring requirements.

Based on conditions imposed by the USEPA Consent Order, influent flow greater than the peak secondary flow rate of 25,600 gpm (36.8 MGD) shall be diverted through the CSO related bypass and be chlorinated and dechlorinated after receiving primary treatment. The total treatment capacity is 55,600 gpm (80 MGD). The primary treatment capacity is 30,000 gpm (43.2 MGD).

b. OUTFALL #001B - Primary Treated and Disinfected Waste Waters
[See Special Condition A(4)]

For those excess combined sewer flows received at the treatment facility which are greater than that which can be treated to a secondary level of treatment, the Department has made a best professional judgment that primary treatment and disinfection constitute practicable and appropriate treatment. A daily maximum fecal coliform bacteria limit of 200 colonies/100 mL is based on a Department best practicable treatment determination for primary treated waste water discharged to marine waters. Limits on total residual chlorine are specified to ensure

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

b. OUTFALL #001B - Primary Treated and Disinfected Waste Waters
[See Special Condition A(4)]

attainment of marine water quality criteria for levels of chlorine and that the best practicable treatment technology is utilized to abate the discharge of chlorine. A technology based total residual chlorine limit of 0.3 mg/L is being carried forward in this permitting action. As mentioned above, the permittee has the ability to dechlorinate its primary bypass waste water and, in this case, in order to set a high enough chlorine residual necessary for disinfection, the permittee will dechlorinate this effluent to achieve the 0.3 mg/L TRC limit.

1. Flow: This permitting action is carrying forward the monthly average and daily maximum flow reporting requirements from the previous permitting action.

   A summary of the monthly Discharge Monitoring Report (DMR) data for the period March 2006 – March 2011 indicates the following:

Flow (DMRs=59)

Value	Limit (MGD)	Range (MGD)	Total (MGD)
Total gallons/month	Report	2.11 – 115.7 (2006) 4.06 – 104.4 (2007) 3.74 – 72.9 (2008) 6.66 – 72.1 (2009) 4.98 – 178.7 (2010)	380.8 (2006) 322.1 (2007) 398.6 (2008) 442.2 (2009) 462.8 (2010)

2. Surface Loading Rate: This permitting action is carrying forward the daily maximum surface loading rate reporting requirements from the previous permitting action.

   A summary of the monthly DMR data for the period March 2006 – March 2011 indicates the following:

Surface Loading Rate

Value	Limit (gpd/sf)	Range (gpd/sf)	Average (gpd/sf)	Number of DMRs
Daily Maximum	Report	1,054 – 7,103	2,824	57

3. Overflow Use, Occurrences: This permitting action is carrying forward the monthly average overflow use occurrences monitoring requirements from the previous permitting action.

   A summary of the monthly DMR data for the period March 2006 – March 2011 indicates the following:

Overflow occurrences (DMRs = 59)

Value	Range (# of days)	Total (# of days)
2006	2 – 13	62
2007	3 – 9	51

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

b. OUTFALL #001B - Primary Treated and Disinfected Waste Waters
[See Special Condition A(4)]

3. Overflow Use, Occurrences (cont'd)

Value	Range (# of days)	Total (# of days)
2008	3 – 10	82
2009	2 – 13	76
2010	1 – 13	57

4. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS): This permitting action is carrying forward the monitoring requirements from the previous permitting action.

A summary of the monthly DMR data for the period of March 2006 – March 2011 indicates the following:

BOD_5 Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Daily Maximum	Report	40 – 292	98	56	N/A

TSS concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Daily Maximum	Report	41 – 935	139	57	N/A

The permittee's BOD5 and TSS percent removal rates for the period of March 2006 – March 2011 ranged from -582% to 1360% (n=56) and from -4963% to 3965% (n=57), respectively. This permitting action is carrying forward the percent removal monitoring requirements from the previous permitting action.

5. Fecal coliform: This permitting action is carrying forward the fecal coliform monitoring requirement from the previous permitting action.

A summary of the monthly DMR data for the period of March 2006 – March 2011 indicates the following:

Fecal coliform

Value	Limit (#col/100 mL)	Range (#col/100 ml)	Arith. Mean (#col/100 mL)	Number of DMRs	Compliance
Daily Maximum	200/100 mL	1 – 8,000	760	57	56%

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

b. OUTFALL #001B - Primary Treated and Disinfected Waste Waters

[See Special Condition A(4)]

6. Total residual chlorine (TRC): This permitting action is carrying forward the TRC reporting requirement from the previous permitting action. A summary of the monthly DMR data for the period of March 2006 – March 2011 indicates the following:

Total Residual Chlorine

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Daily Maximum	0.3	0 – 3.7	0.28	57	91%

7. pH: This permitting action is carrying forward the pH monitoring requirements from the previous permitting action. A review of the DMR data for the period March 2006 – March 2011 (n=57) indicates the pH range was 6.8 SU to 7.9 SU.

c. Combined Sewer Overflows

This permit does not contain effluent limitations on the individual CSO outfalls listed in the table below. *Combined Sewer Overflow Abatement,* 06-096 CMR 570 states that for discharges from overflows from combined municipal storm and sanitary sewer systems, the requirement of "best practicable treatment" specified in 38 M.R.S.A., section 414 A-1(D) may be met by agreement with the discharger, as a condition of its permit, through development of a plan within a time period specified by the Department. The permittee in collaboration with the City of Portland has submitted a *Combined Sewer Overflow Abatement Study Master Plan* and subsequent amendments that were approved by USEPA and the Department on June 25, 1997.

The following are the locations for the permittee's Combined Sewer Overflows (CSOs):

Outfall # (PWD #)	Regulator Location	Outfall Location	Receiving Water,Class
002 (022)	Arcadia St. Pump Station	End of Arcadia St.	Presumpscot Estuary, SC
004 (026)	Tukey's Bridge Siphon	B&M Baked Beans	Casco Bay, SC
005 (010)	Randall Street	Baxter Blvd. and Randall St.	Back Cove, SC
007 (011)	Ocean Avenue	Baxter Blvd.	Back Cove, SC
008 (020)	Clifton St.	Baxter Blvd. and Clifton St.	Back Cove, SC
009 (012)	George Street	Baxter Blvd. and George St.	Back Cove, SC

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

c. Combined Sewer Overflows (cont'd)

010 (014)	Mackworth St.	Baxter Blvd. and Mackworth St.	Back Cove, SC
011 (017)	Chenery Street	Baxter Blvd. and Chenery St.	Back Cove, SC
012 (018)	Vannah Ave.	Baxter Blvd and Vannah Ave.	Back Cove, SC
015 (019)*	Dartmouth St.	Baxter Blvd. and Dartmouth St.	Back Cove, SC
016 (021)*	Bedford Street	Baxter Blvd.	Back Cove, SC
020 (024)	Northeast Pump Station	Northeast Pump Station, Marginal Way	Casco Bay, SC
023 (003)	India St. Pump Station	Portland Ferry Terminal	Portland Harbor, SC
025 (004)	Long Wharf	Commercial St. and Franklin	Portland Harbor, SC
027 (005)	Clark Street	Commercial St. and Clark St.	Portland Harbor, SC
028 (006)	Emery Street	Commercial St. and Emery St.	Portland Harbor, SC
029 (007)	Commercial Street	Commercial St.	Fore River, SC
030 (008)	St. John Street	Barber Foods Parking Lot	Fore River, SC
032 (028)	Thompson's Point Pump Station	Thompson's Point Pump Station	Fore River, SC
033 (009)	Fore River Pump Station	Fore River Pump Station	Fore River, SC
034 (025)	Brewer Street	End of Brewer St.	Fore River, SC

*There are two (2) regulators each for CSOs #015 and #016. The permittee owns one of each and the City of Portland owns one of each.

d. Transported Wastes

The permittee's previous permit contained transported waste limits that are being carried forward in this permitting action and are based on mass loadings of total suspended solids (TSS) and biochemical oxygen demand (BOD5). It is usually the practice to represent permitted transported waste conditions as volume in gallons per day based on actual mass

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

loadings projections. For documentation purposes, this Fact Sheet is incorporating the following language from the December 2000 Waste Discharge License.

In the expired license, the septage was limited to 8000 lbs/day of TSS and 4000 lbs/day of BOD, and no flow amount was specified. In back-calculating to obtain flow, two different flow limits can be derived. In this evaluation, the TSS loadings represent the most limiting factor and thus the 8000 lbs/day TSS loadings was used to calculate the recommended flow. The calculations were based on measured average mass concentrations for the East End WWTF calculated by the District: TSS = 20728 mg/L; BOD = 5925 mg/L. Using the TSS mass loading of 8000 lbs/day results in a calculated septage volume of approximately 46,000 gallons per day.

However, facility influent average BOD and TSS mass loadings are exceeding design influent loadings, based on data from the 1999 reporting year. The District may be found in violation of Department Rule Chapter 555, "Standards for Addition of Septage to Wastewater Treatment Facilities," if addition of septage has an adverse effect on sludge disposal practices or causes any design parameter of the facility to be exceeded. In the opinion of the Department, the recommended 46,000 gallons per day of septage, if received on a daily basis would greatly impact the facility both in maintaining secondary treatment and in keeping pace with sludge processing and removal. The District reported an average of 80,104 gallons per month of septage received at the East End WWTF during 1999. The District on average accepted approximately 4000 gallons per day in 1999, based on a five day work week, with a maximum septage receipt of 24,000 gallons on one day during September 1999. The District has maintained excellent removal rates at the East End WWTF and is in compliance with its secondary effluent limits. Based on these findings, the Department recommends setting a limit of 24,000 gallons per day of septage being introduced into the treatment process. This septage volume shall be contingent upon the District maintaining good removal rates and not incurring any sludge handling problems at the East End WWTF.

8. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge from the permittee will not cause or contribute to the failure of the waterbody to meet standards for Class SC classification. As for the CSOs, the permittee's increased capacity to handle and treat wet weather generated influent flow through its CSO-related primary bypass will result in reductions of pollutant loadings from the permittee's and City's CSO discharge points and mitigate any adverse water impacts associated with such discharges. If ambient water quality monitoring or future modeling determines that at full permitted discharge limits, the permittee's discharge is causing or contributing to the non-attainment of standards, this permit will be reopened per Special Condition R, *Reopening of Permit For Modifications*, to impose more stringent limitations to meet water quality standards.

9. PRETREATMENT

The permittee is required to administer a pretreatment program based on the authority granted under Federal regulations 40 CFR §122.44(j), 40 CFR Part 403 and section 307 of the Federal Water Pollution Control Act (Clean Water Act) and *Pretreatment Program*, 06-096 CMR 528. The permittee's pretreatment program received EPA approval on July 19, 1985 and as a result, appropriate pretreatment program requirements were incorporated into the previous National Pollutant Discharge Elimination System (NPDES) permit which were consistent with that approval and federal pretreatment regulations in effect when the permit was issued. Since issuance of the previous NPDES permit, the State of Maine has been authorized by the EPA to administer the federal pretreatment program as part of receiving authorization to administer the NPDES program.

Upon issuance of this MEPDES permit, the permittee is obligated to modify (if applicable) its pretreatment program to be consistent with current federal regulations and State rules. Those activities that the permittee must address include, but are not limited to, the following: (1) develop and enforce Department approved specific effluent limits (technically-based local limits - last approved by the EPA on May 13, 1999; (2) revise the local sewer-use ordinance or regulation, as appropriate, to be consistent with federal regulations and State rules; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant noncompliance for industrial users; and (6) establish a definition of and track significant industrial users. These requirements are necessary to ensure continued compliance with the permittee's MEPDES permit and its biosolids use or disposal practices.

These requirements are necessary to ensure continued compliance with the permittee's MEPDES permit and its sludge use or disposal practices.

In addition to the requirements described above, this permit requires that within 180 days of the permit's effective date, the permittee shall submit to the Department in writing, a description of proposed changes to permittee's pretreatment program deemed necessary to assure conformity with current federal and State pretreatment regulations and rules respectively. These requirements are included in the permit (Special Condition P) to ensure that the pretreatment program is consistent and up-to-date with all pretreatment requirements in effect. Lastly, by December 1 of each calendar year, the permittee must submit a pretreatment report detailing the activities of the program for the twelve month period ending 60 days prior to the due date.

10. PUBLIC COMMENTS

Public notice of this application was made in the *Portland Press Herald* newspaper on or about December 15, 2010. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses,* 06-096 CMR 522 (effective January 12, 2001).

11. DEPARTMENT CONTACTS

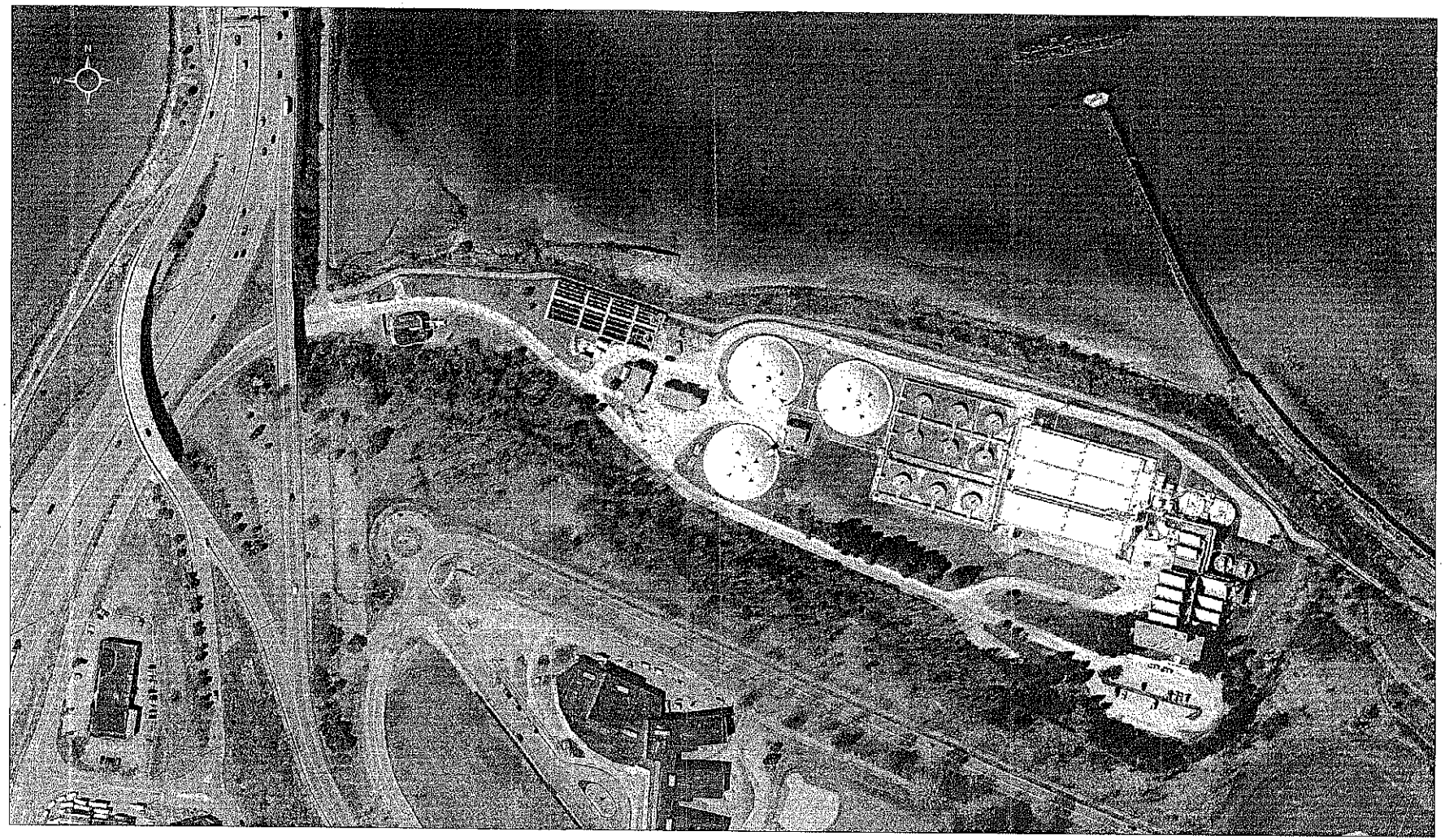
Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Phyllis Arnold Rand
Division of Water Quality Management
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Tel: (207) 287-7658 Fax: (207) 287-3435
e-mail: phyllis.a.rand@maine.gov

12. RESPONSE TO COMMENTS

During the period of July 5, 2011 through the issuance date of the permit/license, the Department solicited comments on the proposed draft permit/license to be issued for the discharge(s) from the permittee. The Department did not receive comments from the permittee, state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the permit. Therefore, the Department has not prepared a Response to Comments.

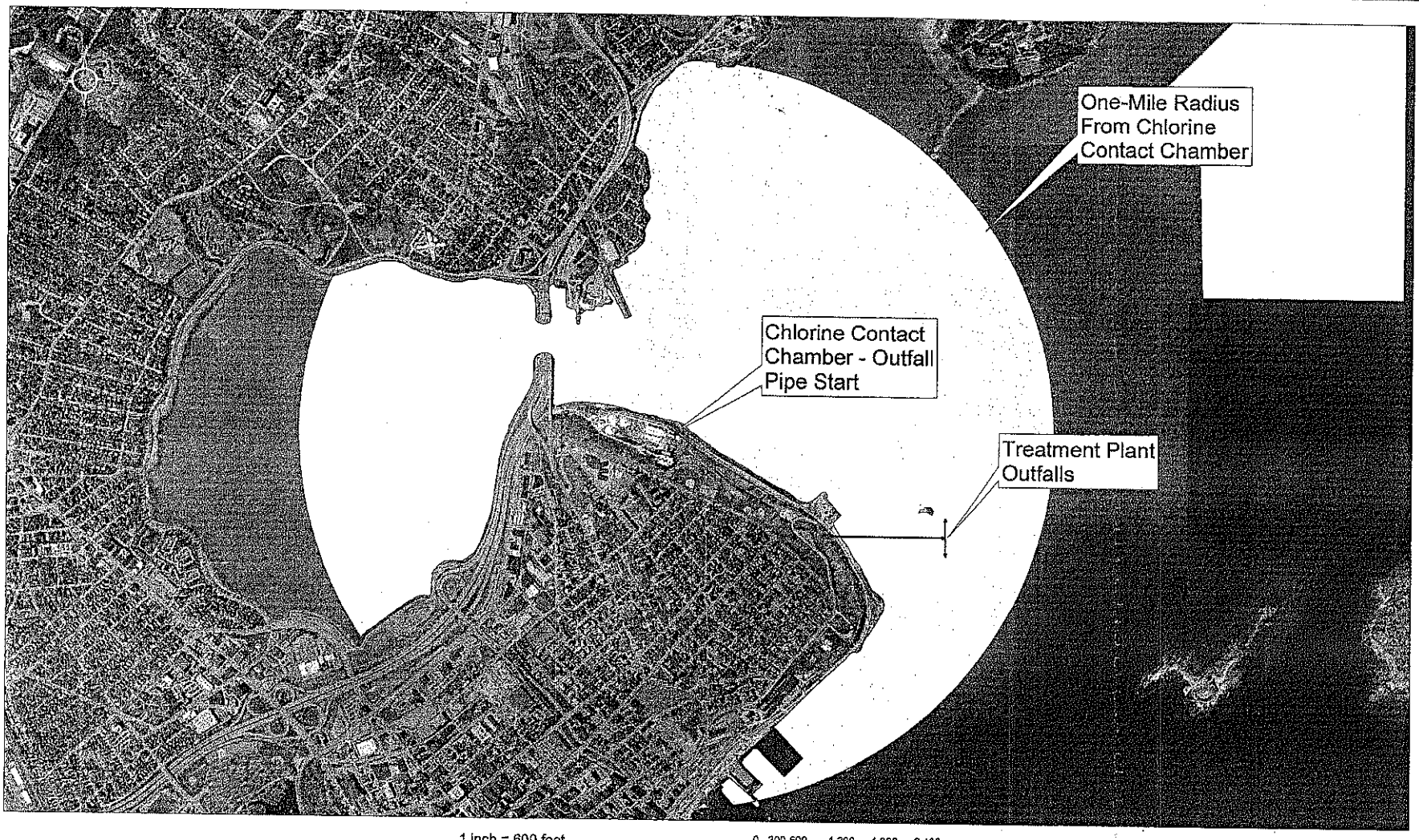
ATTACHMENT A



1 inch = 80 feet

0 40 80 160 240 320 Feet

PORTLAND WATER DISTRICT 225 Douglass Street Portland, ME 04104	Asset Management and Planning Dept.		East End Treatment Plant		Aerial View
	Drawn By: JGH Date: 12/13/2010	Project Completion Date:	**Portland**		Sheet No. 1 of 2



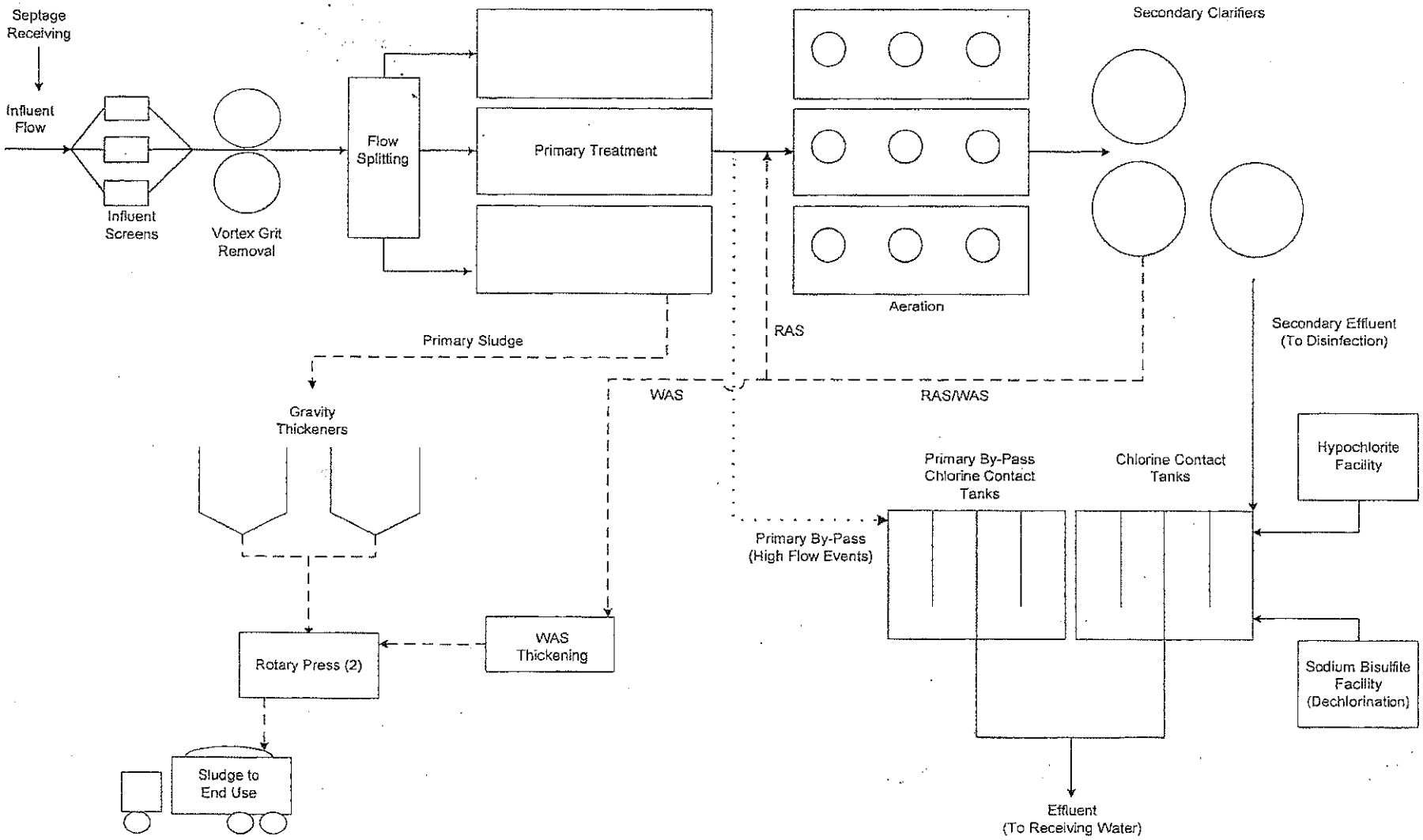
1 inch = 600 feet

0 300 600 1,200 1,800 2,400 Feet

PORTLAND WATER DISTRICT 225 Douglass Street Portland, ME 04104	Asset Management and Planning Dept.	East End Treatment Plant		One-Mile Radius From Chlorine Contact Chamber
	Drawn By: JGH Date: 12/13/2010 — Project Completion Date:	Portland		Sheet No. 2 of 2

ATTACHMENT B

Portland Water District - East End Wastewater Treatment Facility



ATTACHMENT C

FACILITY WET EVALUATION REPORT

Facility: PWD PORTLAND **Permit Number:** ME0102075 **Report Date:** 6/16/2011

Receiving Water: CASCO BAY **Rapidmix:** ?

Dilution Factors: ~~1/4~~ Acute: 21.000 Acute: 21.000 Chronic: 41

Effluent Limits: Acute (%): ~~19.048~~ 4.8 Chronic (%): 2.439 **Date range for Evaluation: From:** 16/Jun/2006 **To:** 16/Jun/2011

Test Type: A_NOEL

Test Species: MYSID SHRIMP

Test Date	Result (%)	Status
03/07/2007	100.000	OK
08/15/2007	37.700	~~RP~~ OK
10/07/2009	100.000	OK
09/22/2010	100.000	OK

Species Summary:

Test Number: 4 **RP:** 2.600 **Min Result (%):** 37.700 **RP factor (%):** 14.500 **Status:** ~~RP~~ OK

Test Type: C_NOEL

Test Species: SEA URCHIN

Test Date	Result (%)	Status
03/07/2007	2.040	EXC
05/09/2007	1.000	EXC
08/15/2007	50.000	OK
10/07/2009	100.000	OK
09/22/2010	100.000	OK

Species Summary:

Test Number: 5 **RP:** 2.300 **Min Result (%):** 1.000 **RP factor (%):** 0.435 **Status:** EXC

ATTACHMENT D

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 16/Jun/2006 - 16/Jun/2011

Facility Name: **PWD PORTLAND** NPDES: **ME0102075**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
03/07/2007	22.83	15.90	12	9	0	0	0	3	0	F	0
05/09/2007	17.42	16.12	15	9	0	0	0	6	0	F	0
08/15/2007	12.87	11.85	15	8	0	0	0	7	0	F	0
10/07/2009	20.07	43.87	15	9	0	0	0	6	0	F	0
04/06/2010	20.79	21.22	130	14	28	46	25	6	11	F	0
06/22/2010	18.23	13.36	11	9	0	0	0	2	0	F	0
09/22/2010	13.06	9.68	16	9	0	0	0	7	0	F	0
12/16/2010	16.84	17.47	11	9	0	0	0	2	0	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

ATTACHMENT E

DEPLW1083-2009

CHAPTER 530(2)(D)(4) CERTIFICATION

MEPDES# _____ Facility Name _____

Since the effective date of your permit have there been:	NO	YES (Describe in Comments)
1. changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may **increase** the toxicity of the discharge?		
2. changes in the operation of the treatment works that may **increase** the toxicity of the discharge?		
3. changes in industrial manufacturing processes contributing wastewater to the treatment works that may **increase** the toxicity of the discharge?		

COMMENTS:

Name(print) _____

Signature _____ Date _____

This document must be signed by the permittee or their legal representative.

This form may be used to meet the requirements of Chap 530(2)(D)(4). This Chapter requires all dischargers having waived or reduced Toxic testing to file a statement with the Department describing changes to the waste being contributed to their system as outlined above. As an alternative the discharger may submit a signed letter containing the same information.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

CONTENTS

SECTION		TOPIC	PAGE
A		GENERAL PROVISIONS	
	1	General compliance	2
	2	Other materials	2
	3	Duty to Comply	2
	4	Duty to provide information	2
	5	Permit actions	2
	6	Reopener clause	2
	7	Oil and hazardous substances	2
	8	Property rights	3
	9	Confidentiality	3
	10	Duty to reapply	3
	11	Other laws	3
	12	Inspection and entry	3
B		OPERATION AND MAINTENANCE OF FACILITIES	
	1	General facility requirements	3
	2	Proper operation and maintenance	4
	3	Need to halt reduce not a defense	4
	4	Duty to mitigate	4
	5	Bypasses	4
	6	Upsets	5
C		MONITORING AND RECORDS	
	1	General requirements	6
	2	Representative sampling	6
	3	Monitoring and records	6
D		REPORTING REQUIREMENTS	
	1	Reporting requirements	7
	2	Signatory requirement	8
	3	Availability of reports	8
	4	Existing manufacturing, commercial, mining, and silvicultural dischargers	8
	5	Publicly owned treatment works	9
E		OTHER PROVISIONS	
	1	Emergency action - power failure	9
	2	Spill prevention	10
	3	Removed substances	10
	4	Connection to municipal sewer	10
F		DEFINTIONS	10

A. GENERAL PROVISIONS

1. **General compliance.** All discharges shall be consistent with the terms and conditions of this permit; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this permit; it shall be a violation of the terms and conditions of this permit to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this permit.

2. Other materials. Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

(a) They are not

(i) Designated as toxic or hazardous under the provisions of Sections 307 and 311, respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law; or
(ii) Known to be hazardous or toxic by the licensee.

(b) The discharge of such materials will not violate applicable water quality standards.

3. Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of State law and the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act, and 38 MRSA, §420 or Chapter 530.5 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
(b) Any person who violates any provision of the laws administered by the Department, including without limitation, a violation of the terms of any order, rule license, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

4. Duty to provide information. The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

5. Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

6. Reopener clause. The Department reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule of compliance or other provisions which may be authorized under 38 MRSA, §414-A(5).

7. Oil and hazardous substances. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act; section 106 of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980; or 38 MRSA §§ 1301, et. seq.

8. Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

9. Confidentiality of records. 38 MRSA §414(6) reads as follows. "Any records, reports or information obtained under this subchapter is available to the public, except that upon a showing satisfactory to the department by any person that any records, reports or information, or particular part or any record, report or information, other than the names and addresses of applicants, license applications, licenses, and effluent data, to which the department has access under this subchapter would, if made public, divulge methods or processes that are entitled to protection as trade secrets, these records, reports or information must be confidential and not available for public inspection or examination. Any records, reports or information may be disclosed to employees or authorized representatives of the State or the United States concerned with carrying out this subchapter or any applicable federal law, and to any party to a hearing held under this section on terms the commissioner may prescribe in order to protect these confidential records, reports and information, as long as this disclosure is material and relevant to any issue under consideration by the department."

10. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

11. Other laws. The issuance of this permit does not authorize any injury to persons or property or invasion of other property rights, nor does it relieve the permittee if its obligation to comply with other applicable Federal, State or local laws and regulations.

12. Inspection and entry. The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), upon presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B. OPERATION AND MAINTENACE OF FACILITIES

1. General facility requirements.

(a) The permittee shall collect all waste flows designated by the Department as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to

maximize removal of pollutants unless authorization to the contrary is obtained from the Department.

(b) The permittee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities.

(c) All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.

(d) Final plans and specifications must be submitted to the Department for review prior to the construction or modification of any treatment facilities.

(e) The permittee shall install flow measuring facilities of a design approved by the Department.

(f) The permittee must provide an outfall of a design approved by the Department which is placed in the receiving waters in such a manner that the maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

2. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Bypasses.

(a) Definitions.

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

(c) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D(1)(f), below. (24-hour notice).

(d) Prohibition of bypass.

(i) Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(C) The permittee submitted notices as required under paragraph (c) of this section.

(ii) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in paragraph (d)(i) of this section.

6. Upsets.

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the cause(s) of the upset;
(ii) The permitted facility was at the time being properly operated; and
(iii) The permittee submitted notice of the upset as required in paragraph D(1)(f) , below. (24 hour notice).
(iv) The permittee complied with any remedial measures required under paragraph B(4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING AND RECORDS

1. General Requirements. This permit shall be subject to such monitoring requirements as may be reasonably required by the Department including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The permittee shall provide the Department with periodic reports on the proper Department reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

2. Representative sampling. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the permittee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

3. Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

(c) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;
(ii) The individual(s) who performed the sampling or measurements;
(iii) The date(s) analyses were performed;
(iv) The individual(s) who performed the analyses;
(v) The analytical techniques or methods used; and
(vi) The results of such analyses.

(d) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.

(e) State law provides that any person who tampers with or renders inaccurate any monitoring devices or method required by any provision of law, or any order, rule license, permit approval or decision is subject to the penalties set forth in 38 MRSA, §349.

D. REPORTING REQUIREMENTS

1. Reporting requirements.

(a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).

(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.

(d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.

(e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(f) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(B) Any upset which exceeds any effluent limitation in the permit.
(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

2. Signatory requirement. All applications, reports, or information submitted to the Department shall be signed and certified as required by Chapter 521, Section 5 of the Department's rules. State law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained by any order, rule, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

3. Availability of reports. Except for data determined to be confidential under A(9), above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by State law, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal sanctions as provided by law.

4. Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under this Section, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) One hundred micrograms per liter (100 ug/l);
(ii) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following ``notification levels'':

(i) Five hundred micrograms per liter (500 ug/l);
(ii) One milligram per liter (1 mg/l) for antimony;
(iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

5. Publicly owned treatment works.

(a) All POTWs must provide adequate notice to the Department of the following:

(i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA or Chapter 528 if it were directly discharging those pollutants.
(ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
(iii) For purposes of this paragraph, adequate notice shall include information on (A) the quality and quantity of effluent introduced into the POTW, and (B) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(b) When the effluent discharged by a POTW for a period of three consecutive months exceeds 80 percent of the permitted flow, the permittee shall submit to the Department a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

E. OTHER REQUIREMENTS

1. Emergency action - power failure. Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.

(a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside power source which is separate and independent from sources used for normal operation of the wastewater facilities.

(b) For industrial and commercial sources. The permittee shall either maintain an alternative power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

2. Spill prevention. (applicable only to industrial sources) Within six months of the effective date of this permit, the permittee shall submit to the Department for review and approval, with or without conditions, a spill prevention plan. The plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminates and shall specify means of disposal and or treatment to be used.

3. **Removed substances.** Solids, sludges trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of waste waters shall be disposed of in a manner approved by the Department.

4. **Connection to municipal sewer.** (applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

F. DEFINITIONS. For the purposes of this permit, the following definitions shall apply. Other definitions applicable to this permit may be found in Chapters 520 through 529 of the Department's rules

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For bacteria, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Except, however, bacteriological tests may be calculated as a geometric mean.

Average weekly discharge limitation means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Composite sample means a sample consisting of a minimum of eight grab samples collected at equal intervals during a 24 hour period (or a lesser period as specified in the section on monitoring and reporting) and combined proportional to the flow over that same time period.

Continuous discharge means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Daily discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved States as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Flow weighted composite sample means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab sample means an individual sample collected in a period of less than 15 minutes.

Interference means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Maximum daily discharge limitation means the highest allowable daily discharge.

New source means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
(b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

Pass through means a discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of 40 CFR parts 122, 123 and 124. Permit includes an NPDES general permit (Chapter 529). Permit does not include any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit.

Person means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.

Point source means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works ("POTW") means any facility for the treatment of pollutants owned by the State or any political subdivision thereof, any municipality, district, quasi-municipal corporation or other public entity.

Septage means, for the purposes of this permit, any waste, refuse, effluent sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Septage does not include wastes from a holding tank.

Time weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected over a constant time interval.

Toxic pollutant includes any pollutant listed as toxic under section 307(a)(1) or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA. Toxic pollutant also includes those substances or combination of substances, including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, including humans either directly through the environment or indirectly through ingestion through food chains, will, on the basis of information available to the board either alone or in combination with other substances already in the receiving waters or the discharge, cause death, disease, abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organism or their offspring.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole effluent toxicity means the aggregate toxic effect of an effluent measured directly by a toxicity test.

DEP INFORMATION SHEET

Appealing a Commissioner's Licensing Decision

Dated: May 2004 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) in an administrative process before the Board of Environmental Protection (Board); or (2) in a judicial process before Maine's Superior Court. This INFORMATION SHEET, in conjunction with consulting statutory and regulatory provisions referred to herein, can help aggrieved persons with understanding their rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

DEP's *General Laws*, 38 M.R.S.A. § 341-D(4), and its *Rules Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2), 06-096 CMR 2.24 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written notice of appeal within 30 calendar days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner and the applicant a copy of the documents. All the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

The materials constituting an appeal must contain the following information at the time submitted:

1. *Aggrieved Status.* Standing to maintain an appeal requires the appellant to show they are particularly injured by the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.

5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.

6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.

7. *New or additional evidence to be offered.* The Board may allow new or additional evidence as part of an appeal only when the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or show that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2, Section 24(B)(5).

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license file is public information made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.

3. *The filing of an appeal does not operate as a stay to any decision.* An applicant proceeding with a project pending the outcome of an appeal runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge initiation of the appeals procedure, including the name of the DEP project manager assigned to the specific appeal, within 15 days of receiving a timely filing. The notice of appeal, all materials accepted by the Board Chair as additional evidence, and any materials submitted in response to the appeal will be sent to Board members along with a briefing and recommendation from DEP staff. Parties filing appeals and interested persons are notified in advance of the final date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision. The Board will notify parties to an appeal and interested persons of its decision.

II. APPEALS TO MAINE SUPERIOR COURT

Maine law allows aggrieved persons to appeal final Commissioner licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2.26; 5 M.R.S.A. § 11001; & MRCivP 80C. Parties to the licensing decision must file a petition for review within 30 days after receipt of notice of the Commissioner's written decision. A petition for review by any other person aggrieved must be filed within 40-days from the date the written decision is rendered. The laws cited in this paragraph and other legal procedures govern the contents and processing of a Superior Court appeal.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, contact the DEP's Director of Procedures and Enforcement at (207) 287-2811.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.