October 21, 2008

Mr. Gardner Rolfe, Superintendent
Town of Baileyville
P.O. Box 40
Baileyville, ME 04694

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101320
Maine Waste Discharge License (WDL) Application #W002649-5L-G-R

FINAL PERMIT/LICENSE-TOWN OF BAILEYVILLE

Dear Mr. Rolfe:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL which was approved by the Department of Environmental Protection. Please read the permit/license and its attached conditions carefully. You must follow the conditions in the permit/license 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 the matter, please feel free to call me at 287-7658.

Sincerely,

Phyllis Arnold Rand
Division of Water Quality Management
Bureau of Land and Water Quality

Enclosure
cc: Tanya Hovell, DEP/EMRO
Roger Janson, USEPA

IN THE MATTER OF

TOWN OF BAILEYVILLE	)	MAINE POLLUTANT DISCHARGE
PUBLICLY OWNED TREATMENT WORKS	)	ELIMINATION SYSTEM PERMIT
BAILEYVILLE, WASHINGTON COUNTY	)	AND
ME0101320	)	WASTE DISCHARGE LICENSE
W002649-5L-G-R **APPROVAL**	)	**RENEWAL**

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 (the Department) has considered the application of the TOWN OF BAILEYVILLE (TOWN), with its supportive data, agency review comments, and other related material on file and finds the following facts:

APPLICATION SUMMARY

The Town has applied to the Department for renewal of MEPDES Permit #ME0101320/ Waste Discharge License (WDL) #W002649-5L-F-R ("permit" hereinafter) which was issued on November 19, 2003 and is due to expire on November 19, 2008. The 11/19/03 permit authorized the discharge of up to a monthly average flow of 0.600 million gallons per day (MGD) of secondary treated sanitary waste water to the St. Croix River, Class C, in Baileyville, Maine.

PERMIT SUMMARY

This permitting action is <u>similar to</u> the November 19, 2003 permit in that it:

1. Carries forward the monthly average flow limit of 0.600 MGD.

2. Carries forward the monthly average, weekly average and daily maximum technology-based mass and concentration limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS).

3. Carries forward the daily maximum technology-based limits for total residual chlorine.

4. Carries forward the daily maximum technology-based concentration limit for settleable solids.

5. Carries forward the technology-based pH range limit.

PERMIT SUMMARY (cont'd)

6. Carries forward the requirement to maintain an up-to-date Operations and Maintenance Plan and a Wet Weather Flow Management Plan.

7. Carries forward the seasonal daily maximum concentration limitation for E. coli bacteria.

This permitting action is different from the November 19, 2003 permit in that it:

1. Establishes a more stringent monthly average water quality-based limitation for E. coli bacteria.

2. Increases dilution factors associated with the discharge from the permittee based on updated river flow data used in the calculations.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself 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, 38 MRSA Section 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 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 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.

ACTION

THEREFORE, the Department APPROVES the application of the TOWN OF BAILEYVILLE to discharge up to a monthly average flow of 0.600 million gallons per day (MGD) of secondary treated sanitary waste water to the St. Croix River, Class C, in Baileyville, Maine. The discharges shall be subject to the attached conditions and all applicable standards and regulations:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits," revised July 1, 2002.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. This permit expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS _24th_ DAY OF __October_ 2008.

COMMISSIONER OF ENVIRONMENTAL PROTECTION

BY:_____

David P. Littell, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application _____9/15/08_____.

Date of application acceptance _____9/16/08_____.

Date filed with Board of Environmental Protection ____10/28/08_____

This Order prepared by PHYLLIS A. RAND, BUREAU OF LAND AND WATER QUALITY
ME0101320 2008 10/28/08

SPECIAL COONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Beginning the effective date of the permit and lasting through permit expiration, the permittee is authorized to discharge secondary treated waste water to the St. Croix River. Such treated waste water discharges shall be limited and monitored by the permittee as specified below:

SECONDARY TREATED WASTE WATER - OUTFALL #001

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	0.600 MGD *[03]*	---	Report (MGD)	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
Biochemical Oxygen Demand (BOD_5) ***[00310]***	150 lbs/Day *[26]*	225 lbs/Day *[26]*	250 lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
BOD_5 Percent Removal (1) ***[81010]***	85 % *[23]*	---	---	---	---	---	1/Month *[01/30]*	Calculate *[CA]*
Total Suspended Solids (TSS) *[00530]*	150 lbs/Day *[26]*	225 lbs/Day *[26]*	250 lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
TSS Percent Removal (1) *[81011]*	85 % *[23]*	---	---	---	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 mL/L *[25]*	5/Week *[05/07]*	Grab *[GR]*
E. coli Bacteria (2) ***(May 15- September 30) [31633]***	---	---	---	126/100 mL *[13]*	---	949/100 mL *[13]*	1/Week *[01/07]*	Grab *[GR]*
Total Residual Chlorine (3) ***[50060]***	---	---	---	---	---	1.0 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
pH (Standard Units) *[00400]*	---	---	---	---	---	6.0-9.0 *[12]*	5/Week *[05/07]*	Grab *[GR]*

SPECIAL CONDITIONS

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

Footnotes:

Sampling Locations – Influent sampling for BOD_5 and TSS shall be sampled after the mechanical screening equipment and before grit removal. For the purposes of this permitting action, BOD_5 and TSS samples taken at this location will serve as the influent values for calculating percent removals for secondary treated waste water. Effluent receiving secondary treatment (Outfall #001) shall be sampled after the last treatment unit in the treatment process. Any change in sampling location must be reviewed and approved by the Department in writing.

Sampling and analysis must be conducted in accordance with; a) EPA-approved methods in Title 40, Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, c) as otherwise specified by the Department. Any laboratory that is subcontracted to analyze the Town's compliance samples are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules,* 10-144 CMR 263 (last amended February 13, 2000).

All detectable analytical test results shall be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department or as specified by other approved test methods. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the detection limit achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL is not acceptable and will be rejected by the Department. For mass, if the analytical result is reported as <Y or if a detectable result is less than a RL, report a <X lbs/day, where X is the parameter specific limitation established in the permit.

1. **Percent removal** - The treatment facility shall maintain a minimum of 85 percent removal of both BOD_5 and TSS. The percent removal shall be based on a monthly average calculation using influent and effluent concentrations. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility shall report "NODI-9" on the monthly Discharge Monitoring Report.

2. **E. coli bacteria** - Limits apply on a seasonal basis between May 15 and September 30 of each calendar year. The monthly average E. coli limitation is a **geometric mean** limitation and results shall be calculated and reported as such.

3. **Total Residual Chlorine** – Limitations and monitoring requirements for TRC are applicable whenever elemental chlorine or chlorine-based compounds are being utilized

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

to disinfect the discharge. The Department reserves the right to require disinfection on a year-round basis to protect the health and welfare of the public.

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.

3. The discharges shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated by the classification of the receiving waters.

4. Notwithstanding specific conditions of this permit the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. DISINFECTION

If chlorination is used as a means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized, followed by a dechlorination system if the total residual chlorine (TRC) limit cannot be met by dissipation in the detention tank. The TRC in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall be sufficient to leave a TRC concentration that will effectively reduce bacteria to levels below those specified in Special Condition A, *"Effluent Limitations and Monitoring Requirements."*

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a Maine **Grade II** Waste Water Treatment Plant Operator Certificate or Registered Maine Professional Engineer [P.E.] pursuant to *Sewerage Treatment Operators*, 32 M.R.S.A. §§ 4171-4182 and *Regulations for Wastewater Operator Certification*, 06-096 CMR 531 (effective May 8, 2006). All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

SPECIAL CONDITIONS

E. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the waste water collection and treatment system by a non-domestic source (user) shall not pass through or interfere with the operation of the treatment system.

F. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) The permittee's General Application for Waste Discharge Permit accepted for processing on 9/16/08, 2) only from Outfall #001. Discharges of waste water from any other point source(s) are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5) (Bypass) of this permit.

G. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, "Reporting Requirements," the permittee shall notify the Department of the following:

1. Any introduction of pollutants into the waste water collection and treatment system from an indirect discharger in a primary industrial category discharging process waste water; and

2. Any substantial change in the volume or character of pollutants being introduced into the waste water collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on:

   (a) the quality and quantity of waste water introduced to the waste water collection and treatment system; and

   (b) any anticipated impact caused by the change in the quantity or quality of the waste water to be discharged from the treatment system.

H. WET WEATHER FLOW MANAGEMENT PLAN

The treatment facility staff shall maintain a Wet Weather Flow Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The facility's Wet Weather Flow Management Plan was last revised in 2004. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall.

SPECIAL CONDITIONS

H. WET WEATHER FLOW MANAGEMENT PLAN (cont'd)

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the permittee shall submit to the Department for review and approval, a new or revised Wet Weather Management Plan which conforms to Department guidelines for such plans. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events. **The**
permittee shall review their plan annually and record any necessary changes to keep the plan up-to-date.

I. OPERATION & MAINTENANCE (O&M) PLAN

This facility shall have a current written comprehensive Operation & Maintenance (O&M) Plan. The plan shall provide a systematic approach by which 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.

By December 31 of each year, **or within 90 days of any process changes or minor equipment upgrades,** the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the waste water treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and EPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

J. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

"Septage" shall mean 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. During the effective period of this permit, the permittee is authorized to receive and introduce into the treatment process or solids handling stream up to **a maximum of 1,500 gallons per day** of septage, subject to treatment processes following the required methods to be employed in accordance with the Septage Management Plan, submitted to the Department, and subject to the following terms and conditions:

1. This approval is limited to methods and plans described in the application and supporting documents. Any variations are subject to review and approval prior to implementation.

SPECIAL CONDITIONS

J. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

(cont'd)

2. At no time shall the addition of septage cause or contribute to effluent quality violations. If such conditions do exist, the introduction of septage into the treatment process or solids handling stream shall be suspended until effluent quality can be maintained.

3. The permittee shall maintain records which shall include, as a minimum, the following by date: volume of septage received, source of the septage (name of municipality), the hauler
transporting the septage, the dates and volume of septage added to the waste water treatment influent and test results.

4. The addition of septage into the treatment process or solids handling stream shall not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment process or solids handling facilities become overloaded, introduction of septage into the treatment process or solids handling stream shall be reduced or terminated in order to eliminate the overload condition.

5. Septage known to be harmful to the treatment processes shall not be accepted. Wastes which contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation shall be refused.

6. Holding tank waste water shall not be recorded as septage but should be reported in the treatment facility's influent flow.

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

On or before December 31 of each year ***[PCS code 95799]*** the permittee is required to file a statement with the Department describing the following:

1. Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

2. Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

3. Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

Further, the Department may require that annual WET or priority pollutant testing be re-instituted if it determines that there have been changes in the character of the discharge or if annual certifications described above are not submitted.

SPECIAL CONDITIONS

L. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the Department's compliance inspector (unless otherwise specified) at the following address:

Maine Department of Environmental Protection
Eastern Maine Regional Office
Division of Water Quality Management
106 Hogan Road
Bangor, Maine 04401

M. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to; 1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded, (2) require additional effluent and/or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

N. SEVERABILITY

In the event that any provision(s), 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

PERMIT NUMBER: **ME0101320**
LICENSE NUMBER: **W002649-5L-G-R**

NAME AND ADDRESS OF APPLICANT:

TOWN OF BAILEYVILLE
Publicly Owned Treatment Works
27 Broadway Street
Baileyville, ME 04694

COUNTY: **Washington County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

22 Elm Street
Baileyville, Maine 04694

RECEIVING WATER/CLASSIFICATION: **St. Croix River, Class C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Gardner Rolfe**
Superintendent
(207) 427-3328

1. APPLICATION SUMMARY

a. Application – The Town of Baileyville ("The Town" hereinafter) has submitted a complete and timely application to the Department for renewal of Maine Pollutant Discharge Elimination System (MEPDES) permit # ME0101320/Maine Waste Discharge License (WDL) # W002649-5L-F-R ("permit" hereinafter) which was issued on November 19, 2003 and is due to expire on November 19, 2008. The 11/19/03 permit authorized the discharge of up to a monthly average flow of 0.600 million gallons per day (MGD) of secondary treated sanitary waste water from the Baileyville Publicly Owned Treatment Works into the St. Croix River, Class C, in Baileyville, Maine.

1. APPLICATION SUMMARY (cont'd)

b. Source Description – The waste water treatment facility receives sanitary waste water from approximately 700 residential and commercial entities within the Town of Baileyville. See **Attachment A** of this Fact Sheet for a location map. The collection system is a separated system approximately 20 miles in length with six pump stations and no combined sewer overflows. The pump stations are equipped with electrical hook-ups such that back-up power can be provided by a portable generator. There are no significant industrial sources contributing waste water to the treatment facility. The facility is permitted to treat 1,500 gallons per day of septic tank waste.

c. Waste Water Treatment – The waste water treatment facility was upgraded in 2008. The upgrade included retrofitting the existing sludge drying beds with new HDPE dewatering tiles, a new greenhouse enclosure and a new sludge transfer connection to allow sludge to bypass the sludge drying beds and be trucked offsite. A new sludge transfer pump was also installed as part of the upgrade.

The waste water treatment facility provides a secondary level of treatment via a mechanical bar screen, a grit removal system, an oxidation ditch and two secondary clarifiers each measuring 40 feet in diameter. A previously unused secondary clarifier was converted into an aerated sludge tank in 2002. The permittee has onsite drying beds for sludge dewatering. Thickened waste activated sludge and dried sludge are trucked to Domtar Maine Corporation in Baileyville, Maine, for disposal.

The facility has two pipes used as chlorine contact chambers for seasonal disinfection. The effluent is chlorinated with sodium hypochlorite and dechlorinated with sodium bisulfite. The treated effluent is discharged to the St. Croix River via an outfall pipe measuring 18 inches in diameter and extending into the river for approximately 40 feet.

See **Attachment B** of this Fact Sheet for a schematic of the waste water treatment plant processes.

2. PERMIT SUMMARY

a. Terms and Conditions – This permitting action is similar to the previous permitting action in that it:

1. Carries forward the monthly average flow limit of 0.600 MGD.

2. Carries forward the monthly average, weekly average, and daily maximum technology-based mass and concentration limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS).

3. Carries forward the daily maximum water quality-based seasonal concentration limit for E. coli bacteria and the requirement to disinfect the effluent on a seasonal basis.

2. PERMIT SUMMARY (cont'd)

4. Carries forward the daily maximum technology-based limit for total residual chlorine.

5 Carries forward the daily maximum technology-based concentration limit for settleable solids.

6. Carries forward the technology-based pH range limit.

7. Carries forward the requirement to maintain an up-to-date Operations and Maintenance Plan and a Wet Weather Flow Management Plan.

This permitting action is different from the previous permitting action in that it:

1. Establishes a more stringent monthly average water quality-based limitation for E. coli bacteria.

2. Increases dilution factors associated with the discharge from the permittee based on updated river flow data.

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

June 17, 1997 – The Department issued WDL #W002649-59-C-R for a five-year term.

October 9, 1997 – The EPA issued NPDES permit #ME0101320 with the same limitations and monitoring requirements established in Department WDL #W002649-59-C-R issued on June 17, 1997.

June 27, 2000 – The Department issued a modification of the 10/09/97 WDL by establishing interim average and maximum concentration limits for mercury.

January 31, 2001 – The Department issued WDL modification #W002649-5L-D-M, increasing the monthly flow average from 0.30 MGD to 0.60 MGD and the corresponding biochemical oxygen demand (BOD5) and total suspended solids (TSS) mass limits due to the installation of 2.5 miles of additional collection system infrastructure and various upgrades of plant equipment at the waste water treatment facility.

October 3, 2001 – The Department issued combination MEPDES permit #ME0101320/WDL #W002649-5L-E-M that incorporated terms and conditions of the MEPDES permitting program. Upon issuance of the final MEPDES permit, the NPDES permit #ME0101320 last issued by the EPA on October 9, 1997 was superseded and all terms and conditions of the NPDES permit became null and void.

2. PERMIT SUMMARY (cont'd)

April 10, 2006 – The Department issued a modification of the 10/03/01 permit for testing requirements for the Surface Water Toxics Control Program.

September 16, 2008 – The Town of Baileyville filed a timely and complete application with the Department to renew their MEPDES permit.

3. CONDITIONS OF PERMITS

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

4. RECEIVING WATER STANDARDS

Maine law, 38 M.R.S.A., Section 467(13)(A)(4) indicates the St. Croix River at the point of discharge is classified as a Class C waterway. Maine law, 38 M.R.S.A., Section 465(4) describes standards for classification of Class C waters.

5. RECEIVING WATER CONDITIONS

The *2008 Maine Integrated Water Quality Report* published by the Department pursuant to Section 305(b) of the Federal Water Pollution Control Act, indicates that the St. Croix River at and below the point of discharge is attaining its Class C classification. It is noted that all freshwaters in the State of Maine are listed in the table entitled, *Category 5-C: Waters Impaired by Atmospheric Deposition of Mercury. Regional or National TMDL May Be Required*, of the 305(b) report. The impairment is the designated use of fishing (consumption) as Maine has a fish advisory due to elevated levels of mercury in fish tissue. See the discussion on mercury limitations in Section 6(h) of this fact sheet.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. Flow: The monthly average flow limitation of 0.600 MGD in the previous permitting action is being carried forward in this permitting action and is considered to be representative of the monthly average design flow for the waste water treatment facility.

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

A review of the DMR data for the period April 2005 – April 2008 indicates the following:

Flow

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.600	0.156 – 0.740	0.336
Daily Maximum	Report	0.198 – 2.500	0.985

b. Dilution Factors – Dilution factors associated with the discharge from the Town were derived in accordance with freshwater protocols established in Department Regulation Chapter 530, *Surface Water Toxics Control Program*, October 2005.

With a monthly flow limit of 0.600 MGD, the dilution calculations are based on the following formula:

$$\text{Dilution Factor} = \frac{\text{River flow(cfs)(Conv. Factor)} + \text{Discharge Flow(MGD)}}{\text{Discharge Flow(MGD)}}$$

Chronic: 7Q10 = 750 cfs[(1)] $\Rightarrow \frac{(750 \text{ cfs})(0.6464) + (0.600 \text{ MGD})}{(0.600 \text{ MGD})} = 809{:}1$

Acute: 1Q10 = 750 cfs $\Rightarrow \frac{(750 \text{ cfs})(0.6464) + (0.600 \text{ MGD})}{(0.600 \text{ MGD})} = 809{:}1$

Acute ¼ of 1Q10[(2)] = 176 cfs $\Rightarrow \frac{(176 \text{ cfs})(0.6464) + (0.600 \text{ MGD})}{(0.600 \text{ MGD})} = 190{:}1$

Harmonic Mean[(3)] = 1812 cfs $\Rightarrow \frac{(1812 \text{ cfs})(0.6464) + (0.600 \text{ MGD})}{(0.600 \text{ MGD})} = 1953{:}1$

Footnotes:

(1) Based on 7Q10 of 750 cfs at the Domtar Mill site. See **Attachment C** of this Fact Sheet that provides justification of the 7Q10 that was established for calculating applicable dilution factors and corresponding water quality-based limits at the Domtar Mill site.

(2) Chapter 530 (4)(B)(1) states that analyses using numeric acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The 1Q10 is the lowest one day flow over a ten-year recurrence interval. The regulation goes on to say that where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater

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

proportion of the stream design, up to including all of it. The Department has made the determination that the discharge does not receive rapid and complete mixing. Therefore, the default stream flow of ¼ of the 1Q10 is applicable in acute statistical evaluations.

(3) Calculated in 1991 using historic flow records for the St. Croix River.

c. Biochemical Oxygen Demand (BOD_5) & Total Suspended Solids (TSS) – This permitting action is carrying forward the monthly and weekly average BOD_5 and TSS concentration limits of 30 mg/L and 45 mg/L, respectively, that were based on secondary treatment requirements as defined in Department rule Chapter 525(3)(III). The maximum daily BOD_5 and TSS concentration limits of 50 mg/L were based on a Department best professional judgment of best practicable treatment (BPT). All three concentration limits are being carried forward in this permitting action.

The once per week (1/Week) minimum monitoring frequencies for BOD_5 and TSS are being carried forward in this permitting action at the recommendation of the facility's DEP inspector.

The monthly average, weekly average and daily maximum technology-based mass limitations are being carried forward in this permitting action and are based on a monthly flow limit of 0.600 MGD. The mass limits were derived as follows:

Monthly average: (0.600 MGD)(8.34)(30 mg/L) = 150 lbs/day
Weekly average: (0.600 MGD)(8.34)(45 mg/L) = 225 lbs/day
Daily maximum: (0.600 MGD)(8.34)(50 mg/L) = 250 lbs/day

A review of the DMR data for the period April 2005 – April 2008 indicates the monthly average and daily maximum mass and concentration values have been reported as follows:

BOD_5 Mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	150	2 – 39	8
Daily Maximum	250	1 – 111	16

BOD_5 Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	0.7 – 22	4.8
Daily Maximum	50	0.7 – 22	4.8

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

For calculation purposes, BOD_5 concentration values reported as "less than" were considered to be present at the minimum detection limit of 2.0 mg/L.

TSS mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	150	2 – 35	12
Daily Maximum	250	2 – 110	27

TSS concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	1.4 – 44	7.0
Daily Maximum	50	1.4 – 44	7.1

d. Settleable Solids – This permit is carrying forward a daily maximum concentration limit of 0.3 mL/L for settleable solids and is considered by the Department as a best professional judgment of BPT for secondary treated waste water.

A review of the DMR data for the period April 2005 – April 2008 indicates the daily maximum settleable solids values have been reported as follows:

Settleable Solids concentration

Value	Limit (mL/L)	Range (mL/L)	Average (mL/L)
Daily Maximum	0.3	0 – 0.3	0.1

For calculation purposes, settleable solids values reported as "less than" were considered to be present at the minimum detection limit of 0.1 mL/L.

e. *E. coli* Bacteria –The previous permitting action established seasonal (May 15 – September 30) monthly average and daily maximum E. coli bacteria limits of 142 colonies/100 mL and 949 colonies/100 mL respectively, based on the State of Maine Water Classification Program criteria for Class C waters found at Maine law, 38 MRSA, §465(4). During calendar year 2005, Maine's Legislature approved new monthly average and daily maximum water quality standards of 126 colonies/100 mL and 236 colonies/100 mL, respectively, for water bodies designated as Class C.

This permitting action is establishing the new monthly E.coli average limit (geometric mean) of 126 colonies/100 mL and is carrying forward the daily maximum limit of 949 colonies/100 mL based on Department guidance for facilities in Class C waters with an acute dilution factor of at least 6.5:1.

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

A review of the DMR data for the period April 2005 – April 2008 indicates E. coli values were reported as follows:

E. coli bacteria

Value	Limit (col/100 mL)	Range (col/100 mL)	Mean (col/100 mL)
Monthly Average	142	1 – 212	31
Daily Maximum	949	3 – 866	110

For calculation purposes, the maximum monthly E. coli result of >300 colonies/100 mLs on 5/31/05 was considered to be present at 300 colonies/100 mLs.

f. Total Residual Chlorine – Analyses using numeric acute criteria for aquatic life must be based on ¼ of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The Department has investigated the mixing characteristics of the discharge and is utilizing the ¼ of 1Q10 in acute evaluations pursuant to Chapter 530. Licensing/permitting actions by the Department impose the more stringent of water quality or technology-based limits. End-of-pipe water quality-based concentration thresholds may be calculated as follows:

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Limit	Chronic Limit
Chlorine	19 ug/L	11 ug/L	190:1	809:1	3.6 mg/L	8.9 mg/L

Example calculations: Acute Limit ⇒ 0.019 mg/L (190) = 3.6 mg/L
Chronic Limit ⇒ 0.011 mg/L (809) = 8.9 mg/L

A review of the DMR data for the period April 2005 – April 2008 indicates TRC values have been reported as follows:

Total residual chlorine

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily Maximum	1.0	0.03 – 1.17	0.52

In the case of the Baileyville facility, the calculated acute water quality-based threshold is higher than 1.0 mg/L, thus the BPT limit of 1.0 mg/L is imposed as a daily maximum limit.

g. pH – This permitting action is carrying forward the pH range limit of 6.0-9.0 standard units pursuant to Department rule found in Chapter 525(3)(III)(c). The limits are considered BPT.

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

A review of the DMR data for the period April 2005 – April 2008 indicates pH values have been reported as follows:

pH

Value	Limit (SU)	Range (SU)	Mean (SU)
Daily Maximum	6.0 – 9.0	7.1 – 7.8	7.4

h. Mercury – June 27, 2000 – Pursuant to *Certain deposits and discharges prohibited,* Maine law, 38 M.R.S.A. § 420 and *Waste discharge licenses,* 38 M.R.S.A. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W002649-5L-F-R by establishing interim monthly average and daily maximum effluent concentration limits of 16.6 parts per trillion (ppt) and 24.9 ppt, respectively, and a minimum monitoring frequency requirement of two (2) tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements,* of this permit as limitations and monitoring frequencies are regulated separately through 38 M.R.S.A.§ 413 and 06-096 CMR 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

Maine law 38 M.R.S.A., §420 1-B,(B)(1) states that a facility is not in violation of the AWQC for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413, subsection 11. A review of the Department's database for the period August 2005 through April 2008 indicates mercury test results reported have ranged from <1.0 ppt to 3.7 ppt with an arithmetic mean (n=6) of 1.9 ppt.

i. Septage– The previous permitting action authorized the Town to receive and treat up to 1,500 gpd of septic tank waste from local haulers. Department rule Chapter 555, *Addition of Septage To Waste Water Treatment Facilities*, limits the quantity of septage treated at a facility to 1% of the design capacity of treatment facility. In their permit renewal application, the Town requested the Department carry forward the daily quantity of 1,500 gallons per day of septic tank waste that it is authorized to receive and treat. With a design capacity of 0.600 MGD, 1,500 gpd represents 0.25 % of said capacity. The permittee submitted an up-to-date Septage Management Plan as an exhibit to their 2008 application for permit renewal.

The Department has reviewed and approved said plan and determined that under normal operating conditions, the addition of 1,500 gpd of septage to the facility will not cause or contribute to upset conditions of the treatment process.

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

j. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: 38 M.R.S.A. § 414-A and 38 M.R.S.A. § 420 prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. 06-096 CMR 530 sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

06-096 CMR 530(2)(B) categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level IV dischargers are *"those dischargers having a chronic dilution factor of at least 500 to 1 and a permitted flow of less than 1 million gallons per day."* The chronic dilution factor associated with the discharge from the Town is 809 to 1, and the permitted flow is 0.600 MGD; therefore, the facility is considered a Level IV facility for purposes of toxics testing. 06-096 CMR 530(D)(1) states that *"routine testing requirements for Level IV are waived, except that the Department shall require an individual discharger to conduct testing under the following conditions:*

(a) The discharger's permit application or information available to the Department indicate that toxic compounds may be present in toxic amounts; or,
(b) Previous testing conducted by the discharger or similar dischargers indicates that toxic compounds may be present in toxic amounts."

The 4/10/06 permit amendment established waived testing for this facility. Previous toxics testing conducted by this facility indicated the discharge did not exceed the critical ambient water quality standards for test organisms or chemical compounds. Therefore, this permitting action is carrying forward the toxics testing waiver pursuant to 06-096 CMR 530 and Department best professional judgment.

06-096 CMR 530(2)(D)(4) states, *"all dischargers having waived or reduced testing must file statements with the Department on or before December 31 of each year describing the following:*

(a) Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

(b) Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

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

(c) Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge."

This permitting action establishes Special Condition K, Chapter 530(2)(D)(4) Certification, pursuant to 06-096 CMR 530(2)(D)(4). It is noted, however, that if future WET or chemical-specific testing indicates the discharge exceeds or demonstrates a reasonable potential to exceed applicable critical water quality thresholds, this permit will be reopened in accordance with Special Condition M, *Reopening of Permit For Modification,* to establish effluent limitations and revised monitoring requirements as necessary.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined 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.

8. PUBLIC COMMENTS

Public notice of this application was made in the *Calais Advertiser* newspaper on 9/15/08. The Department receives public comments on an application until the date a final agency action is taken on that 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 Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

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

Phyllis A. Rand
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017
Telephone (207) 287-7658 e-mail: Phyllis.A.Rand@maine.gov

10. RESPONSE TO COMMENTS

During the period of September 19, 2008 through the issuance date of the permit/license, the Department solicited comments on the proposed draft permit/license to be issued for the discharge(s) from the Town of Baileyville's facility. 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 C

River Flows

River flows at the point of discharge are regulated by upstream hydropower dam operations at Grand Falls and at Woodland. Additional upstream storage dam locations which contribute to river flows at the point of discharge include: Forest City, Vanceboro, Canoose, Clifford, West Grand, and Sysladobsis. An earthen dam at Farm Cove prevents uncontrolled discharge of impounded waters. This dam maintains a small constant flow to a brook flowing into Grand Falls Flowage. Domtar owns and operates all nine of these facilities. A run-of-river hydro power generating facility is located downstream of the mill in the Milltown area of St. Stephen, New Brunswick. This facility depends on upstream flow releases to generate Power and is outside the jurisdiction of the United States. Although hydro power is generated at Grand Falls and Woodland, the Federal Energy Regulatory Commission (FERC) concluded in 1997 that the reservoirs at Forest City, West Grand, Farm Cove, and Sysladobsis (grouped into two projects) have not been operated for downstream power benefits and thus no license under the Federal Power Act is required to operate and maintain the projects. This latter decision is currently undergoing a rehearing and appeal process. The FERC licenses for these two projects are in effect and valid through August 2000, with annual licenses issued by the FERC pending final resolution. The Vanceboro Project is licensed by FERC through 2016. FERC's 1997 decision did not include any direct review or discussion on decisions relative to this project, however the rehearing and appeal process does consider this project as all of these including Grand Falls are auxiliary to and interconnected with the Woodland dam in design and operation such that they form one complete unit of development. The Grand Falls and Woodland Projects were authorized by an Act of Congress prior to the Federal Power Act. Accordingly, FERC jurisdiction does not apply. The Canoose Dam is entirely in Canada, outside the jurisdiction of the United States. The Clifford Lake Dam is a small facility associated with the Grand Falls Project.

The Board of Control of the St. Croix River International Joint Commission (IJC) has the authority to establish (and has established) minimum and maximum levels and flows at Forest City, Vanceboro, and Grand Falls Projects all of which are on the US / Canada boundary. The Woodland Dam which is also on the US / Canada boundary is exempt from IJC jurisdiction because its construction predates the IJC's implementing Act (Boundary Water Treaty Act of 1909).

The IJC currently has issued orders for a minimum flow of 75 cfs at Forest City and a minimum flow of 200 cfs at Vanceboro. As noted, the IJC orders also include maximum and minimum water levels at those dams. In addition, a minimum and maximum lake level is specified by order for Grand Falls Dam but no flow specification is made. The minimum hydropower generation design flow for this facility and Woodland below is 750 cfs. As early as the 1860's State Governmental surveys identified the St. Croix as having a dependable flow of around 1000 cfs and it was on this basis the lower minimum design flow was specified. This minimum design flow was utilized to design the systems integrated operation. The Board has not issued an order for the Woodland Dam. Over the last ten years, USGS

ATTACHMENT C

River Flows (cont'd)

records at the Baring gauging station, located 5.3 miles below Woodland Dam and the point of the Domtar discharge, show that a 7-day minimum of 850 cfs has been consistently maintained. (Note: During the drought of 2002 the DEP authorized a late winter minimum flow of 500- 550 cfs to conserve lake system water. While 750 cfs was achievable, environmental conditions at this time of year allowed a compromise to avoid summer public water use conflicts. The Department agreed that this emergency flow was not representative of a true minimum and accordingly would not be utilized as such for licensing and other assessment purposes.) The 1987 EPA permit and State WDL required the GPC to provide a minimum flow of 750 cfs at Baring from June 1 through September 30 as a condition of permit and license. The permittee has indicated that the IJC formerly specified a minimum flow of 750 cfs as a daily mean flow and not an instantaneous flow as specified in the 1987 EPA permit and 1996 State WDL. The permittee has provided the Department with a lengthy and well documented history of the flow management plan for the river indicating that minimum flow at and below the Domtar mill in said plan is 750 cfs. Consistent flows in the lower river equal to or higher than this value have been the basis for the construction and operation of the dams on the watershed since the early 1800's. The three power generating dams constructed in the early 1900's were also designed accordingly. As a result, 750 cfs is being utilized as the low flow (7Q10) in calculating applicable dilution factors and corresponding water quality-based limits in this permitting action. Should the IJC or other regulatory authorities with appropriate jurisdiction establish a minimum flow regime lower or higher than 750 cfs, this permit may be re-opened (after notice to the permittee) pursuant to Special Condition M of this permit, to re-evaluate effects on water quality and the environment, the applicable dilution factors and water quality-based limits.