



STATE OF MAINE
Department of Environmental Protection

Paul R. LePage
GOVERNOR

Darryl Brown
COMMISSIONER

March 23, 2011

Mr. Leonard Blanchette
Superintendent
Brunswick Sewer District
10 Pine Tree Road
Brunswick, Maine 04011

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100102
Maine Waste Discharge License (WDL) Application #W002600-6D-F-M
Final Minor Revision

Dear Mr. Blanchette:

Enclosed please find a copy of your **final** Maine MEPDES/WDL **minor revision** which was approved by the Department of Environmental Protection. Please read the permit and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

If you have any questions regarding this matter, please feel free to call me at 287-7693.

Sincerely,

A handwritten signature in cursive script, appearing to read "G. Wood".

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc. Matt Hight, DEP/SMRO
Sandy Mojica, USEPA



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

BRUNSWICK SEWER DISTRICT)	MAINE POLLUTANT DISCHARGE
BRUNSWICK, CUMBERLAND COUNTY, ME.)	ELIMINATION SYSTEM
ME0100102)	WASTE DISCHARGE LICENSE
W002600-6D-F-M)	MINOR REVISION
APPROVAL)	

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq. and Maine Law 38 M.R.S.A., Section 414-A et seq., and applicable regulations, the Department of Environmental Protection is initiating a minor revision of combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100102/Maine Waste Discharge License (WDL) #W002600-5L-E-R (permit hereinafter), issued to the BRUNSWICK SEWER DISTRICT on July 9, 2009. With its supportive data, agency review comments, and other related material on file, the Department finds the following facts:

MODIFICATION SUMMARY

The July 9, 2009 permit authorized the monthly average discharge of up to 3.85 million gallons per day (MGD) of secondary treated sanitary waste water from a publicly owned treatment works to the Androscoggin River, Class C, in Brunswick, Maine. This minor revision is being issued to establish water quality based limitations for toxic pollutants that exceed or have a reasonable potential to exceed applicable ambient water quality criteria (AWQC) established in Department rule, 06-096 CMR, Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*. More specifically, this permit modification establishes;

1. Monthly average and daily maximum mass and concentration limits for total aluminum and total copper.
2. Monthly average mass and concentration limits for ammonia, inorganic arsenic and total lead.
3. Daily maximum mass and concentration limits for total zinc.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated January 26, 2011, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharges, either individually or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
2. The discharges, either individually or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.
3. The provisions of the State's antidegradation policy, *Classification of Maine waters*, 38 M.R.S.A. § 464(4)(F), will be met, in that:
 - (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;
 - (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;
 - (c) Where the standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
 - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and
 - (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharges will be subject to effluent limitations that require application of best practicable treatment as defined in 38 M.R.S.A. § 414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the action to modify MEPDES permit #ME0100102/WDL #W002600-5L-E-R, issued to the BRUNSWICK SEWER DISTRICT on July 9, 2009, to establish water quality based limitations for toxic pollutants, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. *Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits*, revised July 1, 2002, copy attached to MEPDES permit #ME0100102/WDL #W002600-5L-E-R, issued on July 9, 2009.
2. The attached Special Conditions, including any effluent limitations and monitoring requirements.
3. All terms and conditions of MEPDES permit #ME0100102/WDL #W002600-5L-E-R, not modified by this permitting action remain in effect and enforceable.
4. This minor revision becomes effective on the date of signature below and expires on July 9, 2014, concurrent with MEPDES permit #ME0100102/WDL #W002600-5L-E-R.

DONE AND DATED AT AUGUSTA, MAINE, THIS 23rd DAY OF March, 2011.

DEPARTMENT OF ENVIRONMENTAL PROTECTION.

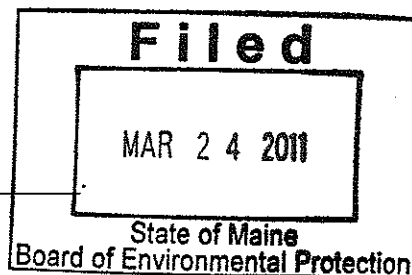
BY: *Darryl N. Brown* *For*
DARRYL N. BROWN, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 14, 2010

Date of application acceptance: October 14, 2010

Date filed with Board of Environmental Protection: _____



SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. Beginning the effective date of this minor revision, the permittee is authorized to discharge secondary treated waste waters to the Androscoggin River via OUTFALL #001A. Such treated waste water discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Aluminum (Total) <i>[01105]</i>	4.1 lbs./day <i>[26]</i>	---	18 lbs./day <i>[26]</i>	256 ug/L <i>[28]</i>	---	1,096 ug/L <i>[28]</i>	1/Year <i>[01/YR]</i>	Composite <i>[24]</i>
Ammonia (as N) <i>[00610]</i>	703 lbs./day <i>[26]</i>	---		44,000 ug/L <i>[28]</i>	---	---	1/Year <i>[01/YR]</i>	Composite <i>[24]</i>
Arsenic (Total)⁽¹⁰⁾ <i>[01002]</i> <i>Upon permit issuance</i>	Report lbs./day <i>[26]</i>	---	---	Report ug/L <i>[28]</i>	---	---	1/Year <i>[01/YR]</i>	Composite <i>[24]</i>
Arsenic (Inorganic)⁽¹¹⁾ <i>[01252]</i> <i>Upon EPA test method approval</i>	0.035 lbs./day <i>[26]</i>	---	---	1.1 ug/L <i>[28]</i>	---	---	1/Year <i>[01/YR]</i>	Composite <i>[24]</i>
Copper (Total) <i>[01042]</i>	1.1 lbs./day <i>[26]</i>	---	0.77 lbs./day <i>[26]</i>	68 ug/L <i>[28]</i>	---	48 ug/L <i>[28]</i>	1/Year <i>[01/YR]</i>	Composite <i>[24]</i>
Lead (Total) <i>[01051]</i>	0.96 lbs./day <i>[26]</i>	---	---	6 ug/L <i>[28]</i>	---	---	1/Year <i>[01/YR]</i>	Composite <i>[24]</i>
Zinc (Total) <i>[01092]</i>	---	---	9.1 lbs./day <i>[26]</i>	---	---	566 ug/L <i>[28]</i>	1/Year <i>[01/YR]</i>	Composite <i>[24]</i>

The italicized bracketed numeric values in the table above and tables that follow are not limitations but are code numbers used by Department personnel to code the Discharge Monitoring Reports (DMR)

SPECIAL CONDITIONS

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

FOOTNOTES:

- (10) **Arsenic (Total)**– Beginning the effective date of this minor revision and lasting through EPA approval of a test method for inorganic arsenic, the permittee shall conduct 1/Year testing for total arsenic and report the monthly average mass and concentration limits on the applicable DMR's. All detectable analytical test results shall be reported to the Department including results which are detected below the Department's RL of 5 ug/L. If the concentration result is at or above RL, the concentration and corresponding mass shall be reported at those levels.
- (11) **Arsenic (Inorganic)** - The limitations and monitoring requirements are not in effect until the USEPA approves of a test method for inorganic arsenic. Once effective, compliance will be based on a 12-month rolling average basis beginning 12 months after the effective date of the limits. Following USEPA approval of a test method for inorganic arsenic and based on recent available data, the permittee may request that the Department reopen this permit in accordance with Special Condition M, *Reopening on Permit For Modifications*, of the 7/9/09 permitting action to establish a schedule of compliance for imposition of the numeric inorganic arsenic limitations.

P. SCHEDULE OF COMPLIANCE – INORGANIC ARSENIC

This permitting action is establishing a schedule of compliance for the monthly average mass and concentration limits for inorganic arsenic as follows:

Beginning upon issuance of this permit and lasting through EPA approval of a test method for inorganic arsenic, the permittee shall conduct 1/Year testing for total arsenic and report the mass and concentration on the applicable DMR's.

Beginning 12 months after EPA approval of a test method for inorganic arsenic, the permittee shall be in compliance with the 12-month rolling average mass and concentration limits of 0.035 lbs/day and 1.1 ug/L respectively, for inorganic arsenic.

Note: The applicable ambient water quality criteria for arsenic is currently undergoing review by the Department and other regulatory authorities. Should the criteria be changed during the term of this permit, the permit may be reopened and amended accordingly.

Q. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE**

FACT SHEET

DATE: January 26, 2011

**MEPDES PERMIT NUMBER: ME0100102
WASTE DISCHARGE LICENSE: W002600-6D-F-M**

NAME AND ADDRESS OF APPLICANT:

**BRUNSWICK SEWER DISTRICT
10 Pine Tree Road
Brunswick, Maine 04011**

COUNTY: Cumberland

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**8 Pine Tree Road
Brunswick, Maine 04011**

RECEIVING WATER / CLASSIFICATION: Androscoggin River/ Class C

**COGNIZANT OFFICIAL AND TELEPHONE NUMBER: Mr. Leonard Blanchette
Assistant General Manager
(207) 729-0148 ext. 15**

1. MODIFICATION SUMMARY

The July 9, 2009, MEPDES permit issued to the Brunswick Sewer District authorized the monthly average discharge of up to 3.85 million gallons per day (MGD) of secondary treated sanitary waste water from a publicly owned treatment works to the Androscoggin River, Class C, in Brunswick, Maine. This minor revision is being issued to establish water quality based limitations for toxic pollutants that exceed or have a reasonable potential to exceed applicable ambient water quality criteria (AWQC) established in Department rule, 06-096 CMR, Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*. More specifically, this permit modification establishes;

1. Monthly average and daily maximum mass and concentration limits for total aluminum and total copper.
2. Monthly average mass and concentration limits for ammonia, inorganic arsenic and total lead.
3. Daily maximum mass and concentration limits for total zinc.

2. CONDITIONS OF PERMITS

Conditions of licenses, 38 M.R.S.A. § 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, 38 M.R.S.A., § 420 and 06-096 CMR 530 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.

3. RECEIVING WATER QUALITY STANDARDS

Classification of major river basins, 38 M.R.S.A. § 467(1)(A)(2) classifies the Androscoggin River at the point of discharge as a Class C waterway. *Standards for classification of fresh surface waters*, 38 M.R.S.A. § 465(4)(C) describes the standards for Class C waters.

4. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

- a. Whole Effluent Toxicity (WET) & Chemical-Specific Testing – Maine law, 38 M.R.S.A., Sections 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. Department Rules, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, and Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants* 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 Chapter 530, is 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. Acute and chronic WET tests are performed on invertebrate and vertebrate species. 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 Chapter 584.

Chapter 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 $\geq 20:1$ but $<100:1$.
- 3) Level III – chronic dilution factor $\geq 100:1$ but $<500:1$ or $>500:1$ and $Q \geq 1.0$ MGD
- 4) Level IV – chronic dilution $>500:1$ and $Q \leq 1.0$ MGD

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

Department rule Chapter 530 (1)(D) specifies the criteria to be used in determining the minimum monitoring frequency requirements for WET, priority pollutant and analytical chemistry testing. Based on the Chapter 530 criteria, the permittee's facility falls into the Level III frequency category as the facility has a chronic dilution factor of $\geq 100:1$ but $< 500:1$. Chapter 530(1)(D)(1) specifies that routine screening and surveillance level testing requirements are as follows:

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

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

A review of the data on file with the Department indicates that to date, the permittee has fulfilled the WET and chemical-specific testing requirements of Chapter 530. See **Attachment A** of this Fact Sheet for a summary of the WET test results and **Attachment B** of this Fact Sheet for a summary of the chemical-specific test dates.

Department rule Chapter 530(D)(3)(b) states in part, *Dischargers in Levels III and IV may be waived from conducting surveillance testing for individual WET species or chemicals provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E).*

Chapter 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.*”

Chapter 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.*”

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

WET evaluation

On 9/27/10, the Department conducted a statistical evaluation on the most recent 60 months of WET data that indicates that the discharge does not exceed or have a reasonable potential (RP) to exceed either the acute or chronic critical ambient water quality criteria (AWQC) thresholds (0.6% and 0.3%, respectively – mathematical inverse of the applicable dilution factors) for any of the WET species tested to date.

Given the absence of exceedences or reasonable potential to exceed critical WET thresholds, the permittee meets the surveillance level monitoring frequency waiver criteria found at Department rule Chapter 530(D)(3)(b). Therefore, the only WET testing requirements are screening level testing of once per year (1/Year) as established in the 7/9/09 permitting action. Screening level testing shall be completed in the 12-month period prior to the expiration date of this permit and every five years thereafter.

In accordance with Department rule Chapter 530(2)(D)(4) and Special Condition I, 530(2)(D)(4) *Statement For The Reduced/Waived Toxics Testing* of the July 9, 2009, permit, the permittee must annually submit to the Department a written statement evaluating its current status for each of the conditions listed.

Chemical evaluation

Chapter 530 (promulgated on October 12, 2005) §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 limited information on the background levels of metals in the water column in the Androscoggin River in the vicinity of the permittee's outfall. Therefore, a default background concentration of 10% of the applicable water quality criteria is being used in the calculations of this permitting action.

Chapter 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.

Chapter 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."

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

Chapter 530 §4(F) states in part *“Where there is more than one discharge into the same fresh or estuarine receiving water or watershed, the Department shall consider the cumulative effects of those discharges when determining the need for and establishment of the level of effluent limits. The Department shall calculate the total allowable discharge quantity for specific pollutants, less the water quality reserve and background concentration, necessary to achieve or maintain water quality criteria at all points of discharge, and in the entire watershed. The total allowable discharge quantity for pollutants must be allocated consistent with the following principles.*

Evaluations must be done for individual pollutants of concern in each watershed or segment to assure that water quality criteria are met at all points in the watershed and, if appropriate, within tributaries of a larger river.

The total assimilative capacity, less the water quality reserve and background concentration, may be allocated among the discharges according to the past discharge quantities for each as a percentage of the total quantity of discharges, or another comparable method appropriate for a specific situation and pollutant. Past discharges of pollutants must be determined using the average concentration discharged during the past five years and the facility's licensed flow.

The amount of allowable discharge quantity may be no more than the past discharge quantity calculated using the statistical approach referred to in section 3(E) [Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control"] of the rule, but in no event may allocations cause the water quality reserve amount to fall below the minimum referred to in 4(E) [15% of the total assimilative capacity]. Any difference between the total allowable discharge quantity and that allocated to existing dischargers must be added to the reserve.

See **Attachment C** of this Fact Sheet for Department guidance that establishes protocols for establishing waste load allocations. The guidance states that the most protective of water quality becomes the facility's allocation. According to the 11/18/10 statistical evaluation (Report ID #316), all pollutants of concern (aluminum, ammonia, arsenic, copper, lead and zinc) are to be limited based on the segment allocation method.

Chapter 530 §(3)(D)(1) states *“For specific chemicals, effluent limits must be expressed in total quantity that may be discharged and in effluent concentration. In establishing concentration, the Department may increase allowable values to reflect actual flows that are lower than permitted flows and/or provide opportunities for flow reductions and pollution prevention provided water quality criteria are not exceeded. With regard to concentration limits, the Department may review past and projected flows and set limits to reflect proper operation of the treatment facilities that will keep the discharge of pollutants to the minimum level practicable.”*

As not to penalize the permittee for operating at flows less than the permitted flow, the Department is establishing concentration limits based on a back calculation from the mass limit utilizing a multiplier of 2.0. This multiplier is not utilized for inorganic arsenic. See the discussion under the heading *Arsenic (inorganic)* on page 8 of this Fact Sheet.

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

Segment allocation methodology

Historical Average:

For the segment allocation methodology, the historical average quantity (mass) for each pollutant of concern for each facility is calculated utilizing the arithmetic mean of the concentrated values reported for each pollutant, a conversion factor of 8.34 lbs/gallon and the monthly average permit limit for flow. The historical mass discharged for each pollutant for each facility is mathematically summed to determine the total mass discharged for each pollutant in the watershed. Based on the individual dischargers historical average each discharger is assigned a percentage of the whole which is then utilized to determine the percent of the segment allocation for each pollutant for each facility. For the District's facility, historical averages for aluminum, ammonia, arsenic, copper, lead and zinc were calculated as follows:

Aluminum

Mass limits

Mean concentration (n=5) = 139 ug/L or 0.139 mg/L

Permit flow limit = 3.85 MGD

Historical average mass = (0.139 mg/L)(8.34)(3.85 MGD) = 4.46 lbs/day

The 11/18/10 statistical evaluation indicates the historical average mass of aluminum discharged by the District's facility is 0.61% of the aluminum discharged by the facilities on the Androscoggin River and its tributaries. Therefore, District's segment allocation for aluminum is calculated as 0.61% of the acute and chronic assimilative capacities of the river at Brunswick, the most downstream facility minus the assimilative capacities assigned to the tributaries on the Androscoggin River that have permitted discharges. The Department has calculated an acute assimilative capacity of 2,890 lbs/day and a chronic assimilative capacity 672 lbs/day of aluminum at Brunswick. Therefore, the mass segment allocations for aluminum for the District can be calculated as follows:

Daily maximum (acute) and monthly average (chronic) mass limitations for aluminum are calculated as follows:

Daily maximum: (Acute assimilative capacity mass)(% of total aluminum discharged)
(2,890 lbs/day)(0.0061) = 17.6 lbs/day or 18 lbs/day

Monthly average: (Chronic assimilative capacity mass)(% of total aluminum discharged)
(672 lbs/day)(0.0061) = 4.1 lbs/day

Since the adoption of Chapter 530, the Department has developed a policy for establishing equitable concentration limits in permits that are greater than calculated end-of-pipe concentrations. In general, most dischargers subject to the Chapter 530 testing requirements are discharging at or about 50% of the flow limitations established in their permits. This provides

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

the Department with the flexibility to establish higher concentration limits in the permit while still maintaining compliance with the water quality based mass limitations. With an actual discharge flow at ½ (0.5) of permitted flow rate, a concentration limit of two times (mathematical inverse of 0.5) the calculated end-of-pipe concentration, will maintain compliance with water quality based mass limits. Therefore, this permitting action is establishing concentration limitations that are two (2) times higher than the calculated end-of-pipe concentrations. The permittee must keep in mind, if flows greater than 50% of the permitted flow are realized, the concentration in the effluent must be reduced proportionally to maintain compliance with the mass limitations.

Concentration limits

Daily maximum concentration for aluminum;

$$\frac{17.6 \text{ lbs/day}}{(3.85 \text{ MGD})(8.34 \text{ lbs/gal.})} = 0.548 \text{ mg/L}$$

$$(0.548 \text{ mg/L})(1,000 \text{ ug/mg})(2) = 1,096 \text{ ug/L}$$

Monthly average concentration for aluminum;

$$\frac{4.1 \text{ lbs/day}}{(3.85 \text{ MGD})(8.34 \text{ lbs/gal.})} = 0.128 \text{ mg/L}$$

$$(0.128 \text{ mg/L})(1,000 \text{ ug/mg})(2) = 256 \text{ ug/L}$$

Ammonia

Mass limits

Mean concentration (n=13) = 1,396 ug/L or 1.396 mg/L

Permit flow limit = 3.85 MGD

Historical average mass = (1.396 mg/L)(8.34)(3.85 MGD) = 44.8 lbs/day

The 11/18/10 statistical evaluation indicates the historical average mass of ammonia discharged by the District's facility is 3.03% of the ammonia discharged by the facilities on the Androscoggin River and its tributaries. Therefore, District's segment allocation for ammonia is calculated as 3.03% of the chronic assimilative capacity of the river at Brunswick, the most downstream facility minus the assimilative capacities assigned to the tributaries on the Androscoggin River that have permitted discharges. The Department has calculated a chronic assimilative capacity of 23,213 lbs/day of ammonia at Brunswick. Therefore, the mass segment allocation for ammonia for the District can be calculated as follows:

Monthly average mass for ammonia:

(Chronic assimilative capacity mass)(% of total ammonia discharged)

$$(23,213 \text{ lbs/day})(0.0303) = 703 \text{ lbs/day}$$

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

Concentration limits

Monthly average concentration for ammonia;

$$\frac{703 \text{ lbs/day}}{(3.85 \text{ MGD})(8.34 \text{ lbs/gal.})} = 22.0 \text{ mg/L}$$

$$(22.0 \text{ mg/L})(1,000 \text{ ug/mg})(2) = 44,000 \text{ ug/L}$$

Arsenic (inorganic)

Mass limits

Mean concentration (n=13) = 2.5 ug/L or 0.0025 mg/L

Permit flow limit = 3.85 MGD

$$\text{Historical average mass} = (0.0025 \text{ mg/L})(8.34)(3.85 \text{ MGD}) = 0.080 \text{ lbs/day}$$

The 11/18/10 statistical evaluation indicates the historical average mass of total arsenic discharged by the District's facility is 7.09% of the arsenic discharged by the facilities on the Androscoggin River and its tributaries. However, the Verso Paper facility upstream of Brunswick facility was limited by the individual allocation resulting in a surplus of 0.32 lbs of arsenic to be allocated to downstream dischargers where arsenic is being limited in a permit. In this case, there are two downstream dischargers being limited for arsenic, Lisbon and Brunswick. Therefore, the District's segment allocation for arsenic is calculated as 16.56% of the harmonic mean assimilative capacity of the river at Brunswick, the most downstream facility minus the assimilative capacities assigned to the tributaries on the Androscoggin River that have permitted discharges. The Department has calculated a harmonic mean assimilative capacity of 0.21 lbs/day of inorganic arsenic at Brunswick. Therefore, the mass segment allocation for inorganic arsenic for the District can be calculated as follows:

Monthly average mass for inorganic arsenic

(Harmonic mean assimilative capacity mass)(% of inorganic arsenic discharged)

$$(0.21 \text{ lbs/day})(0.1656) = 0.035 \text{ lbs/day}$$

Concentration limits

Monthly average concentration for inorganic arsenic;

$$\frac{0.035 \text{ lbs/day}}{(3.85 \text{ MGD})(8.34 \text{ lbs/gal.})} = 0.0011 \text{ mg/L or } 1.1 \text{ ug/L}$$

4. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Department rule Chapter 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 than, 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. 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} -arsenite 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 1.1 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 1.1 ug/L. The calculation is as follows:

$$\frac{1.1 \text{ ug/L inorganic arsenic}}{0.5 \text{ ug/L inorganic arsenic} / 1.0 \text{ ug/L total arsenic}} = 2.2 \text{ ug/L total arsenic}$$

Therefore, a total arsenic value greater than 2.2 ug/L is potentially exceeding the water quality based end-of pipe monthly average concentration value of 1.1 ug/L for inorganic arsenic. Only the results greater than the total arsenic threshold of 2.2 ug/L will be considered a potential exceedence of the inorganic limit of 1.1 ug/L. It is noted the Department's current RL for total arsenic is 5.0 ug/L.

4. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

If a test result is determined to be a potential exceedence, the permittee shall submit a toxicity reduction evaluation (TRE) to the Department for review and approval within 45 days of receiving the test result of concern from the laboratory. Contact the Department's compliance inspector for a copy of the Department's December 2007 guidance on conducting a TRE for arsenic.

Maine law, 38 M.R.S.A., §414-A(2), Schedules of Compliance 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 P, *Schedule of Compliance – Inorganic Arsenic*, of this permit modification establishes a schedule as follows:

Beginning upon issuance of this permit modification 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.

Department rule Chapter 523, Waste Discharge License Conditions, § 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.*

4. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

(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 Department rule, Chapter 523, *Waste Discharge License Conditions*, Section 7, *Schedules of Compliance*, Sub-section 3, *Interim dates*.

Chapter 530 §(3)(D)(1) states "For specific chemicals, effluent limits must be expressed in total quantity that may be discharged and in effluent concentration. In establishing concentration, the Department may increase allowable values to reflect actual flows that are lower than permitted flows and/or provide opportunities for flow reductions and pollution prevention provided water quality criteria are not exceeded.

With regard to concentration limits, the Department may review past and projected flows and set limits to reflect proper operation of the treatment facilities that will keep the discharge of pollutants to the minimum level practicable."

It is noted the calculations for establishing limitations for inorganic arsenic in this Fact Sheet do not increase the EOP concentration for inorganic arsenic by a factor of 1.5 due to uncertainty of the ratio between organic and inorganic fractions of total arsenic. However, the Department has given the permittee some flexibility by evaluating possible exceedences using the rebuttable presumption that the effluent contains a ratio of 50% inorganic arsenic and 50% organic arsenic in total arsenic results. In other words, the equivalent total arsenic concentration threshold has been increased by a factor of 2.0.

Copper

Mass limits

Mean concentration = 23.8 ug/L or 0.0245 mg/L

Permit flow limit = 3.85 MGD

Historical average mass = (0.0245 mg/L)(8.34)(3.85 MGD) = 0.79 lbs/day

The 11/18/10 statistical evaluation indicates the historical average mass of copper discharged by the District's facility is 6.37% of the copper discharged by the facilities on the Androscoggin River and its tributaries. Therefore, District's segment allocation for copper is calculated as 6.37% of the acute and chronic assimilative capacities of the river at Brunswick, the most downstream facility minus the assimilative capacities assigned to the tributaries on the

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

Androscoggin River that have permitted discharges. The Department has calculated an acute assimilative capacity of 12.1 lbs/day and a chronic assimilative capacity 18.4 lbs/day of copper at Brunswick. Therefore, the mass segment allocations for copper for the District can be calculated as follows:

Daily maximum (acute) and monthly average (chronic) mass limitations for copper are calculated as follows:

$$\text{Daily maximum: (Acute assimilative capacity mass)(\% of total copper discharged)} \\ (12.1 \text{ lbs/day})(0.0637) = 0.77 \text{ lbs/day}$$

$$\text{Monthly average: (Chronic assimilative capacity mass)(\% of total copper discharged)} \\ (18.4 \text{ lbs/day})(0.0637) = 1.1 \text{ lbs/day}$$

The calculations above are correct in that the monthly average limitation is greater than the daily maximum limit. This will occur when the ratio between the acute and chronic AWQC is smaller than the ratio between the acute (1Q10) and chronic (7Q10) receiving water flows.

Concentration limits:

Daily mass limit = 0.77 lbs/day

$$\frac{(0.77 \text{ lbs/day})}{(8.34 \text{ lbs/gal})(3.85 \text{ MGD})} = 0.0240 \text{ mg/L}$$

$$(0.0240 \text{ mg/L})(1,000 \text{ ug/mg})(2) = 48 \text{ ug/L}$$

Monthly average mass limit = 1.1 lbs/day

$$\frac{(1.1 \text{ lbs/day})}{(8.34 \text{ lbs/gal})(3.85 \text{ MGD})} = 0.0342 \text{ mg/L}$$

$$(0.0342 \text{ mg/L})(1,000 \text{ ug/mg})(2) = 68.4 \text{ ug/L or } 68 \text{ ug/L}$$

Lead

Mass limits

Mean concentration (n=13) = 1.77 ug/L or 0.00177 mg/L

Permit flow limit = 3.85 MGD

$$\text{Historical average mass} = (0.00177 \text{ mg/L})(8.34)(3.85 \text{ MGD}) = 0.057 \text{ lbs/day}$$

The 11/18/10 statistical evaluation indicates the historical average mass of lead discharged by the District's facility is 3.0% of the lead discharged by the facilities on the Androscoggin River and its tributaries. Therefore, District's segment allocation for lead is calculated as 3.0% of the chronic assimilative capacity of the river at Brunswick, the most downstream facility minus the assimilative capacities assigned to the tributaries on the Androscoggin River that have permitted

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

discharges. The Department has calculated a chronic assimilative capacity of 3.2 lbs/day of lead at Brunswick. Therefore, the mass segment allocation for lead for the District can be calculated as follows:

Monthly average mass for lead
(Chronic assimilative capacity mass)(% of total lead discharged)
 $(3.2 \text{ lbs/day})(0.030) = 0.96 \text{ lbs/day}$

Concentration limits

Monthly average concentration for lead;

$$\frac{0.96 \text{ lbs/day}}{(3.85 \text{ MGD})(8.34 \text{ lbs/gal.})} = 0.0031 \text{ mg/L}$$

$$(0.030 \text{ mg/L})(1,000 \text{ ug/mg})(2) = 6 \text{ ug/L}$$

Zinc

Mass limits

Mean concentration (n=13) = 156 ug/L or 0.156 mg/L

Permit flow limit = 3.85 MGD

$$\text{Historical average mass} = (0.156 \text{ mg/L})(8.34)(3.85 \text{ MGD}) = 5.0 \text{ lbs/day}$$

The 11/18/10 statistical evaluation indicates the historical average mass of zinc discharged by the District's facility is 7.75% of the zinc discharged by the facilities on the Androscoggin River and its tributaries. Therefore, District's segment allocation for zinc is calculated as 7.75% of the acute assimilative capacity of the river at Brunswick, the most downstream facility minus the assimilative capacities assigned to the tributaries on the Androscoggin River that have permitted discharges. The Department has calculated an acute assimilative capacity of 118 lbs/day of zinc at Brunswick. Therefore, the mass segment allocation for zinc for the District can be calculated as follows:

Daily maximum (acute) mass limitation for zinc is calculated as follows:

Daily maximum: (Acute assimilative capacity mass)(% of total zinc discharged)
 $(118 \text{ lbs/day})(0.0775) = 9.1 \text{ lbs/day}$

Concentration limits:

Daily mass limit = 9.1 lbs/day

$$\frac{(9.1 \text{ lbs/day})}{(8.34 \text{ lbs/gal})(3.85 \text{ MGD})} = 0.283 \text{ mg/L}$$

$$(0.283 \text{ mg/L})(1,000 \text{ ug/mg})(2) = 566 \text{ ug/L}$$

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

Chapter 530 does not establish monitoring frequencies for parameters that exceed or have a reasonable potential to exceed AWQC. Monitoring frequencies are established on case-by-case basis given the timing, severity and frequency of occurrences of the exceedences or reasonable potential to exceed applicable critical water quality thresholds. Therefore, this permitting action is making a best professional judgment to establish the monitoring frequencies for the parameters of concern at the default surveillance level frequency of 1/Year specified in Chapter 530.

As for the remaining chemical specific parameters tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable acute, chronic or human health AWQC. Therefore, as with the 7/9/09 permitting action, this permitting action is waiving surveillance level reporting and monitoring frequency for analytical chemistry and priority pollutant testing for the first four years of the term of the permit. It is noted Chapter 530 does require surveillance level testing for dischargers in the Level III category. As with reduced WET testing, the permittee must file an annual certification with the Department pursuant to Chapter 530 §2(D)(3) and Special Condition I of the July 9, 2009 permit.

Beginning 12 months prior to the expiration date of the permit, the permittee shall conduct default screening level analytical chemistry testing at 1/Quarter and priority pollutant testing of 1/Year.

5. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has made a determination based on a best professional judgment that the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the waterbody to meet standards for Class C classification.

6. PUBLIC COMMENTS

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).

7. DEPARTMENT CONTACTS

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

Gregg Wood
Division of Water Quality Management
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7693 Fax: (207) 287-3435
e-mail: gregg.wood@maine.gov

8. RESPONSE TO COMMENTS

During the period of January 26, 2011, through the issuance date of this minor revision, the Department solicited comments on the proposed draft minor revision to be issued for the discharge(s) from the Brunswick Sewer District. 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

11/2/2010

WET TEST REPORT

Data for tests conducted for the period
02/Nov/2005 - 02/Nov/2010 period.



BRUNSWICK

NPDES = ME010010 Effluent Limit: Acute (%) = 0.562 Chronic (%) = 0.295

Species	Test	Percent	Sample date	Critical %	Exception	RP
TROUT	A_NOEL	100	04/06/2008	0.562		
TROUT	C_NOEL	100	04/06/2008	0.295		
WATER FLEA	A_NOEL	100	04/06/2008	0.562		
WATER FLEA	C_NOEL	100	04/06/2008	0.295		

ATTACHMENT B

CHEMICAL EVALUATION REPORT (WATERSHED)



9/27/2010

Report ID: 306

Data Date Range: 24/Sep/2005 - 24/Sep/2010

Facility: **BRUNSWICK**

Permit Number: **ME0100102**

Receiving Water: **ANDROSCOGGIN RIVER**

Fresh or Salt: **F**

Complete Mix: **N**

Dilution Factors: Acute: **177.8** Chronic: **338.5** Health: **739.6** Licensed Flow: **3.9**

Water Quality Assumptions: Reserve (%): **15.0** Background (%): **10.0** Temperature: **25.0**

Hardness: **20.0**

PH: **7.0**

Salinity: **0.0**

Historical Average Date: 23/Sep/2010

Specific pollutants with reasonable potential: Number of parameters found = 6

Pollutant: ALUMINUM	Reporting Limit: 0.0	Sample Number: 5	
Coefficient of Variation: 0.6	Reasonable Potential Factor: 2.3		
Historical Average: 4.45673	RP Historical Average: 10.250479		
Assimilative Capacity:	Acute	Chronic	Health
Pounds per day	17.2501 S	4.00823 S	N/A
Exceedence ug/L	537.24	124.83	---
RP ug/L	233.58	54.27	---

******* INDIVIDUAL RESULTS *******

Exceedence or Reasonable Potential and Basis

Flag	Daily Flow	Date	Concentration	Mass	Acute	Chronic	Health
IN	2.5640	02/11/2008	70	1.49686	---	---	---
IN	4.6940	04/06/2008	86	3.36672	Y	Y	---
IN	2.2700	10/19/2008	78	1.47668	---	---	---
IN	2.2400	01/26/2009	301	5.62316	Y	Y	---
IN	3.1400	05/04/2009	159	4.16383	Y	Y	---

Pollutant: AMMONIA	Reporting Limit: 0.0	Sample Number: 12	
Coefficient of Variation: 2.0	Reasonable Potential Factor: 3.0		
Historical Average: 42.6782	RP Historical Average: 128.0346		
Assimilative Capacity:	Acute	Chronic	Health
Pounds per day	---	708.282 S	N/A
Exceedence ug/L	---	22,058.68	---
RP ug/L	---	7,352.89	---

******* INDIVIDUAL RESULTS *******

Exceedence or Reasonable Potential and Basis

Flag	Daily Flow	Date	Concentration	Mass	Acute	Chronic	Health
IN	3.8500	04/11/2006	10100	324.3009	---	Y	---
IN	3.8500	10/16/2006	1400	44.9526	---	---	---
IN	1.8420	08/13/2007	100	1.53623	---	---	---
IN	2.0820	10/22/2007	<500	---	---	---	---

IN	4.6940	04/06/2008	900 ⁵⁰⁰	35.23316	---	---	---
IN	2.2700	10/19/2008	400	7.57272	---	---	---
IN	2.2400	01/26/2009	600	11.20896	---	---	---
IN	3.1400	05/04/2009	<500	---	---	---	---
IN	2.9000	07/20/2009	100	2.4186	---	---	---
IN	2.1190	10/12/2009	<2500	---	---	---	---
IN	2.1860	02/21/2010	100	1.82312	---	---	---

Pollutant: ARSENIC		Reporting Limit: 5.0		Sample Number: 12	
Coefficient of Variation: 0.3		Reasonable Potential Factor: 1.3			
Historical Average: 0.08161		RP Historical Average: 0.106093			
Assimilative Capacity:		Acute	Chronic	Health	
Pounds per day		---	---	0.03468 S	
Exceedence ug/L		---	---	1.08	
RP ug/L		---	---	0.83	

******* INDIVIDUAL RESULTS *******

Flag	Daily Flow	Date	Concentration	Mass	Exceedence or Reasonable Potential and Basis		
					Acute	Chronic	Health
IN	3.8500	04/11/2006	<4	---	---	---	---
IN	3.8500	10/16/2006	2	0.06422	---	---	Y
IN	1.8420	08/13/2007	<4	---	---	---	---
IN	2.0820	10/22/2007	<4	---	---	---	---
IN	2.5640	02/11/2008	2	0.04277	---	---	Y
IN	4.6940	04/06/2008	<1	---	---	---	---
IN	2.2700	10/19/2008	2	0.03786	---	---	Y
IN	2.2400	01/26/2009	3	0.05604	---	---	Y
IN	3.1400	05/04/2009	2	0.05238	---	---	Y
IN	2.9000	07/20/2009	5	0.12093	---	---	Y
IN	2.1190	10/12/2009	2	0.03534	---	---	Y
IN	2.1860	02/21/2010	<5	---	---	---	---

Pollutant: COPPER		Reporting Limit: 3.0		Sample Number: 12	
Coefficient of Variation: 0.4		Reasonable Potential Factor: 1.4			
Historical Average: 0.765265		RP Historical Average: 1.071371			
Assimilative Capacity:		Acute	Chronic	Health	
Pounds per day		0.779825 S	1.18643 S	---	
Exceedence ug/L		24.29	36.95	---	
RP ug/L		17.35	26.39	---	

******* INDIVIDUAL RESULTS *******

Flag	Daily Flow	Date	Concentration	Mass	Exceedence or Reasonable Potential and Basis		
					Acute	Chronic	Health
IN	3.8500	04/11/2006	27	0.86694	Y	Y	---
IN	3.8500	10/16/2006	32	1.02749	Y	Y	---
IN	1.8420	08/13/2007	12	0.18435	---	---	---
IN	2.0820	10/22/2007	18	0.31255	---	---	---
IN	2.5640	02/11/2008	16	0.34214	---	---	---
IN	4.6940	04/06/2008	12	0.46978	---	---	---
IN	2.2700	10/19/2008	33	0.62475	Y	---	---

IN	3.1400	05/04/2009	34	0.89038	Y	Y	---
IN	2.9000	07/20/2009	7	0.1693	---	---	---
IN	2.1190	10/12/2009	28	0.49483	---	---	---
IN	2.1860	02/21/2010	28	0.51047	---	---	---

Pollutant: LEAD		Reporting Limit: 3.0		Sample Number: 12	
Coefficient of Variation: 0.5		Reasonable Potential Factor: 1.5			
Historical Average: 0.057529		RP Historical Average: 0.0862935			
Assimilative Capacity:		Acute	Chronic	Health	
Pounds per day		---	0.101922 S	N/A	
Exceedence ug/L		---	3.17	---	
RP ug/L		---	2.11	---	

***** INDIVIDUAL RESULTS *****

Flag	Daily Flow	Date	Concentration	Mass	Exceedence or Reasonable Potential and Basis		
					Acute	Chronic	Health
IN	3.8500	04/11/2006	1	0.03211	---	---	---
IN	3.8500	10/16/2006	3	0.09633	---	Y	---
IN	1.8420	08/13/2007	4	0.06145	---	---	---
IN	2.0820	10/22/2007	1	0.01736	---	---	---
IN	2.5640	02/11/2008	2	0.04277	---	---	---
IN	4.6940	04/06/2008	<1	---	---	---	---
IN	2.2700	10/19/2008	1	0.01893	---	---	---
IN	2.2400	01/26/2009	<3	---	---	---	---
IN	3.1400	05/04/2009	2	0.05238	---	---	---
IN	2.9000	07/20/2009	<3	---	---	---	---
IN	2.1190	10/12/2009	<3	---	---	---	---
IN	2.1860	02/21/2010	<3	---	---	---	---

Pollutant: ZINC		Reporting Limit: 5.0		Sample Number: 12	
Coefficient of Variation: 0.3		Reasonable Potential Factor: 1.3			
Historical Average: 5.03844		RP Historical Average: 6.549972			
Assimilative Capacity:		Acute	Chronic	Health	
Pounds per day		9.29611 S	---	---	
Exceedence ug/L		289.52	---	---	
RP ug/L		222.71	---	---	

***** INDIVIDUAL RESULTS *****

Flag	Daily Flow	Date	Concentration	Mass	Exceedence or Reasonable Potential and Basis		
					Acute	Chronic	Health
IN	3.8500	04/11/2006	120	3.85308	---	---	---
IN	3.8500	10/16/2006	131	4.20628	---	---	---
IN	1.8420	08/13/2007	131	2.01246	---	---	---
IN	2.0820	10/22/2007	170	2.95186	---	---	---
IN	2.5640	02/11/2008	160	3.4214	---	---	---
IN	4.6940	04/06/2008	103	4.03224	---	---	---
IN	2.2700	10/19/2008	204	3.86209	---	---	---
IN	2.2400	01/26/2009	244	4.55831	---	---	---
IN	3.1400	05/04/2009	196	5.13277	---	---	---
IN	2.9000	07/20/2009	112	2.70883	---	---	---

IN	2.1860	02/21/2010	137	2.49768	---	---	---
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8/16/2010

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 16/Aug/2005 - 16/Aug/2010 period



Facility Name: BRUNSWICK

NPDES: ME0100102

Test Date	Monthly (Flow MGD)	Daily	Total Test Number	Test # By Group						Clean	Hg
				M	V	BN	P	O	A		
04/11/2006	NR	NR	14	8	0	0	0	6	0	F	0
10/16/2006	NR	NR	12	7	0	0	0	5	0	F	0
08/13/2007	2.04	1.84	10	8	0	0	0	2	0	F	0
10/22/2007	2.06	2.08	10	8	0	0	0	2	0	F	0
02/11/2008	3.19	2.56	13	9	0	0	0	4	0	F	0
04/06/2008	4.11	4.69	133	13	28	46	25	10	11	F	0
10/19/2008	2.68	2.27	13	9	0	0	0	4	0	F	0
01/26/2009	2.43	2.24	13	9	0	0	0	4	0	F	0
05/04/2009	3.03	3.14	12	9	0	0	0	3	0	F	0
07/20/2009	3.65	2.90	10	8	0	0	0	2	0	F	0
10/12/2009	2.24	2.12	10	8	0	0	0	2	0	F	0
02/21/2010	2.83	2.19	10	8	0	0	0	2	0	F	0

A - Acid O - Others P - Pesticides
 BN - Base Neutral M - Metals V - Volatiles

8/16/2010

FACILITY CHEMICAL DATA REPORT

Data Date Range: 16/Aug/2005 - 16/Aug/2010

Showing all data

Facility name: **BRUNSWICK**Permit Number: **ME0100102**

Parameter	Test date	Result (ug/l)	Lsthan
Parameter: 1,1,1-TRICHLOROETHANE	04/06/2008	2.000	Y
Parameter: 1,1,2,2-TETRACHLOROETHANE	04/06/2008	2.000	Y
Parameter: 1,1,2-TRICHLOROETHANE	04/06/2008	2.000	Y
Parameter: 1,1-DICHLOROETHANE	04/06/2008	2.000	Y
Parameter: 1,1-DICHLOROETHYLENE	04/06/2008	2.000	Y
Parameter: 1,2-(O)DICHLOROBENZENE	04/06/2008	2.000	Y
Parameter: 1,2,4-TRICHLOROBENZENE	04/06/2008	2.000	Y
Parameter: 1,2-DICHLOROETHANE	04/06/2008	2.000	Y
Parameter: 1,2-DICHLOROPROPANE	04/06/2008	2.000	Y
Parameter: 1,2-DIPHENYLHYDRAZINE	04/06/2008	2.000	Y
Parameter: 1,2-TRANS-DICHLOROETHANE	04/06/2008	2.000	Y
Parameter: 1,3-(M)DICHLOROBENZENE	04/06/2008	2.000	Y
Parameter: 1,3-DICHLOROPROPYLENE	04/06/2008	2.000	Y
Parameter: 1,4-(P)DICHLOROBENZENE	04/06/2008	2.000	Y
Parameter: 2,4,6-TRICHLOROPHENOL	04/06/2008	2.000	Y
Parameter: 2,4-DICHLOROPHENOL	04/06/2008	3.000	Y
Parameter: 2,4-DIMETHYLPHENOL	04/06/2008	5.000	Y
Parameter: 2,4-DINITROPHENOL	04/06/2008	5.000	Y
	04/06/2008	5.000	Y

Parameter: 2,4-DINITROTOLUENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: 2,6-DINITROTOLUENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: 2-CHLOROETHYLVINYL ET	Test date	Result (ug/l)	Lsthan
	04/06/2008	15.000	Y
Parameter: 2-CHLORONAPHTHALENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: 2-CHLOROPHENOL	Test date	Result (ug/l)	Lsthan
	04/06/2008	5.000	Y
Parameter: 2-NITROPHENOL	Test date	Result (ug/l)	Lsthan
	04/06/2008	5.000	Y
Parameter: 3,3'-DICHLOROBENZIDIN	Test date	Result (ug/l)	Lsthan
	04/06/2008	16.500	Y
Parameter: 3,4-BENZO(B)FLUORANTH	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: 4,4'-DDD	Test date	Result (ug/l)	Lsthan
	04/06/2008	0.050	Y
Parameter: 4,4'-DDE	Test date	Result (ug/l)	Lsthan
	04/06/2008	0.050	Y
Parameter: 4,4'-DDT	Test date	Result (ug/l)	Lsthan
	04/06/2008	0.050	Y
Parameter: 4,6-DINITRO-O-CRESOL	Test date	Result (ug/l)	Lsthan
	04/06/2008	5.000	Y
Parameter: 4-BROMOPHENYLPHENYL	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: 4-CHLOROPHENYL PHENY	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: 4-NITROPHENOL	Test date	Result (ug/l)	Lsthan
	04/06/2008	5.000	Y
Parameter: A-BHC	Test date	Result (ug/l)	Lsthan
	04/06/2008	0.200	Y
Parameter: ACENAPHTHENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: ACENAPHTHYLENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: ACROLEIN	Test date	Result (ug/l)	Lsthan
	04/06/2008	500.000	Y
Parameter: ACRYLONITRILE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: A-ENDOSULFAN	Test date	Result (ug/l)	Lsthan
	04/06/2008	0.050	Y

Parameter:	Test date	Result (ug/l)	Lsthan
ALDRIN	04/06/2008	0.150	Y
Parameter:	Test date	Result (ug/l)	Lsthan
ALUMINUM	02/11/2008	70.000	N
	04/06/2008	86.000	N
	10/19/2008	78.000	N
	01/26/2009	301.000	N
	05/04/2009	159.000	N
Parameter:	Test date	Result (ug/l)	Lsthan
AMMONIA	04/11/2006	10100.000	N
	10/16/2006	1400.000	N
	08/13/2007	100.000	N
	10/22/2007	500.000	Y
	02/11/2008	500.000	N
	04/06/2008	900.000	N
	10/19/2008	400.000	N
	01/26/2009	600.000	N
	05/04/2009	500.000	Y
	07/20/2009	100.000	N
	10/12/2009	2500.000	Y
	02/21/2010	100.000	N
Parameter:	Test date	Result (ug/l)	Lsthan
ANTHRACENE	04/06/2008	2.000	Y
Parameter:	Test date	Result (ug/l)	Lsthan
ANTIMONY	04/06/2008	2.000	Y
Parameter:	Test date	Result (ug/l)	Lsthan
ARSENIC	04/11/2006	4.000	Y
	10/16/2006	2.000	N
	08/13/2007	4.000	Y
	10/22/2007	4.000	Y
	02/11/2008	2.000	N
	04/06/2008	1.000	Y
	10/19/2008	2.000	N
	01/26/2009	3.000	N
	05/04/2009	2.000	N
	07/20/2009	5.000	N
	10/12/2009	2.000	N
	02/21/2010	5.000	Y
Parameter:	Test date	Result (ug/l)	Lsthan
B-BHC	04/06/2008	0.050	Y
Parameter:	Test date	Result (ug/l)	Lsthan
B-ENDOSULFAN	04/06/2008	0.050	Y
Parameter:	Test date	Result (ug/l)	Lsthan
BENZENE	04/06/2008	2.000	Y
Parameter:	Test date	Result (ug/l)	Lsthan
BENZIDINE	04/06/2008	20.000	Y
Parameter:	Test date	Result (ug/l)	Lsthan
BENZO(A)ANTHRACENE	04/06/2008	2.000	Y

Parameter:	Test date	Result (ug/l)	Lsthan
BENZO(A)PYRENE	04/06/2008	2.000	Y
BENZO(G,H,I)PERYLENE	04/06/2008	2.000	Y
BENZO(K)FLUORANTHENE	04/06/2008	2.000	Y
BERYLLIUM	04/06/2008	0.200	Y
BIS(2-CHLOROETHOXY)M	04/06/2008	2.000	Y
BIS(2-CHLOROETHYL)ETH	04/06/2008	2.000	Y
BIS(2-CHLOROISOPROPYL)	04/06/2008	2.000	Y
BIS(2-ETHYLHEXYL)PHTH.	04/06/2008	10.000	N
BROMOFORM	04/06/2008	2.000	Y
BUTYLBENZYL PHTHALATE	04/06/2008	2.000	Y
CADMIUM	04/11/2006	0.200	N
	10/16/2006	0.400	N
	08/13/2007	0.500	N
	10/22/2007	0.300	N
	02/11/2008	0.600	Y
	04/06/2008	0.400	N
	10/19/2008	0.400	N
	01/26/2009	0.800	N
	05/04/2009	0.600	Y
	07/20/2009	0.500	N
	10/12/2009	0.500	N
	02/21/2010	0.200	N
CALCIUM	04/06/2008	20000.000	N
CARBON TETRACHLORIDE	04/06/2008	2.000	Y
CHEMICAL OXYGEN DEMAND	04/11/2006	84000.000	N
	10/16/2006	82000.000	N
CHLORDANE	04/06/2008	0.100	Y
CHLOROBENZENE	04/06/2008	2.000	Y
CHLORODIBROMOMETHANE	04/06/2008	2.000	Y

Parameter: CHLOROETHANE	04/06/2008	2.000	Y
	Test date	Result (ug/l)	Lsthan
Parameter: CHLOROFORM	04/06/2008	2.000	Y
	Test date	Result (ug/l)	Lsthan
Parameter: CHROMIUM	04/06/2008	2.000	Y
	Test date	Result (ug/l)	Lsthan
Parameter: CHRYSENE	04/11/2006	5.000	Y
	10/16/2006	3.000	N
	08/13/2007	2.000	N
	10/22/2007	5.000	Y
	02/11/2008	5.000	Y
	04/06/2008	2.000	Y
	10/19/2008	5.000	Y
	01/26/2009	2.000	N
	05/04/2009	5.000	Y
	07/20/2009	5.000	Y
	10/12/2009	5.000	Y
	02/21/2010	2.000	N
	Test date	Result (ug/l)	Lsthan
	Parameter: COPPER	04/06/2008	2.000
Test date		Result (ug/l)	Lsthan
04/11/2006		27.000	N
10/16/2006		32.000	N
08/13/2007		12.000	N
10/22/2007		18.000	N
02/11/2008		16.000	N
04/06/2008		12.000	N
10/19/2008		33.000	N
01/26/2009		39.000	N
05/04/2009		34.000	N
07/20/2009		7.000	N
10/12/2009		28.000	N
02/21/2010		28.000	N
Test date	Result (ug/l)	Lsthan	
Parameter: CYANIDE	02/11/2008	3.000	N
	04/06/2008	4.000	N
	10/19/2008	2.000	N
	01/26/2009	5.000	Y
	05/04/2009	5.000	Y
	Test date	Result (ug/l)	Lsthan
Parameter: D-BHC	04/06/2008	0.050	Y
Parameter: DIBENZO(A,H)ANTHRACE	Test date	Result (ug/l)	Lsthan
Parameter: DICHLOROBROMOMETHAI	04/06/2008	2.000	Y
	Test date	Result (ug/l)	Lsthan
Parameter: DIELDRIN	04/06/2008	2.000	Y
	Test date	Result (ug/l)	Lsthan
Parameter: DIETHYL PHTHALATE	04/06/2008	0.050	Y
	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y

Parameter:	Test date	Result (ug/l)	Lsthan
DIMETHYL PHTHALATE	04/06/2008	2.000	Y
DI-N-BUTYL PHTHALATE	04/06/2008	2.000	Y
DI-N-OCTYL PHTHALATE	04/06/2008	2.000	Y
ENDOSULFAN SULFATE	04/06/2008	0.100	Y
ENDRIN	04/06/2008	0.050	Y
ENDRIN ALDEHYDE	04/06/2008	0.050	Y
ETHYLBENZENE	04/06/2008	2.000	Y
FLUORANTHENE	04/06/2008	2.000	Y
FLUORENE	04/06/2008	2.000	Y
G-BHC	04/06/2008	0.150	Y
HEPTACHLOR	04/06/2008	0.150	Y
HEPTACHLOR EPOXIDE	04/06/2008	0.100	Y
HEXACHLOROBENZENE	04/06/2008	2.000	Y
HEXACHLOROBUTADIENE	04/06/2008	1.000	Y
HEXACHLOROCYCLOPENT	04/06/2008	2.000	Y
HEXACHLOROETHANE	04/06/2008	2.000	Y
INDENO(1,2,3-CD)PYREN	04/06/2008	2.000	Y
ISOPHORONE	04/06/2008	2.000	Y
LEAD	04/06/2008	2.000	Y
	04/11/2006	1.000	N
	10/16/2006	3.000	N
	08/13/2007	4.000	N
	10/22/2007	1.000	N
	02/11/2008	2.000	N
	04/06/2008	1.000	Y
	10/19/2008	1.000	N

	01/26/2009	3.000	Y
	05/04/2009	2.000	N
	07/20/2009	3.000	Y
	10/12/2009	3.000	Y
	02/21/2010	3.000	Y
Parameter: MAGNESIUM	Test date	Result (ug/l)	Lsthan
	04/06/2008	2800.000	N
Parameter: MERCURY	Test date	Result (ug/l)	Lsthan
	01/25/2006	0.027	N
	04/12/2006	0.028	N
	07/12/2006	0.061	N
	10/17/2006	0.018	N
	01/09/2007	0.051	N
	04/24/2007	0.014	N
	08/27/2007	0.020	N
	10/23/2007	0.021	N
	02/12/2008	0.029	N
	04/07/2008	0.007	N
	10/20/2008	0.014	N
	01/27/2009	0.023	N
	05/05/2009	0.018	N
	07/21/2009	0.014	N
	10/13/2009	0.013	N
	02/22/2010	0.014	N
Parameter: METHYL BROMIDE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: METHYL CHLORIDE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: METHYLENE CHLORIDE	Test date	Result (ug/l)	Lsthan
	04/06/2008	5.000	Y
Parameter: NAPHTHALENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: NICKEL	Test date	Result (ug/l)	Lsthan
	04/11/2006	2.000	N
	10/16/2006	3.000	N
	08/13/2007	3.000	N
	10/22/2007	5.000	Y
	02/11/2008	3.000	N
	04/06/2008	3.000	N
	10/19/2008	3.000	N
	01/26/2009	2.000	N
	05/04/2009	4.000	N
	07/20/2009	3.000	N
	10/12/2009	2.000	N
	02/21/2010	2.000	N
Parameter: NITRATE-N	Test date	Result (ug/l)	Lsthan
	04/11/2006	19900.000	N
	10/16/2006	32900.000	N
Parameter: NITRITE-N	Test date	Result (ug/l)	Lsthan
	04/11/2006	790.000	N

Parameter:	Test date	Result (ug/l)	Lsthan
NITROBENZENE	04/06/2008	2.000	Y
N-NITROSODIMETHYLAMI	04/06/2008	1.000	Y
N-NITROSODI-N-PROPYLA	04/06/2008	2.000	Y
N-NITROSODIPHENYLAMI	04/06/2008	2.000	Y
PCB-1016	04/06/2008	0.300	Y
PCB-1221	04/06/2008	0.300	Y
PCB-1232	04/06/2008	0.300	Y
PCB-1242	04/06/2008	0.300	Y
PCB-1248	04/06/2008	0.300	Y
PCB-1254	04/06/2008	0.300	Y
PCB-1260	04/06/2008	0.200	Y
P-CHLORO-M-CRESOL	04/06/2008	5.000	Y
PENTACHLOROPHENOL	04/06/2008	10.000	Y
PHENANTHRENE	04/06/2008	2.000	Y
PHENOL	04/06/2008	5.000	Y
PHOSPHORUS	04/11/2006	3100.000	N
	10/16/2006	2200.000	N
PYRENE	04/06/2008	2.000	Y
SELENIUM	04/06/2008	1.000	N
SILVER	04/11/2006	1.000	Y
	08/13/2007	1.000	Y
	10/22/2007	1.000	Y
	02/11/2008	1.000	Y
	04/06/2008	0.300	Y
	10/19/2008	1.000	Y

	01/26/2009	1.000	Y
	05/04/2009	1.000	Y
	07/20/2009	1.000	Y
	10/12/2009	1.000	Y
	02/21/2010	1.000	Y
Parameter: TETRACHLOROETHYLENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: THALLIUM	Test date	Result (ug/l)	Lsthan
	04/06/2008	1.000	Y
Parameter: TOLUENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: TOXAPHENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	1.000	Y
Parameter: TRICHLOROETHYLENE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: VINYL CHLORIDE	Test date	Result (ug/l)	Lsthan
	04/06/2008	2.000	Y
Parameter: ZINC	Test date	Result (ug/l)	Lsthan
	04/11/2006	120.000	N
	10/16/2006	131.000	N
	08/13/2007	131.000	N
	10/22/2007	170.000	N
	02/11/2008	160.000	N
	04/06/2008	103.000	N
	10/19/2008	204.000	N
	01/26/2009	244.000	N
	05/04/2009	196.000	N
	07/20/2009	112.000	N
	10/12/2009	175.000	N
	02/21/2010	137.000	N

ATTACHMENT C

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEMORANDUM

DATE: October 2008

TO: Interested Parties

FROM: Dennis Merrill, DEP

SUBJECT: DEP's system for evaluating toxicity from multiple discharges

Following the requirements of DEP's rules, Chapter 530, section 4(F), the Department is evaluating discharges of toxic pollutants into a freshwater river system in order to prevent cumulative impacts from multiple discharges. This is being through the use of a computer program known internally as "DeTox". The enclosed package of information is intended to introduce you to this system.

Briefly, the DeTox program evaluates each wastewater facility within a watershed in three different ways in order to characterize its effluent: 1) the facility's past history of discharges, 2) its potential toxicity at the point of discharge on an individual basis, and 3) the facility's contribution to cumulative toxicity within a river segment in conjunction with other facilities. The value that is most protective of water quality becomes the value that is held in the DeTox system as an allocation for the specific facility and pollutant.

The system is not static and uses a five-year "rolling" data window. This means that, over time, old test results drop off and newer ones are added. The intent of this process is to maintain current, uniform facility data to estimate contributions to a river's total allowable pollutant loading prior to each permit renewal.

Many facilities are required to do only a relatively small amount of pollutant testing on their effluent. This means, statistically, the fewer tests done, the greater the possibility of effluent limits being necessary based on the facility's small amount of data. To avoid this situation, most facilities, especially those with low dilution factors, should consider conducting more than the minimum number of tests required by the rules.

Attached you will find three documents with additional information on the DeTox system:

- Methods for evaluating the effects of multiple discharges of toxic pollutants
- Working definitions of terms used in the DeTox system
- Reviewing DeTox Reports
- Prototype facility and pollutant reports

If you have questions as you review these, please do not hesitate to contact me at Dennis.L.Merrill@maine.gov or 287-7788.

Maine Department of Environmental Protection

Methods for evaluating the effects of multiple discharges of toxic pollutants.

Reference: DEP Rules, Chapter 530, section 4(F)

To evaluate discharges of toxic pollutants into a freshwater river system and prevent cumulative impacts from multiple discharges, DEP uses a computer program called "DeTox" that functions as a mathematical evaluation tool.

It uses physical information about discharge sources and river conditions on file with the Department, established water quality criteria and reported effluent test information to perform these evaluations. Each toxic pollutant and associated water quality criterion for acute, chronic and/or human health effects is evaluated separately.

Each facility in a river drainage area has an assigned position code. This "address" is used to locate the facility on the river segment and in relation to other facilities and tributary streams. All calculations are performed in pounds per day to allow analysis on a mass balance. Pollutants are considered to be conservative in that once in the receiving water they will not easily degrade and have the potential to accumulate.

The process begins with establishing an assimilative capacity for each pollutant and water quality criterion at the most downstream point in the river segment. This calculation includes set-aside amounts for background and reserve quantities and assumed values for receiving water pH, temperature and hardness. The resulting amount of assimilative capacity is available for allocation among facilities on the river.

Each facility is evaluated to characterize its past discharge quantities. The historical discharge, in pounds per day, is figured using the average reported concentration and the facility's permitted flow. As has been past practice, a reasonable potential (RP) factor is used as a tool to estimate the largest discharge that may occur with a certain degree of statistical certainty. The RP factor is multiplied by the historical average to determine an allocation based on past discharges. The RP factor is also multiplied by the single highest test to obtain a maximum day estimate. Finally, the direct average without RP adjustment is used to determine the facility's percent contribution to the river segment in comparison to the sum of all discharges of the pollutant. This percent multiplied by the total assimilative capacity becomes the facility's discharge allocation used in evaluations of the segment loadings.

Additionally, individual facility discharges are evaluated as single sources, as they have been in the past to determine if local conditions are more limiting than a segment evaluation.

With all of this information, facilities are evaluated in three ways. The methods are:

1. The facility's past history. This is the average quantity discharged during the past five years multiplied by the applicable RP factor. This method is often the basis for an allocation when the discharge quantity is relatively small in comparison to the water quality based allocation.
2. An individual evaluation. This assumes no other discharge sources are present and the allowable quantity is the total available assimilative capacity. This method may be used when a local condition such as river flow at the point of discharge is the limiting factor.
3. A segment wide evaluation. This involves allocating the available assimilative capacity within a river segment based on a facility's percent of total past discharges. This method would be used when multiple discharges of the same pollutant to the same segment and the available assimilative capacity is relatively limited.

The value that is most protective of water quality becomes the facility's allocation that is held in the system for the specific facility and pollutant. It is important to note that the method used for allocation is facility and pollutant specific and different facilities on the same segment for the same pollutant can have different methods used depending on their individual situations.

Discharge amounts are always allocated to all facilities having a history of discharging a particular pollutant. This does not mean that effluent limits will be established in a permit. Limits are only needed when past discharge amounts suggest a reasonable potential to exceed a water quality based allocation, either on an individual or segment basis. Similar to past practices for single discharge evaluations, the single highest test value is multiplied by a RP factor and if product is greater than the water quality allowance, an effluent limit is established. It is important to remember an allocation is "banking" some assimilative capacity for a facility even if effluent limits are not needed.

Evaluations are also done for each tributary segment with the sum of discharge quantities in tributaries becoming a "point source" to the next most significant segment. In cases where a facility does not use all of its assimilative capacity, usually due to a more limiting individual water quality criterion, the unused quantity is rolled downstream and made available to other facilities.

The system is not static and uses a five-year rolling data window. Over time, old tests drop off and newer ones are added on. These changes cause the allocations and the need for effluent limits to shift over time to remain current with present conditions. The intent is to update a facility's data and relative contribution to a river's total assimilative capacity prior to each permit renewal. Many facilities are required to do only minimal testing to characterize their effluents. This creates a greater degree of statistical uncertainty about the true long-term quantities. Accordingly, with fewer tests the RP factor will be larger and result in a greater possibility of effluent limits being necessary. To avoid this situation, most facilities, especially those with relatively low dilution factors, are encouraged to conduct more than a minimum number of tests. It is generally to a facility's long-term benefit to have more tests on file since their RP factor will be reduced.

Maine Department of Environmental Protection

Working Definitions of Terms Used in the DeTox System.

Allocation. The amount of pollutant loading set aside for a facility. Separate amounts are set for each *water quality criterion*. Each pollutant having a history of being discharged will receive an allocation, but not all allocations become *effluent limits*. Allocation may be made in three ways: *historical allocation, individual allocation or segment allocation*.

Assimilative capacity. The amount of a pollutant that river segment can safely accept from point source discharges. It is determined for the most downstream point in a river segment using the *water quality criterion* and river flow. Separate capacities are set for acute, chronic and human health criteria as applicable for each pollutant. Calculation of this capacity includes factors for *reserve* and *background* amounts.

Background. A concentration of a pollutant that is assumed to be present in a receiving water but not attributable to discharges. By rule, this is set as a rebuttable presumption at 10% of the applicable *water quality criterion*.

Effluent limit. A numeric limit in a discharge permit specifically restricting the amount of a pollutant that may be discharged. An effluent limit is set only when the highest discharge, including an adjustment for *reasonable potential*, is greater than a facility's water quality based *allocation* for a pollutant.

Historical allocation (or RP history). One of three ways of developing an *allocation*. The facility's average history of discharges, in pounds at design flow, is multiplied by the appropriate *reasonable potential* factor. An allocation using this method does not become an *effluent limit*.

Historical discharge percentage. For each pollutant, the average discharge concentration for each facility in a segment is multiplied by the permitted flow (without including a *reasonable potential* factor). The amounts for all facilities are added together and a percent of the total is figured for each facility. When a facility has no detectable concentrations, that pollutant is assumed to be not present and it receives no percentage.

Individual allocation. One of three ways of developing an *allocation*. The facility's single highest discharge on record multiplied by the appropriate *reasonable potential* factor is compared to a water quality based quantity with an assumption that the facility is the only point source to that receiving water. If the RP-adjusted amount is larger, the water quality amount may become an *effluent limit*.

Less than. A qualification on a laboratory report indicating the concentration of a pollutant was below a certain concentration. Such a result is evaluated as being one half of the Department's reporting limit in most calculations.

Reasonable potential (RP). A statistical method to determine the highest amount of a pollutant likely to be present at any time based on the available test results. The method produces a value or RP factor that is multiplied by test results. The method relies on an EPA guidance document, and considers the coefficient of variation and the number of tests. Generally, the fewer number of tests, the higher the RP factor.

Reserve. An assumed concentration of a pollutant that set aside to account for non-point source of a pollutant and to allow new discharges of a pollutant. By rule this is set at 15% of the applicable *water quality criterion*.

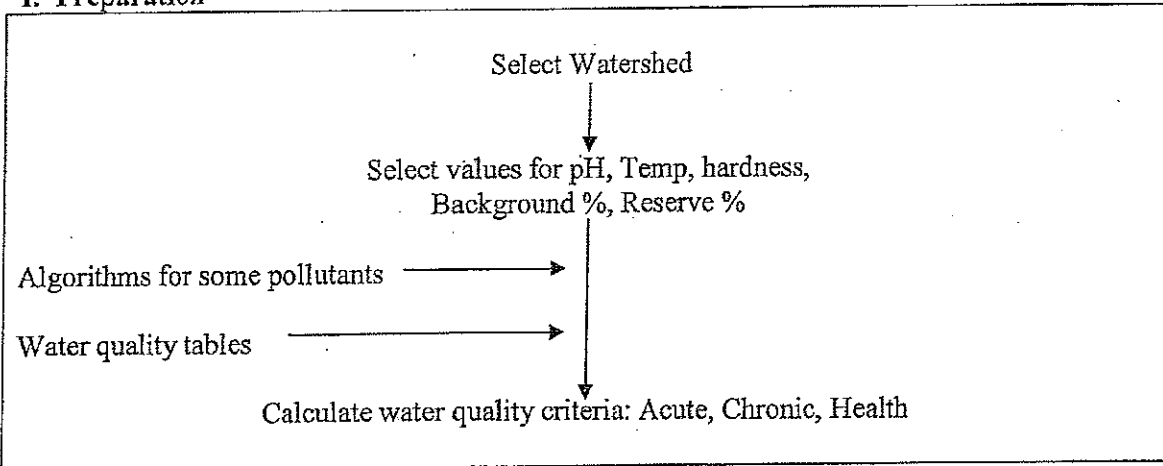
Segment allocation. One of three ways of developing an *allocation*. The amount is set by multiplying a facility's *historical discharge percentage* for a specific pollutant by the *assimilative capacity* for that pollutant and criterion. A facility will have different allocation percentages for each pollutant. This amount may become an *effluent limit*.

Tributary. A stream flowing into a larger one. A total pollutant load is set by adding the all facilities *allocations* on the tributary and treating this totaled amount as a "point source" to the next larger segment.

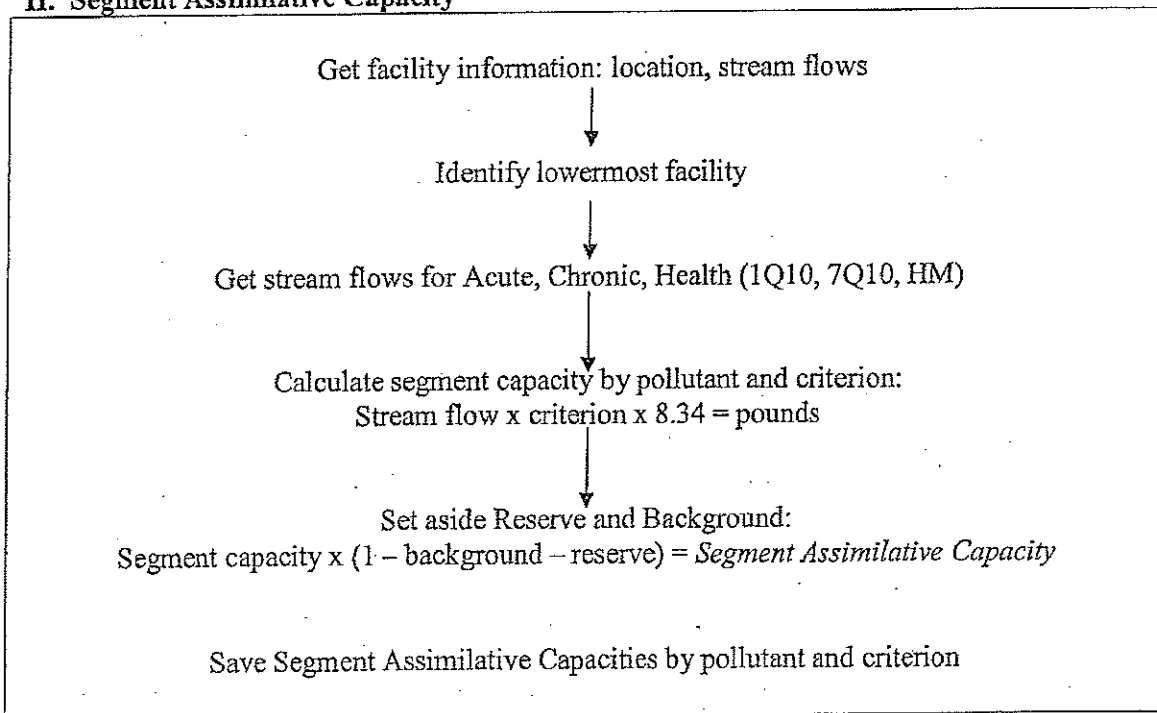
Water quality criteria. Standards for acceptable in-stream or ambient levels of pollutants. These are established in the Department's Chapter 584 and are expressed as concentrations in ug/L. There may be separate standards for acute and chronic protection aquatic life and/or human health. Each criterion becomes a separate standard. Different stream flows are used in the calculation of each.

Maine Department of Environmental Protection
General Processing Steps in "DeTox"

I. Preparation

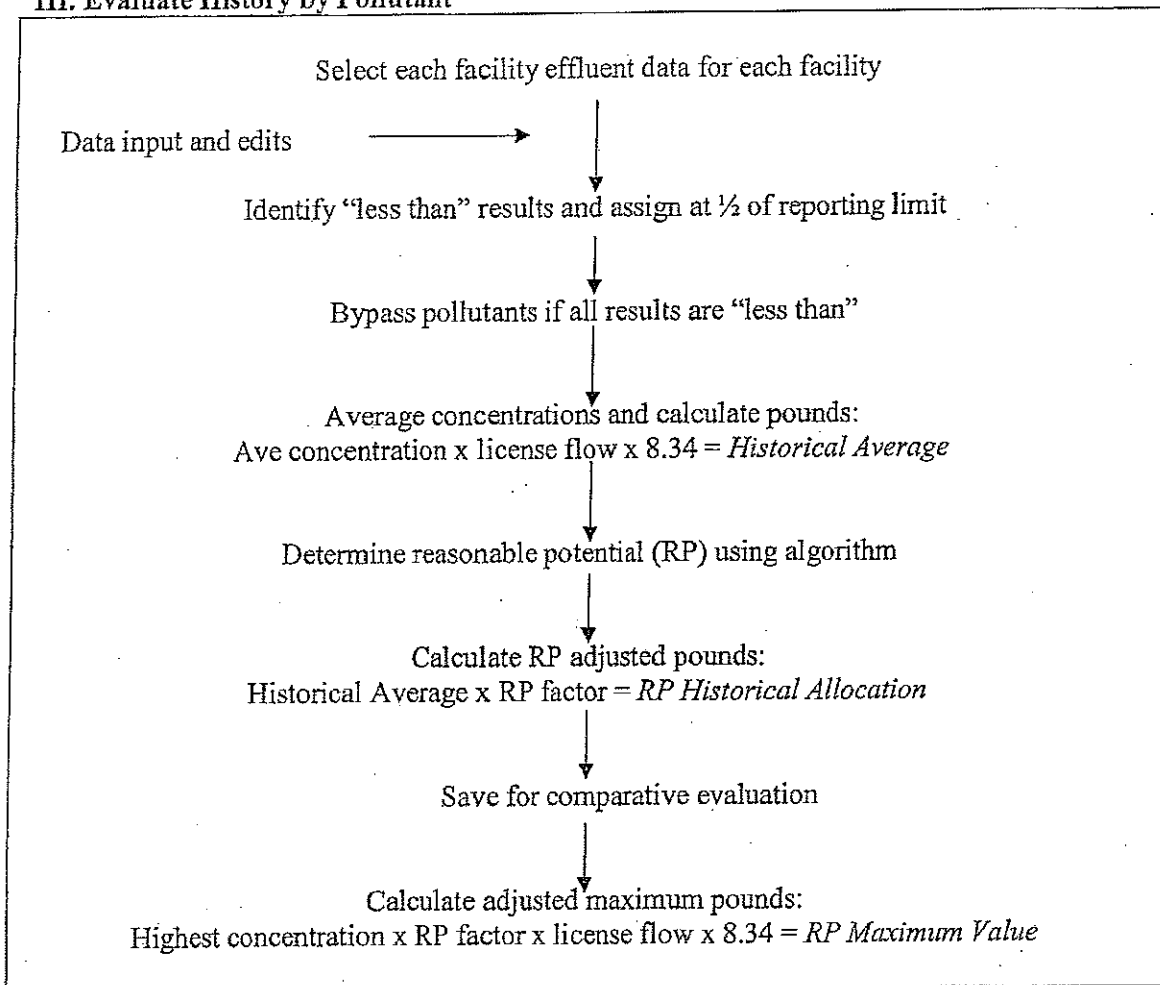


II. Segment Assimilative Capacity

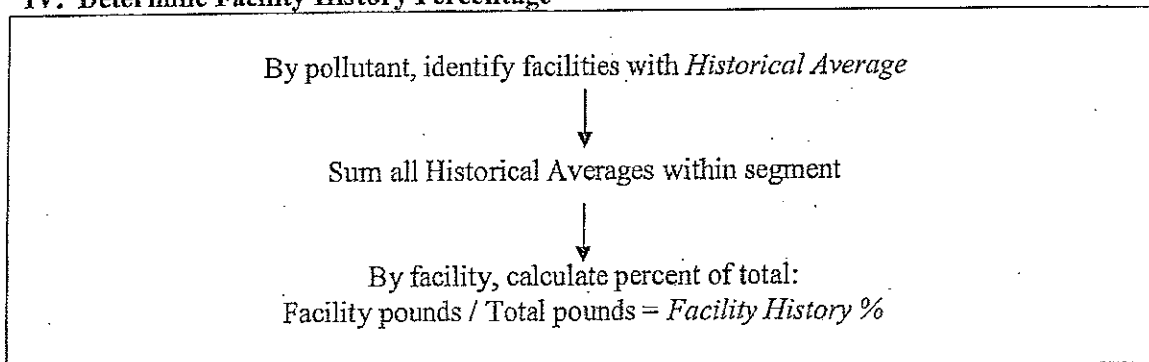


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

III. Evaluate History by Pollutant

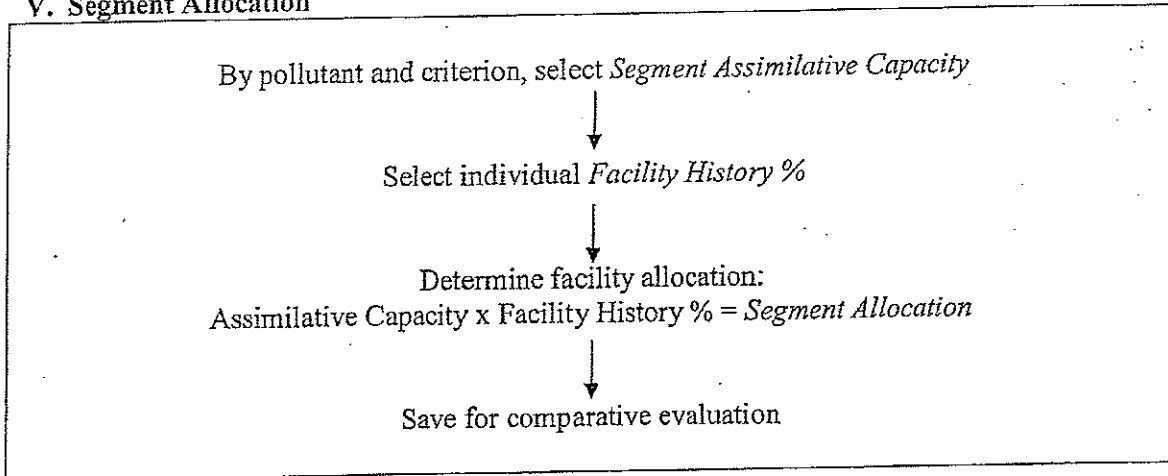


IV. Determine Facility History Percentage

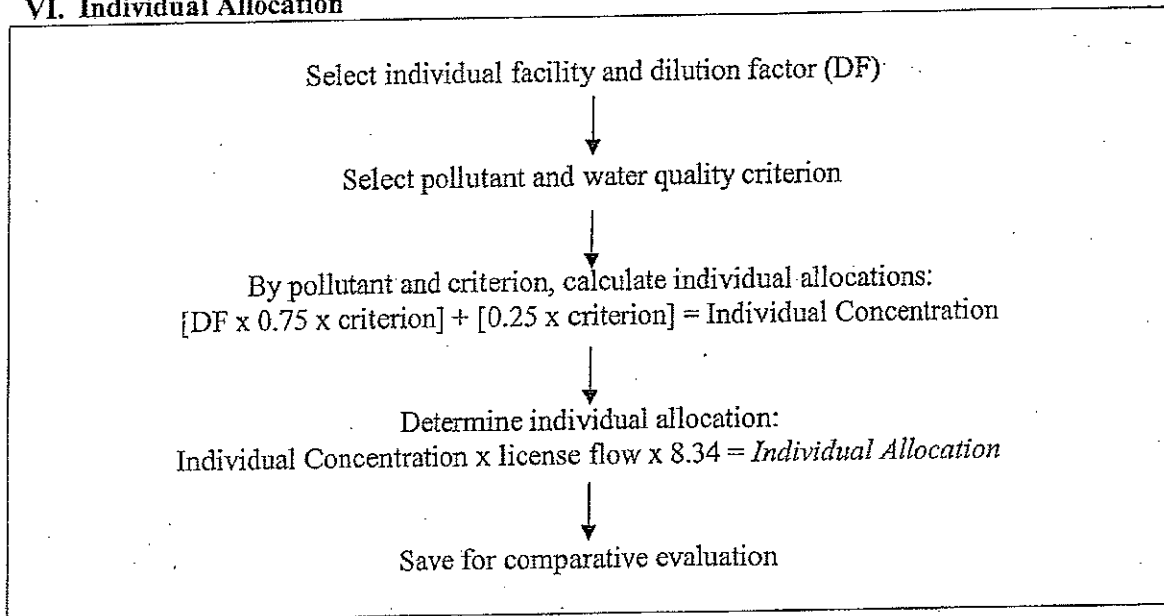


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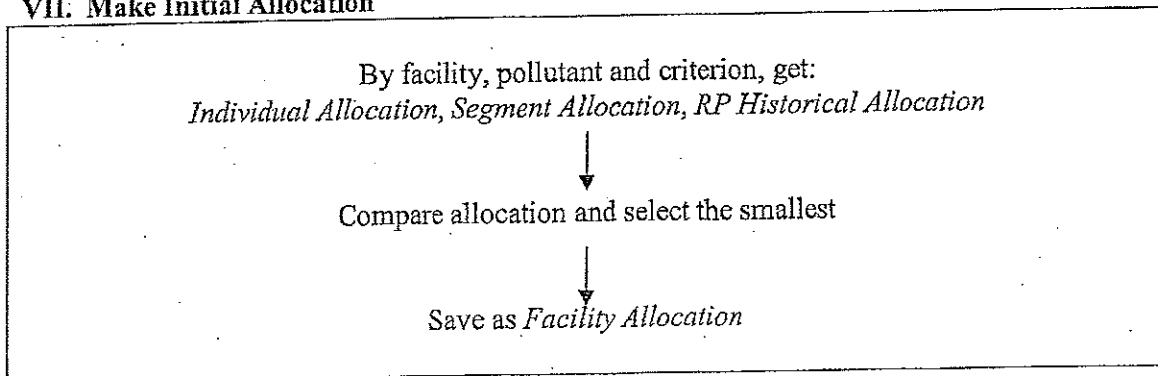
V. Segment Allocation



VI. Individual Allocation

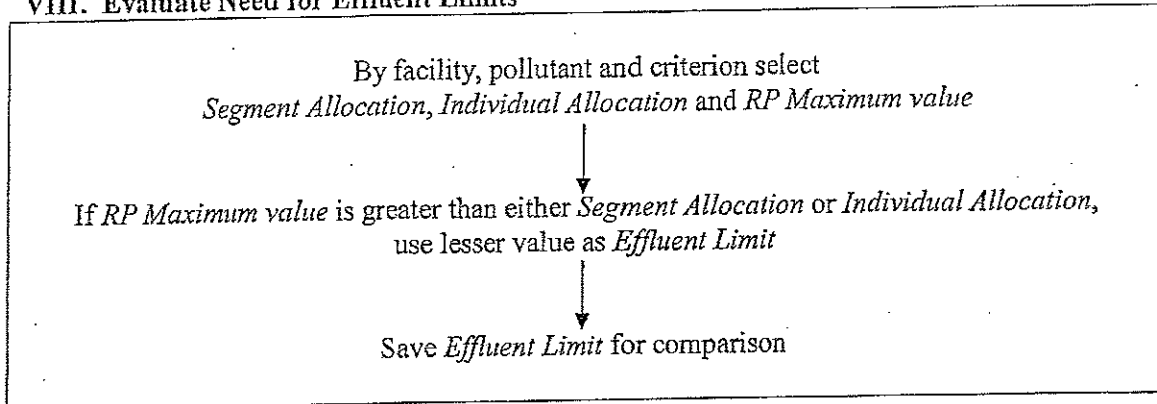


VII. Make Initial Allocation

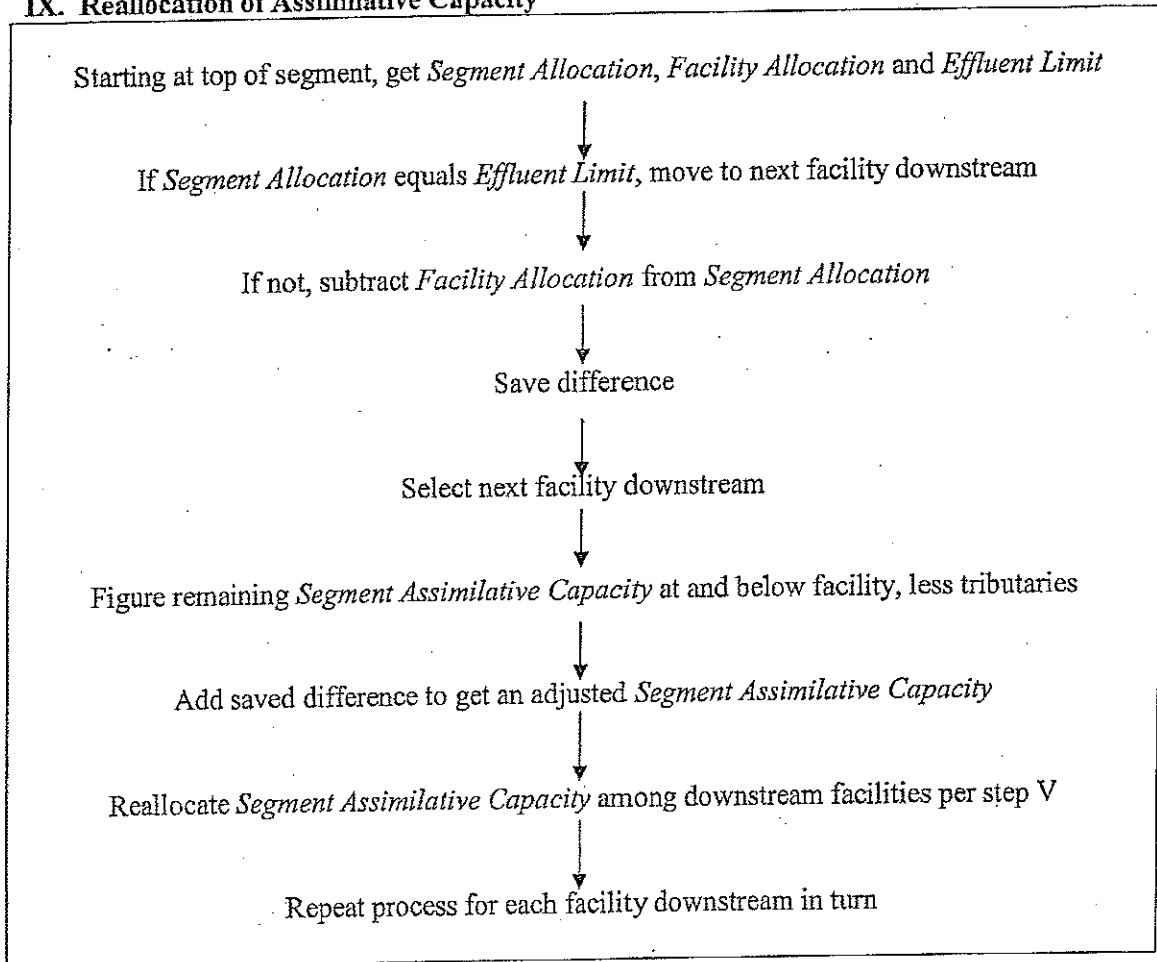


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VIII. Evaluate Need for Effluent Limits



IX. Reallocation of Assimilative Capacity



MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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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).

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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 of 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 MAINTENANCE 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

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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.

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- (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.

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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.

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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

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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).

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- (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.

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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 contaminants 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.

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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.

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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.
