STATE OF MAINE
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

February 27, 2017

Mr. Matthew Palmer
2136 Parsons Road
Washburn, ME. 04786
washburnwsd@ainop.com

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101028
Maine Waste Discharge License (WDL) Application #W007610-6C-H-R
PROPOSED DRAFT MEPDES Permit Renewal

Dear Mr. Palmer:

Attached is a proposed draft MEPDES permit and Maine WDL which the Department proposes to issue for your facility as a final document after opportunity for your review and comment. By transmittal of this letter, you are provided with an opportunity to comment on the proposed draft permit and its special and standard conditions. If it contains errors or does not accurately reflect present or proposed conditions, please respond to this Department so that changes can be considered.

The comment period begins on February 27, 2017 and ends on March 29, 2017. All comments on the proposed draft permit must be received in the Department of Environmental Protection office on or before the close of business Wednesday March 29, 2017. Failure to submit comments in a timely fashion will result in the proposed draft/license permit document being issued as drafted.

If you have any questions regarding the matter, please feel free to call me at 207-446-1875.

Sincerely,

Rodney Robert
Division of Water Quality Management
Bureau of Water Quality

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

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STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

WASHBURN WATER & SEWER DISTRICT	)	MAINE POLLUTANT DISCHARGE
WASHBURN, AROOSTOOK COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
ME0101028	)	WASTE DISCHARGE LICENSE
W007610-6C-H-R **APPROVAL**	)	**RENEWAL**

In compliance with the applicable provisions of *Pollution Control*, 38 M.R.S. §§ 411 – 424-B, *Water Classification Program*, 38 M.R.S. §§ 464 – 470 and *Federal Water Pollution Control Act*, Title 33 U.S.C. § 1251, and applicable rules of the Department of Environmental Protection (Department), the Department has considered the application of the WASHBURN WATER & SEWER DISTRICT (permittee), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

On May 31, 2016, the Department accepted as complete for processing an application from the permittee for renewal of combination Waste Discharge License (WDL) # W007610-6C-E-R / Maine Pollutant Discharge Elimination System (MEPDES) permit # ME0101028, which was issued by the Department on December 5, 2011 for a five-year term. The December 5, 2011 permit authorized the monthly average discharge of 0.283 million gallons per day (MGD) of secondary treated sanitary wastewater from a publicly owned treatment works (POTW) to the Aroostook River, Class B, in Washburn, Maine.

PERMIT SUMMARY

a. Terms and conditions

This permitting action is carrying forward all the terms and conditions from the December 5, 2011 permitting action, except that it:

1. Updates and incorporates an Industrial Waste Survey (IWS) into Special Condition E, Limitations for Industrial Users.
2. Incorporates Special Conditions associated with the permittee's Asset Management Plan (AMP).
3. Amends the Whole Effluent Toxicity (WET) Screening Level testing period from 12 months prior to permit expiration to 24 months prior to permit expiration (year 4 of the permit).

PERMIT SUMMARY (cont'd)

4. Eliminates the Biological Oxygen Demand (BOD) and Total Settleable Solids (TSS) percent removal waiver when the influent concentration is less than 200 mg/L.
5. Corrects a typographical error in Special Condition A Effluent Limitations and Requirements for BOD and TSS.
6. Eliminates numeric limits for aluminum and copper based on results of facility testing.

CONCLUSIONS

BASED on the findings in the attached and incorporated Fact Sheet dated February 27, 2017, 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, *Classification of Maine waters,* 38 M.R.S. § 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 waterbody are not met, the discharge will not cause or contribute to the failure of the waterbody to meet the standards of classification;

   (d) Where the actual quality of any classified receiving waterbody 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 waterbody, 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 *Conditions of licenses,* 38 M.R.S. § 414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the application of the WASHBURN WATER & SEWER DISTRICT to discharge a monthly average of 0.283 million gallons per day (MGD) of secondary treated sanitary wastewater from the permittee's facility to the Aroostook River, Class B, in Washburn, Maine, SUBJECT TO ALL APPLICABLE STANDARDS AND REGULATIONS AND THE FOLLOWING CONDITIONS:

1. "*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable to All Permits*," revised July 1, 2002, copy attached.

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

3. This permit becomes effective upon the date of signature below and expires at midnight five (5) years after that date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the terms and conditions of this permit and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. *Maine Administrative Procedure Act*, 5 M.R.S. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matter*s, 06-096 CMR 2(21)(A) (amended October 19, 2015).

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
PAUL MERCER, Commissioner

Date of initial receipt of application May 31, 2016
Date of application acceptance May 31, 2016

Date filed with Board of Environmental Protection _____

This Order prepared by Rod Robert, Bureau of Water Quality

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge secondary treated sanitary wastewater from **Outfall #001A** to the Aroostook River in Washburn, Maine. Such discharges are limited and must be monitored by the permittee as specified below [(1)]:

	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	0.283 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	71 lbs./day *[26]*	106 lbs./day *[26]*	118 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	24-Hour Composite *[24]*
BOD_5 Percent Removal [(2)] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	71 lbs./day *[26]*	106 lbs./day *[26]*	118 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	24-Hour Composite *[24]*
TSS Percent Removal [(2)] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	1/Week *[01/07]*	Grab *[GR]*
***E. coli* Bacteria**[(3)] *[31633] (May 15 – Sept. 30)*	---	---	---	64/100 ml[(4)] *[13]*	---	427/100 ml *[13]*	1/Week *[01/07]*	Grab *[GR]*
Total Residual Chlorine [(5)] *[50060]*	---	---	---	---	---	1.0 mg/L *[19]*	5/Week[(5)] *[05/07]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	5/Week[(5)] *[05/07]*	Grab *[GR]*
Mercury (Total) [(6)] *[71900]*	---	---	---	0.0052 ug/L *[28]*	---	0.0078 ug/L *[28]*	1/Year *[01/YR]*	Grab *[GR]*

SPECIAL CONDITIONS

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

2. **SCREENING LEVEL TESTING.** During the period **beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the permit) and every five years thereafter, for Outfall #001**, the permittee must be limited and monitored as follows:

WHOLE EFFLUENT TOXICITY (WET) (7)	**Daily Maximum**	**Minimum Frequency**	**Sample Type**
Acute No Observed Effect Level (A-NOEL)			
Water Flea (*Ceriodaphnia dubia)* *[TDA3B]*	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Brook Trout (*Salvelinus fontinalis*) *[TDA6F]*	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Chronic No Observed Effect Level (C-NOEL)			
Water Flea (*Ceriodaphnia dubia)* *[TBP3B]*	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Brook Trout (*Salvelinus fontinalis*) *[TBQ6F]*	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Analytical Chemistry(8) (10) *[51477]*	Report µg/L *[28]*	1/Quarter *[01/90]*	24-Hour Composite/Grab *[24/GR]*
Priority Pollutant (9) (10) *[50008]*	Report µg/L *[28]*	1/Year *[01/YR]*	24-Hour Composite/Grab *[24/GR]*

Footnotes: See Pages 7-11 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

3. **UNDER-DRAIN POINTS 002A**: The permittee is required to conduct sampling on lagoon under-drain #002A as specified below:

Effluent Characteristic Minimum Monitoring Requirements

Parameter	Daily Maximum (units specified)	Measurement Frequency[11]	Sample Type
Flow Rate *[00058]*	Report GPM *[78]*	3/Year *[03/YR]*	Measure *[MS]*
Conductivity *[00094]*	Report (umhos/cm) *[11]*	3/Year *[03/YR]*	Grab *[GR]*
Temperature, °C *[00010]*	Report (°C) *[04]*	3/Year *[03/YR]*	Grab *[GR]*
***E. coli* Bacteria** *[31633]*	Report # / 100 ml *[13]*	3/Year *[03/YR]*	Grab *[GR]*

4. **GROUND WATER MONITORING WELL MW 1A**: The permittee is required to conduct sampling on the ground water monitoring well MW 104 as specified below:

Effluent Characteristic Minimum Monitoring Requirements

Parameter	Daily Maximum (units specified)	Measurement Frequency[12]	Sample Type
Conductivity *[00094]*	Report (umhos/cm) *[11]*	1/Year *[01/YR]*	Grab *[GR]*
Temperature, °C *[00010]*	Report (°C) *[04]*	1/Year *[01/YR]*	Grab *[GR]*
pH (Std. Unit) *[00400]*	Report (SU) *[12]*	1/Year *[01/YR]*	Grab *[GR]*
Chlorides *[00940]*	Report mg/L *[19]*	1/Year *[01/YR]*	Grab *[GR]*
Total Sodium *[00929]*	Report mg/L *[19]*	1/Year *[01/YR]*	Grab *[GR]*
Total Nitrate Nitrogen (as N) *[00620]*	10 mg/L *[19]*	1/Year *[01/YR]*	Grab *[GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports (DMRs).

SPECIAL CONDITIONS

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

Footnotes

1. **Sampling** – The permittee must conduct all effluent sampling and analysis in accordance with; a) methods approved by 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, or c) as otherwise specified by the Department. Samples that are sent out for analysis must be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services. Laboratories operated by waste discharge facilities licensed pursuant to *Waste discharge licenses*, 38 M.R.S. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended April 1, 2010). 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 this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR.

2. **BOD_5 and TSS Percent Removal** – The treatment facility must maintain a minimum of 85 percent removal of BOD and a minimum of 85 percent removal for TSS for all flows receiving secondary treatment. Compliance with the limitation is based on a twelve-month rolling average. Calendar monthly average percent removal values must be calculated based on influent and effluent concentrations. The twelve-month rolling average calculation is based on the most recent twelve-month period.

SPECIAL CONDITIONS

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

Footnotes

3. ***E. coli* bacteria –** *E. coli* bacteria limits and monitoring requirements are seasonal and apply between May 15th and September 30th of each year. In accordance with 38 M.R.S. § 414-A(5), the Department may, at any time and with notice to the permittee, modify this permit to establish bacteria limitations on a year-round basis to protect the health and welfare of the public.

4. **Bacteria Reporting** – The monthly average *E. coli* bacteria limitation is a geometric mean limitation and sample results must be reported as such.

5. **Total residual chlorine (TRC)/ pH** – Limitations and monitoring requirements are applicable whenever elemental chlorine or chlorine based compounds are being used to disinfect the discharge. The permittee must utilize approved test methods that are capable of bracketing the limitations in this permit. Monitoring for TRC and pH is not required on legally recognized state and federal holidays.

6. **Mercury** – The permittee must conduct all mercury monitoring required by this permit required to determine compliance with interim limitations established pursuant to 06-096 CMR 519 in accordance with the U.S. Environmental Protection Agency's (USEPA) "clean sampling techniques" found in USEPA Method 1669, *Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels*. All mercury analysis must be conducted in accordance with USEPA Method 1631, *Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry*. See **Attachment A** of this permit for a Department report form for mercury test results. Compliance with the monthly average limitation established in Special Condition A of this permit will be based on the cumulative arithmetic mean of all mercury tests results that were conducted utilizing sampling Method 1669 and analysis Method 1631E on file with the Department for this facility.

SPECIAL CONDITIONS

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

7. **Whole effluent toxicity (WET) testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 0.36% and 0.31% respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 280:1 and 321:1, respectively.

   a. **Surveillance level testing** – Waived pursuant Department rule 06-096 CMR, Chapter 530, *Surface water Toxics Control Program*, §2(D)(3)(b).

   b. **Screening level testing** - The permittee must initiate screening level WET testing at a minimum frequency of once per year (1/Year). Acute and chronic testing must be conducted on the water flea and the brook trout.

   WET test results must be submitted to the Department not later than the next DMR required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee must evaluate test results being submitted and identify to the Department possible exceedances of the critical acute and chronic water quality thresholds of 0.36% and 0.31%, respectively.

SPECIAL CONDITIONS

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

Footnotes:

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following USEPA methods manuals.

a. U.S. Environmental Protection Agency. 2002. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organism*s, 5th ed. EPA 821-R-02-012. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the acute method manual).

b. U.S. Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organism*s, 4th ed. EPA 821-R-02-013. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the freshwater chronic method manual).

Results of WET tests must be reported on the "WET Results Report – Fresh Waters" form included as **Attachment B** of this permit each time a WET test is performed.

8. **Analytical Chemistry** – Refers to a suite of chemicals in **Attachment C** of this permit.

a. **Surveillance level testing** – Waived pursuant Department rule 06-096 CMR, Chapter 530, Surface water Toxics Control Program, §2(D)(3)(b).

b. **Screening level testing** - Beginning twenty-four (24) months prior to the expiration date of this permit (year 4 of the permit) and every five years thereafter, the permittee must conduct screening level analytical chemistry testing at a minimum frequency of four times per year (4/Year) in successive calendar quarters.

Analytical chemistry and/or priority pollutant testing must be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department on the form entitled, "Maine Department of Environmental Protection WET and Chemical-Specific Data Report Form" included as **Attachment C** of this permit.

SPECIAL CONDITIONS

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

Footnotes:

9. **Priority Pollutant Testing –** Priority pollutant testing refers to a suite of chemicals in **Attachment C** of this permit.

a. **Surveillance level testing** - Priority pollutant testing is not required for this facility pursuant to Department rule Chapter 530, § 2(D)(1).

b. **Screening level testing** - Beginning twenty-four (24) months prior to the expiration date of this permit (year 4 of the permit) and every five years thereafter, the permittee must conduct screening level priority pollutant testing at a minimum frequency of once per year (1/Year) in any calendar quarter provided the sample is representative of the discharge and any seasonal or other variations in effluent quality.

10. **Analytical chemistry and priority pollutant tests** - Results must be submitted to the Department not later than the next DMR required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee must evaluate test results being submitted and identify to the Department, possible exceedances of the acute, chronic or human health ambient water quality criteria (AWQC) as established in Department rule 06-096 CMR Chapter 584.

For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "0" monitoring not required this period.

11. **Lagoon Under-Drain Monitoring** – Monitoring must be conducted during the months of May, July and October of each year.

12. **Ground Water Well Monitoring** – Monitoring must be conducted during the month of May of each year. Ground water monitoring results that exceed 250 mg/L for chlorides, 120 mg/L for sodium, or 10 mg/L for total nitrate nitrogen must be reported to the Department within five (5) working days of obtaining sample results.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The permittee must not discharge effluent that contains a visible oil sheen, foam or floating solids at any time which would impair the uses designated for the classification of the receiving waters.

2. The permittee must not discharge effluent that contains materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the uses designated for the classification of the receiving waters.

3. The permittee must not discharge effluent that causes visible discoloration or turbidity in the receiving waters or otherwise impairs the uses designated for the classification of the receiving waters.

4. The permittee must not discharge effluent that lowers the quality of any classified body of water below such classification, or lowers the existing quality of any body of water if the existing quality is higher than the classification.

C. TREATMENT PLANT OPERATOR

The person who has management responsibility over the treatment facility must hold a **Maine Grade II,** Biological Treatment certificate (or higher) or must be a Maine Registered Professional Engineer pursuant to *Sewage Treatment Operators*, 32 M.R.S. § 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.

D. AUTHORIZED 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 May 31, 2016, 2) the terms and conditions of this permit; and 3) only from Outfall #001A. Discharges of wastewater from any other point source are not authorized under this permit, and must be reported in accordance with Standard Condition D(1)(f), *Twenty-four hour reporting*, of this permit.

SPECIAL CONDITIONS

E. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the wastewater collection and treatment system by a non-domestic source (user) must not pass through or interfere with the operation of the treatment system. The permittee must conduct an IWS any time a new industrial user proposes to discharge within its jurisdiction; an existing user proposes to make a significant change in its discharge; or at an alternative minimum, once every permit cycle, and submit the results to the Department. The IWS must identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of the federal Clean Water Act, 40 CFR Part 403 (general pretreatment regulations) or *Pretreatment Program*, 06-096 CMR 528 (last amended March 17, 2008).

F. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee must notify the Department of the following:

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

2. Any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system by a source introducing pollutants into the system at the time of permit issuance.

3. For the purposes of this section, adequate notice must include information on:

   (a) The quality and quantity of wastewater introduced to the wastewater collection and treatment system; and

   (b) Any anticipated impact of the change in the quantity or quality of the wastewater to be discharged from the treatment system.

SPECIAL CONDITIONS

G. 06-096 CMR 530(2)(D)(4) STATEMENT FOR REDUCED/WAIVED TOXICS TESTING

By December 31 of each calendar year, the permittee must provide the Department with a certification describing any of the following that have occurred since the effective date of this permit ***[ICIS Code 75305]***. See **Attachment C** of the Fact Sheet for an acceptable certification form to satisfy this Special Condition.

(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;

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

In addition, in the comments section of the certification form, the permittee must provide the Department with statements describing;

(d) Changes in stormwater collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge; and

(e) Increases in the type or volume of transported (hauled) wastes accepted by the facility.

The Department may require that annual testing be re-instated 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

H. OPERATION & MAINTENANCE (O&M) PLAN

The permittee must maintain a current written comprehensive Operation & Maintenance (O&M) Plan for the facility. The plan must provide a systematic approach by which the permittee must 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 must evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the wastewater treatment facility to ensure that it is up-to-date. The O&M Plan must be kept on-site at all times and made available to Department and USEPA personnel upon request.

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

I. WET WEATHER FLOW MANAGEMENT PLAN

The treatment facility staff must have a current written Wet Weather Flow Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. 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.

The plan must conform to Department guidelines for such plans and must 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 must review their plan annually and record any necessary changes to keep the plan up to date. The Department may require review and update of the plan as it is determined to be necessary.

SPECIAL CONDITIONS

J. MONITORING AND REPORTING

Electronic Reporting

NPDES Electronic Reporting, 40 C.F.R. 127, requires MEPDES permit holders to submit monitoring results obtained during the previous month on an electronic discharge monitoring report to the regulatory agency utilizing the USEPA electronic system.

Electronic DMRs submitted using the USEPA NetDMR system, must be:

1. Submitted by a facility authorized signatory; and
2. Submitted no later than **midnight on the 15th day of the month** following the completed reporting period.

Documentation submitted in support of the electronic DMR may be attached to the electronic DMR. Toxics reporting must be done using the Department toxsheet reporting form. An electronic copy of the Toxsheet reporting document must be submitted to your Department compliance inspector as an attachment to an email. In addition, a hardcopy form of this sheet must be signed and submitted to your compliance inspector, or a copy attached to your NetDMR submittal will suffice. Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15th day of the month following the completed reporting period.

Non-electronic Reporting

If you have received a waiver from the Department concerning the USEPA electronic reporting rule, or are permitted to submit hardcopy DMR's to the Department, then your monitoring results obtained during the previous month must 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.

SPECIAL CONDITIONS

J. MONITORING AND REPORTING (cont'd)

Toxsheet reporting forms must be submitted electronically as an attachment to an email sent to your Department compliance inspector. In addition, a signed hardcopy of your toxsheet must also be submitted.

Secondary treatment bypass reporting must be done using *DEP-49-CSO Form For Use With [Dedicated / Non-Dedicated] CSO Primary Clarifier*. Secondary treatment bypass reporting must be submitted to your Department compliance inspector and the CSO Coordinator as an attachment to an email. In addition, a hardcopy form of this sheet must be signed and submitted to your compliance inspector.

A signed copy of the DMR and all other reports required herein must be submitted to the Department assigned compliance inspector (unless otherwise specified) following address:

Department of Environmental Protection
Northern Maine Regional Office
Bureau of Water Quality
Division of Water Quality Management
1235 Central Park Drive – Skyway Park
Presque Isle, Maine 04769

K. REOPENING OF PERMIT FOR MODIFICATION

In accordance with 38 M.R.S. § 414-A(5) and upon evaluation of the test results in the 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 any time and with notice to the permittee, modify this permit to: (1) include effluent limitations 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 monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

SPECIAL CONDITION

L. ASSET MANAGEMENT PROGRAM (AMP)

The permittee must maintain an AMP in accordance with Department guidance entitled, *Maine Department of Environmental Protection, Clean Water State Revolving Fund (CWSRF) Guidance for Minimum Requirements for an Asset Management Program and Reserve Account In Order to Qualify for CWSRF Principal Forgiveness*, DEPLW1190-2010. The AMP shall be reviewed and updated as necessary at least annually. The AMP shall be kept on-site at the permittee's office and made available to Department staff for review during normal business hours.

M. 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 must remain in full force and effect, and must be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

ATTACHMENT A

Maine Department of Environmental Protection

Effluent Mercury Test Report

Name of Facility: _____ Federal Permit # ME _____

Pipe # _____

Purpose of this test:
- ☐ Initial limit determination
- ☐ Compliance monitoring for: year _____ calendar quarter _____
- ☐ Supplemental or extra test

SAMPLE COLLECTION INFORMATION

Sampling Date: ___ ___ ___ (mm dd yy) Sampling time: _____ AM/PM

Sampling Location:

Weather Conditions: _____

Please describe any unusual conditions with the influent or at the facility during or preceding the time of sample collection:

Optional test - not required but recommended where possible to allow for the most meaningful evaluation of mercury results:

Suspended Solids _____ mg/L Sample type: _____ Grab (recommended) or _____ Composite

ANALYTICAL RESULT FOR EFFLUENT MERCURY

Name of Laboratory: _____

Date of analysis: _____ Result: _____ ng/L (PPT)

Please Enter Effluent Limits for your facility

Effluent Limits: Average = _____ ng/L Maximum = _____ ng/L

Please attach any remarks or comments from the laboratory that may have a bearing on the results or their interpretation. If duplicate samples were taken at the same time please report the average.

CERTIFICATION

I certifiy that to the best of my knowledge the foregoing information is correct and representative of conditions at the time of sample collection. The sample for mercury was collected and analyzed using EPA Methods 1669 (clean sampling) and 1631 (trace level analysis) in accordance with instructions from the DEP.

By: _____ Date: _____

Title: _____

PLEASE MAIL THIS FORM TO YOUR ASSIGNED INSPECTOR

ATTACHMENT B

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WHOLE EFFLUENT TOXICITY REPORT
FRESH WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

By signing this form, I attest that to the best of my knowledge that the information provided is true, accurate, and complete.

Facility Telephone # _____ Date Collected _____ (mm/dd/yy) Date Tested _____ (mm/dd/yy)

Chlorinated? _____ Dechlorinated? _____

Results % effluent

	water flea	trout
A-NOEL		
C-NOEL		

Effluent Limitations

A-NOEL	
C-NOEL	

Data summary

	water flea			trout		
	% survival		no. young	% survival		final weight (mg)
QC standard	A>90	C>80	>15/female	A>90	C>80	> 2% increase
lab control						
receiving water control						
conc. 1 (%)						
conc. 2 (%)						
conc. 3 (%)						
conc. 4 (%)						
conc. 5 (%)						
conc. 6 (%)						
stat test used						

place * next to values statistically different from controls

for trout show final wt and % incr for both controls

Reference toxicant

	water flea		trout	
	A-NOEL	C-NOEL	A-NOEL	C-NOEL
toxicant / date				
limits (mg/L)				
results (mg/L)				

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

Report WET chemistry on DEP Form "ToxSheet (Fresh Water Version), March 2007."

ATTACHMENT C

Maine Department of Environmental Protection
WET and Chem

This form is for reporting laboratory data and facility information. Official compliance reviews will be done by DEP.

Facility Name _____ MEPDES # _____ Facility Representative Signature _____
Pipe # _____ To the best of my knowledge this information is true, accurate and complete.

Licensed Flow (MGD) _____ Flow for Day (MGD)[1] _____ Flow Avg. for Month (MGD)[2] _____
Acute dilution factor _____
Chronic dilution factor _____ Date Sample Collected _____ Date Sample Analyzed _____
Human health dilution factor _____
Criteria type: M(arine) or F(resh) r

Laboratory _____ Telephone _____
Address _____
Lab Contact _____ Lab ID # _____

Last Revision: July 1 2015

ERROR WARNING ! Essential facility information is missing. Please check required entries in bold above.

FRESH WATER VERSION

Please see the footnotes on the last page.

			Effluent Limits, %			Receiving Water or Ambient	Effluent Concentration (ug/L or as noted)		Possible Exceedence [7]		
	WHOLE EFFLUENT TOXICITY		Acute	Chronic			WET Result, % Do not enter % sign	Reporting Limit Check	Acute	Chronic	
	Trout - Acute										
	Trout - Chronic										
	Water Flea - Acute										
	Water Flea - Chronic										
	WET CHEMISTRY										
	pH (S.U.) (9)										
	Total Organic Carbon (mg/L)					(8)					
	Total Solids (mg/L)										
	Total Suspended Solids (mg/L)										
	Alkalinity (mg/L)					(8)					
	Specific Conductance (umhos)										
	Total Hardness (mg/L)					(8)					
	Total Magnesium (mg/L)					(8)					
	Total Calcium (mg/L)					(8)					
	ANALYTICAL CHEMISTRY [3]										
	Also do these tests on the effluent with WET. Testing on the receiving water is optional	Reporting Limit	Effluent Limits, ug/L Acute[6]	Chronic[6]	Health[6]			Reporting Limit Check	Possible Exceedence [7] Acute	Chronic	Health
	TOTAL RESIDUAL CHLORINE (mg/L) (9)	0.05				NA					
	AMMONIA	NA				(8)					
M	ALUMINUM	NA				(8)					
M	ARSENIC	5				(8)					
M	CADMIUM	1				(8)					
M	CHROMIUM	10				(8)					
M	COPPER	3				(8)					
M	CYANIDE, TOTAL	5				(8)					
	CYANIDE, AVAILABLE [3a]	5				(8)					
M	LEAD	3				(8)					
M	NICKEL	5				(8)					
M	SILVER	1				(8)					
M	ZINC	5				(8)					

Maine Department of Environmental Protection
WET and Chem

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	PRIORITY POLLUTANTS [4]		Effluent Limits					Reporting Limit Check	Possible Exceedence [7]		
		Reporting Limit	Acute[5]	Chronic[6]	Health[6]				Acute	Chronic	Health
M	ANTIMONY	5									
M	BERYLLIUM	2									
M	MERCURY (5)	0.2									
M	SELENIUM	5									
M	THALLIUM	4									
A	2,4,6-TRICHLOROPHENOL	5									
A	2,4-DICHLOROPHENOL	5									
A	2,4-DIMETHYLPHENOL	5									
A	2,4-DINITROPHENOL	45									
A	2-CHLOROPHENOL	5									
A	2-NITROPHENOL	5									
A	4,6 DINITRO-O-CRESOL (2-Methyl-4,6-dinitrophenol)	25									
A	4-NITROPHENOL	20									
A	P-CHLORO-M-CRESOL (3-methyl-4-chlorophenol)+B80	5									
A	PENTACHLOROPHENOL	20									
A	PHENOL	5									
BN	1,2,4-TRICHLOROBENZENE	5									
BN	1,2-(O)DICHLOROBENZENE	5									
BN	1,2-DIPHENYLHYDRAZINE	20									
BN	1,3-(M)DICHLOROBENZENE	5									
BN	1,4-(P)DICHLOROBENZENE	5									
BN	2,4-DINITROTOLUENE	6									
BN	2,6-DINITROTOLUENE	5									
BN	2-CHLORONAPHTHALENE	5									
BN	3,3'-DICHLOROBENZIDINE	16.5									
BN	3,4-BENZO(B)FLUORANTHENE	5									
BN	4-BROMOPHENYLPHENYL ETHER	5									
BN	4-CHLOROPHENYL PHENYL ETHER	5									
BN	ACENAPHTHENE	5									
BN	ACENAPHTHYLENE	5									
BN	ANTHRACENE	5									
BN	BENZIDINE	45									
BN	BENZO(A)ANTHRACENE	8									
BN	BENZO(A)PYRENE	5									
BN	BENZO(G,H,I)PERYLENE	5									
BN	BENZO(K)FLUORANTHENE	5									
BN	BIS(2-CHLOROETHOXY)METHANE	5									
BN	BIS(2-CHLOROETHYL)ETHER	6									
BN	BIS(2-CHLOROISOPROPYL)ETHER	6									
BN	BIS(2-ETHYLHEXYL)PHTHALATE	10									
BN	BUTYLBENZYL PHTHALATE	5									
BN	CHRYSENE	5									
BN	DI-N-BUTYL PHTHALATE	5									
BN	DI-N-OCTYL PHTHALATE	5									
BN	DIBENZO(A,H)ANTHRACENE	5									
BN	DIETHYL PHTHALATE	5									
BN	DIMETHYL PHTHALATE	5									
BN	FLUORANTHENE	5									

Maine Department of Environmental Protection
WET and Chem

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BN	FLUORENE	5									
BN	HEXACHLOROBENZENE	5									
BN	HEXACHLOROBUTADIENE	5									
BN	HEXACHLOROCYCLOPENTADIENE	10									
BN	HEXACHLOROETHANE	5									
BN	INDENO(1,2,3-CD)PYRENE	5									
BN	ISOPHORONE	5									
BN	N-NITROSODI-N-PROPYLAMINE	10									
BN	N-NITROSODIMETHYLAMINE	5									
BN	N-NITROSODIPHENYLAMINE	5									
BN	NAPHTHALENE	5									
BN	NITROBENZENE	5									
BN	PHENANTHRENE	5									
BN	PYRENE	5									
P	4,4'-DDD	0.05									
P	4,4'-DDE	0.05									
P	4,4'-DDT	0.05									
P	A-BHC	0.2									
P	A-ENDOSULFAN	0.05									
P	ALDRIN	0.15									
P	B-BHC	0.05									
P	B-ENDOSULFAN	0.05									
P	CHLORDANE	0.1									
P	D-BHC	0.05									
P	DIELDRIN	0.05									
P	ENDOSULFAN SULFATE	0.1									
P	ENDRIN	0.05									
P	ENDRIN ALDEHYDE	0.05									
P	G-BHC	0.15									
P	HEPTACHLOR	0.15									
P	HEPTACHLOR EPOXIDE	0.1									
P	PCB-1016	0.3									
P	PCB-1221	0.3									
P	PCB-1232	0.3									
P	PCB-1242	0.3									
P	PCB-1248	0.3									
P	PCB-1254	0.3									
P	PCB-1260	0.2									
P	TOXAPHENE	1									
V	1,1,1-TRICHLOROETHANE	5									
V	1,1,2,2-TETRACHLOROETHANE	7									
V	1,1,2-TRICHLOROETHANE	5									
V	1,1-DICHLOROETHANE	5									
V	1,1-DICHLOROETHYLENE (1,1-dichloroethene)	3									
V	1,2-DICHLOROETHANE	3									
V	1,2-DICHLOROPROPANE	6									
V	1,2-TRANS-DICHLOROETHYLENE (1,2-trans-dichloroethene)	5									
V	1,3-DICHLOROPROPYLENE (1,3-dichloropropene)	5									
V	2-CHLOROETHYLVINYL ETHER	20									
V	ACROLEIN	NA									
V	ACRYLONITRILE	NA									
V	BENZENE	5									

Maine Department of Environmental Protection
WET and Chem

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V	BROMOFORM	5									
V	CARBON TETRACHLORIDE	5									
V	CHLOROBENZENE	6									
V	CHLORODIBROMOMETHANE	3									
V	CHLOROETHANE	5									
V	CHLOROFORM	5									
V	DICHLOROBROMOMETHANE	3									
V	ETHYLBENZENE	10									
V	METHYL BROMIDE (Bromomethane)	5									
V	METHYL CHLORIDE (Chloromethane)	5									
V	METHYLENE CHLORIDE	5									
V	TETRACHLOROETHYLENE (Perchloroethylene or Tetrachloroethene)	5									
V	TOLUENE	5									
V	TRICHLOROETHYLENE (Trichloroethene)	3									
V	VINYL CHLORIDE	5									

Notes:

(1) Flow average for day pertains to WET/PP composite sample day.

(2) Flow average for month is for month in which WET/PP sample was taken.

(3) Analytical chemistry parameters must be done as part of the WET test chemistry.

(3a) Cyanide, Available (Cyanide Amenable to Chlorination) is not an analytical chemistry parameter, but may be required by certain discharge permits .

(4) Priority Pollutants should be reported in micrograms per liter (ug/L).

(5) Mercury is often reported in nanograms per liter (ng/L) by the contract laboratory, so be sure to convert to micrograms per liter on this spreadsheet.

(6) Effluent Limits are calculated based on dilution factor, background allocation (10%) and water quality reserves (15% - to allow for new or changed discharges or non-point sources).

(7) Possible Exceedence determinations are done for a single sample only on a mass basis using the actual pounds discharged. This analysis does not consider watershed wide allocations for fresh water discharges.

(8) These tests are optional for the receiving water. However, where possible samples of the receiving water should be preserved and saved for the duration of the WET test. In the event of questions about the receiving water's possible effect on the WET results, chemistry tests should then be conducted.

(9) pH and Total Residual Chlorine must be conducted at the time of sample collection. Tests for Total Residual Chlorine need be conducted only when an effluent has been chlorinated or residual chlorine is believed to be present for any other reason.

Comments:

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
WASTE DISCHARGE LICENSE

FACT SHEET

Date: **February 27, 2017**

MEPDES PERMIT: **ME0101028**
WASTE DISCHARGE LICENSE: **W007610-6C-H-R**

NAME AND ADDRESS OF APPLICANT:

WASHBURN WATER & SEWER DISTRICT
1287 Main Street
Washburn, Maine 04786

COUNTY: **AROOSTOOK**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

2136 Parsons Road
Washburn, Maine 04786

RECEIVING WATER / CLASSIFICATION: **Aroostook River/Class B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER:

Mr. Matthew Palmer
(207) 455-1042
washburnwsd@ainop.com

1. APPLICATION SUMMARY

a. Application: On August 12, 2016, the Department of Environmental Protection (Department) accepted as complete for processing an application from the Washburn Water & Sewer District (permittee) for renewal of combination Waste Discharge License (WDL) # W007610-6C-E-R / Maine Pollutant Discharge Elimination System (MEPDES) permit # ME0101028, which was issued by the Department on December 5, 2011 for a five-year term. The December 5, 2011 permit authorized the monthly average discharge of 0.283 million gallons per day (MGD) of secondary treated sanitary wastewater from a publicly owned treatment works (POTW) to the Aroostook River, Class B, in Washburn, Maine.

2. PERMIT SUMMARY

a. Terms and conditions

This permitting action is carrying forward all the terms and conditions from the December 5, 2011 permitting action, except that it:

1. Updates and incorporates an Industrial Waste Survey (IWS) into Special Condition E, Limitations for Industrial Users.
2. Incorporates Special Conditions associated with the permittee's Asset Management Plan (AMP).
3. Amends the Whole Effluent Toxicity (WET) Screening Level testing period from 12 months prior to permit expiration to 24 months prior to permit expiration (year 4 of the permit).
4. Eliminates the BOD and TSS percent removal waiver when the influent concentration is less than 200 mg/L.
5. Corrects a typographical error in Special Condition A Effluent Limitations and Requirements for BOD and TSS.
6. Eliminates numeric limits for aluminum and copper based on results of facility testing.

b. History: This section provides a summary of significant licensing/permitting actions and milestones that have been completed for the permittee's facility.

March 15, 1995 – The United States Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0101028 to the Town for a five-year term, which superseded the previous NPDES permit issued to the permittee for this facility by the USEPA on March 28, 1986.

June 27, 2000 –The Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W007610-59-B-R by establishing interim monthly average and daily maximum effluent concentration limits of 5.2 parts per trillion (ppt) and 7.8 ppt, respectively, and a minimum monitoring frequency requirement of four (4) tests per year for mercury.

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES permit program in Maine. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program, and MEPDES permit #ME0101028 has been utilized for the permittee's facility.

2. PERMIT SUMMARY (cont'd)

December 21, 2001 – The Department issued WDL #W007610-5L-C-R / MEPDES permit #ME0101028 to the permittee for a five-year term. The 12/21/01 permit superseded WDL #W007610-59-B-R issued on August 24, 1996, and WDL #W007610-58-A-N issued on January 29, 1990 (earliest Order on file with the Department), as well as the 3/15/95 NPDES permit issued by the USEPA.

December 7, 2006 – The Department issued combination MEPDES permit #ME0101028/WDL #W007610-5L-D-R for a five year term.

September 1, 2011 – The permittee submitted a timely and complete application to the Department to renew the December 7, 2006, MEPDES permit/WDL.

December 5, 2011 – The Department issued combination MEPDES permit #ME0101028/WDL) #W007610-6C-E-R for a five year term.

March 8, 2012 – The Department issued a minor revision to combination MEPDES permit #ME0101028/WDL) #W007610-6C-E-R. The minor revision enrolled the permittee in the Department's Clean Water State Revolving Fund and directed the permittee to create and maintain an Asset Management Plan for the life of the permit.

May 31, 2016 – The permittee submitted a timely and complete application to the Department to renew the December 5, 2011, MEPDES permit/WDL.

c. Source Description: The wastewater treatment facility receives residential sanitary and commercial waste waters from customers within the boundaries of the Town of Washburn. Based on information contained in the previous MEPDES permit, the facility was designed for and services a population equivalent of 1,200 people. There are no significant industrial users connected to and no combined sewer overflow (CSO) points associated with the collection system.

Based on information contained in the previous MEPDES permit and on information provided by the permittee in its' application, the collection system is approximately 4.5 miles in length and contains four main pump stations (lift stations): Station No. 1 on McManus Street, Station No. 2 on Bridge Street, and Station No. 3 (the Main Pump Station). Each pump station is equipped with an emergency generator and radio telemetry. The fourth pump station is located on Trafton Street and services a small trailer park, elderly housing complex and three houses. Three thousand (3,000) linear feet of 8-inch diameter sewer main was added to the collection system in calendar years 2004-2005 to replace failing private septic systems. This addition required the installation of a fifth lift station.

2. PERMIT SUMMARY (cont'd)

The permittee has not applied to the Department for authorization to receive or introduce septage wastes into the treatment process. A map showing the location of the facility and the receiving water is included as Fact Sheet **Attachment A.**

d. Wastewater Treatment: The facility provides a secondary level of wastewater treatment via two aerated lagoons (total capacity of approximately 6 million gallons) equipped with diffused aeration. During calendar year 2004-2005 projects, the permittee upgraded Lagoon No.1 to three treatment cells including an anoxic zone. Screened influent is conveyed to the first (anoxic) cell for settling of solids to the lagoon floor. Sludge is mechanically removed from the anoxic zone once per month by a sludge dredge and pumped to two reed beds for treatment and disposal. The facility provides primary wastewater treatment via a bar screen and an aerated grit removal chamber. Treated effluent is seasonally disinfected with chlorine for compliance with the *E. coli* bacteria limits established for Class B waters and is conveyed to the Aroostook River at Washburn via a twelve (12) inch diameter outfall pipe designated Outfall #001A in this permitting action. The pipe is fitted with a series of two (2) inch diameter steel diffuser ports at 8-feet on center to enhance mixing of the effluent with the receiving waters. The Department's Division of Environmental Assessment (DEA) has determined that this outfall structure provides complete and rapid mixing of the effluent with the receiving waters. See **Attachment B** of this Fact Sheet for a schematic of the waste water treatment facility.

3. CONDITIONS OF PERMIT

Conditions of licenses, 38 M.R.S. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require the application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, *Certain deposits and discharges prohibited*, 38 M.R.S. § 420 and Department rule *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective March 21, 2012), 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 July 29, 2012), 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 QUALITY STANDARDS

Classification of major river basins, 38 M.R.S. § 467(15)(C)(1)(c) classifies the Aroostook River "[f]rom the Sheridan Dam to its confluence with Presque Isle Stream, including all impoundments" which includes the river at the point of discharge, as Class B waters. Maine law, 38 M.R.S., Section 465(3) describes standards for classification of Class B waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2012 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the Aroostook River at the point of discharge as the Main stem between Washburn Gauge and confluence with Presque Isle Stream (Assessment Unit ID #ME0101000412 _148R) as, "*Category 2: Rivers and Streams Attaining Some Designated Uses – Insufficient Information for Other Uses*."

The Report lists all of Maine's fresh waters as, "Category 4-A: Waters Impaired by Atmospheric Deposition of Mercury." Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, "All freshwaters are listed in Category 4A (Total Maximum Daily Load (TMDL) Completed) due to USEPA approval of a Regional Mercury TMDL." Maine has a fish consumption advisory for fish taken from all freshwaters due to mercury. Many fish from any given waters do not exceed the action level for mercury. However, because it is impossible for someone consuming a fish to know whether the mercury level exceeds the action level, the Maine Department of Health and Human Services decided to establish a statewide advisory for all freshwater fish that recommends limits on consumption.

Maine has already instituted statewide programs for removal and reduction of mercury sources. Pursuant to 38 M.R.S. § 420(1-B)(B), "a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11." Pursuant to 06-096 CMR 519, the Department has established interim monthly average and daily maximum mercury concentration limits and reporting requirements for this facility.

The Department has no information that the discharge from the permittee, as conditioned, causes or contributes to non-attainment of applicable Class B water quality standards.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average discharge flow limitation of 0.283 MGD based on the monthly average dry weather design capacity of the facility, and a daily maximum discharge flow reporting requirement to assist in compliance evaluations.

A review of the monthly average flow data as reported on the Discharge Monitoring Reports (DMRs) submitted to the Department for the period December 2011- September 2016 indicates the permittee has been in compliance with the monthly average flow limit 99% of the time (1 excursion) as values have been reported as follows:

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

Flow

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.283	0.02 – 0.36	0.096
Daily Maximum	Report	0.04 – 1.44	0.257

b. Dilution Factors: The Department established applicable dilution factors for the discharge in accordance with freshwater protocols established in *Surface Water Toxics Control Program,* 06-096 CMR 530 (last amended March 21, 2012). The previous permitting action established dilution factors based on the 0.283 MGD flow limit to ensure that water quality-based limits are protective of receiving water quality on a year-round basis.

Acute: 1Q10 = 122 cfs
61 cfs[(1)] $\Rightarrow \frac{(61 \text{ cfs})(0.6464) + 0.283 \text{ MGD}}{0.283 \text{ MGD}} = 140{:}1$

Chronic: 7Q10 = 140 cfs $\Rightarrow \frac{(140 \text{ cfs})(0.6464) + 0.283 \text{ MGD}}{0.283 \text{ MGD}} = 321{:}1$

Harmonic Mean = 868 cfs $\Rightarrow \frac{(868 \text{ cfs})(0.6464) + 0.283 \text{ MGD}}{0.283 \text{ MGD}} = 1{,}984{:}1$

The critical low flows cited above for the Aroostook River were recalculated by the Department based on a statistical evaluation of historic river gauge data through 2015 from the United States Geological Survey (USGS) gauge at Washburn.

Footnotes:

(1) The Department has determined that mixing of the effluent with the receiving water is complete and rapid. Based on guidance from the DEA in the previous permitting action, the 1Q10 low river flow value utilized in the acute dilution calculation is based on a value that is equivalent to one-half the prorated river gage flow value due to the presence of an island in the river at the point of discharge (see attached map). DEA further recommended that acute evaluations be based on this 1Q10 value rather than the default stream design flow of ¼ of the 1Q10 in accordance with Department rule Chapter 530 Section 4.B.1.

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

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): The previous permitting action established, and this permitting action carries forward, technology-based monthly and weekly average BOD_5 and TSS concentration limits of 30 mg/L and 45 mg/L, respectively, based on secondary treatment requirements of Department rule, 06-096 CMR, Chapter 525(3)(III). The previous permitting action established, and this permitting action carries forward, technology-based daily maximum BOD_5 and TSS concentration limits of 50 mg/L based on a Department best professional judgment (BPJ) of best practicable treatment (BPT). This permitting action also carries forward the previously established monitoring frequencies of once per week (1/Week) for both BOD and TSS.

Department rule 06-096 CMR Chapter 523(6)(f) states that all pollutants limited in permits must have limitations, standards or prohibitions expressed in terms of mass. The previous permitting action established, and this permitting action is carrying forward, monthly average, weekly average, and daily maximum mass limits based on calculations using the average design flow for the facility of 0.283 MGD and the appropriate concentration limits as follows:

Monthly Average Mass Limit: (30 mg/L)(8.34 lbs./gallon)(0.283 MGD) = 71 lbs./day
Weekly Average Mass Limit: (45 mg/L)(8.34 lbs./day)(0.283 MGD) = 106 lbs./day
Daily Maximum Mass Limit: (50 mg/L)(8.34 lbs./day)(0.283 MGD) = 118 lbs./day

It is noted that in Special Conditions (A) (1) of the 2011 permitting action the monthly average mass limit for BOD_5 and TSS were incorrectly stated at 76 lbs. / day. This permitting action correctly identifies the monthly average mass limit for BOD_5 and TSS as 71 lbs. / day as demonstrated in the above calculation.

The previous permitting action established, and this permitting action carries forward, a requirement to achieve a minimum 30-day average removal of 85 percent for BOD_5 and TSS pursuant to Department rule, 06-096 CMR Chapter 525(3)(III)(a&b)(3) as a 12-month rolling average.

A review of the monthly average flow data as reported on the Discharge Monitoring Reports submitted to the Department for the period December 2011 – September 2016 indicates values have been reported as follows:

BOD mass (DMRs = 54)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	71	3 – 56	13
Weekly Average	106	4 – 101	24
Daily Maximum	118	4 – 101	24

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

BOD concentration (DMRs = 54)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	30	7 - 32	16
Weekly Average	45	8 – 43	22
Daily Maximum	50	8 – 43	22

TSS mass (DMRs = 54)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	71	1 - 44	10
Weekly Average	106	2 – 172	22
Daily Maximum	118	2 – 172	22

TSS concentration (DMRs = 54)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	30	2 - 33	10
Weekly Average	45	2 – 44	15
Daily Maximum	50	2 – 44	15

d. Settleable Solids: The previous permitting action established, and this permitting action carries forward, a technology-based daily maximum concentration limit of 0.3 ml/L for settleable solids, which is considered a best practicable treatment limitation (BPT) for secondary treated wastewater. This permitting action also carries forward the previously established once per week (1/Week) minimum monitoring frequency requirement.

A review of the monthly Discharge Monitoring Report (DMR) data for the period December 2011 – September 2016 indicates settleable solids have been reported as follows:

Settleable solids concentration (DMRs 54)

Value	Limit (ml/L)	Range (ml/L)	Average (ml/L)
Daily Maximum	0.3	<0.1 - 0.1	<0.1

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

e. *Escherichia coli* bacteria: The previous permitting action established, and this permitting action carries forward, seasonal monthly average and daily maximum *Escherichia coli* bacteria limitations of 64 colonies/100 ml (geometric mean) and 427 colonies/100 ml (instantaneous), respectively, that are in effect between May 15 and September 30, inclusive, of each year.

During calendar year 2005, Maine's Legislature approved a new daily maximum water quality standard of 236 colonies/100 ml for Class B and Class C waters. The Department has determined that end-of-pipe limitations for the instantaneous concentration standard of 427 colonies/100 mL will be achieved through available dilution of the effluent with the receiving waters and need not be revised in MEPDES permits for facilities with adequate dilution (at least 1.1:1 for facilities in Class B waters).

A review of the bacterial testing data as reported on the monthly DMRs for the period of December 2011- September 2016 (n=21) indicates the permittee to have been in compliance with the permit limits 100% of the time. A statistical summary of the reported *E. coli* bacteria test results is as follows:

***E. coli* Bacteria**

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	64	1 – 12	3
Daily Maximum	427	1 – 145	19

This permitting action is carrying forward the seasonal, 1/Week monitoring and reporting frequency.

f. Total Residual Chlorine (TRC): The previous permitting action established a daily maximum BPT-based concentration limit of 1.0 mg/L as well as a minimum monitoring frequency requirement of once per day. The Department specifies TRC limitations in order to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. The Department imposes the more stringent of either water quality-based or BPT-based limits. End-of-pipe acute and chronic water quality-based concentration thresholds may be calculated as follows:

Criterion		Dilution Factors	Calculated Threshold
Acute	0.019 mg/L	140:1	2.7 mg/L
Chronic	0.011 mg/L	321:1	3.5 mg/L

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

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that must dechlorinate the effluent in order to consistently achieve compliance with water quality based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. The permittee conducts seasonal treatments of effluent with chlorine to aid in compliance with E. coli limitations. This permitting action carries forward the daily maximum BPT-based concentration limit of 1.0 mg/L as it is more stringent than the water quality-based thresholds of 2.7 mg/L (acute) and 3.5 mg/L (chronic) as calculated above. Although bacteria limitations are seasonal and apply between May 15 and September 30 of each year, the facility must monitor and report TRC during any period that chlorine-based compounds are in use at the facility because chlorine compounds are toxic at all times of the year.

A summary of TRC data as reported on the monthly DMRs for the period of December 2011 – September 2016 (n=21) is as follows:

Total residual chlorine

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily Maximum	1.0	0.37 – 1.0	0.66

This permitting action carries forward the minimum monitoring requirement of five times per week (5/Week).

g. pH: The previous permitting action established and this permit carries forward a technology based pH range limitation of 6.0 – 9.0 standard units pursuant to 06-096 CMR 525(3)(III)(c) along with a monitoring frequency of five times per week (5/Week). A review of the pH values from December 2011 - September 2016 (n=54) indicates that the results ranged from 6.25 to 8.2 standard units.

pH (N = 54)

Value	Limit (su)	Minimum (su)	Maximum (su)
Range	6.0 – 9.0	6.25	8.2

h. Mercury: Pursuant to 38 M.R.S. § 420 and 38 M.R.S. § 413 and 06-096 CMR 519, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL # W007610-59-B-R by establishing interim monthly average and daily maximum effluent concentration limits of 5.2 parts per trillion (ppt) and 7.8 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury.

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

38 M.R.S. § 420(1-B)(B)(1) provides that a facility is not in violation of the Ambient Water Quality Criteria (AWQC) for mercury if the facility is in compliance with an interim discharge limit established by the Department. A review of the Department's database for the period December 2011 through September 2016 is as follows:

Mercury (n = 5)

Value	Limit (ppt)	Range (ppt)	Mean (ppt)
Monthly Average	5.2	2.39 – 6.0	3.4
Daily Maximum	7.8		

On February 6, 2012, the Department issued a minor revision to amend the minimum monitoring frequency requirement from four times per year to once per year pursuant to 38 M.R.S. § 420(1-B)(F). This minimum monitoring frequency is carried forward in this permitting action. See **Attachment D** of this Fact Sheet for a summary of mercury test results.

i. WET, Priority Pollutant, and Analytical Chemistry Testing: 38 M.R.S. § 414-A and 38 M.R.S. § 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.

06-096 CMR 530(2)(A) states, *"…all licensed dischargers of industrial process wastewater or domestic wastes discharging to surface waters of the State must meet the testing requirements of this section. Dischargers of other types of wastewater are subject to this subsection when and if the Department determines that toxicity of effluents may have reasonable potential to cause or contribute to exceedances of narrative or numerical water quality criteria."*

Dischargers are categorized based on the dilution of the receiving water and the potential risk of toxic contamination. The four categories for dischargers are as follows:

Level I	Chronic dilution factor of <20:1
Level II	Chronic dilution factor of ≥20:1 but <100:1.
Level III	Chronic dilution factor ≥100:1 but <500:1 or >500:1 and Q ≥1.0 MGD
Level IV	Chronic dilution >500:1 and Q ≤1.0 MGD

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

Based on the criteria, the permittee's facility is considered a Level III discharger as the chronic dilution of the receiving water is 321:1 and the permitted flow is equal to or less than 1.0 MGD.

Using the categorization criteria as stated above, and pursuant to 06-096 CMR 530 (1)(D)(1), routine screening and surveillance level testing requirements are as follows:

Screening level testing – Beginning twenty-four (24) months prior to permit expiration and lasting through twelve (12) months prior to permit expiration (fourth year of the permit) 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 – Waived pursuant to Department rule 06-096 CMR, Chapter 530(D)(3)(b).

Level	WET Testing	Priority pollutant testing	Analytical chemistry
III	None required	None required	None required

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 E** of this Fact Sheet for a summary of the WET test results and **Attachment F** 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 exceedance 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 exceedance of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*"

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

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.*"

WET evaluation

On 10/24/16, 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 the acute or chronic critical ambient water quality criteria (AWQC) thresholds (0.36% and 0.31% – mathematical inverse of the modified acute dilution factor 140:1 and the chronic dilution factor 321:1).

Given the absence of exceedances 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, this permit is carrying forward the previously established requirement for the permittee to only conduct screening level testing for both the water flea and the brook trout. Testing must be conducted in the 24 to12-month period (year 4 of the permit) 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 G, *06-096 CMR 530(2)(D)(4) Statement For Reduced/Waived Toxics Testing* of this permit, the permittee must annually submit to the Department a written statement evaluating its current status for each of the conditions listed.

i. Lagoon Under-Drain and Ground Water Well Monitoring: The previous permitting action established lagoon under-drain (Outfall 002A) and ground water monitoring well (MW1A) monitoring and reporting requirements. The basis for these monitoring requirements as stated in the previous permit was that "Site permit L-015831-29-A-N issued by the Department on June 28, 1989 required certain ground water monitoring in order to monitor the effects of lagoon leakage on the ground water quality. The parameters and monitoring frequencies are being carried forward in this permitting action.

A review of the lagoon under-drain data on record with the Department for the period December 2011- September 2016 (applicable monitoring months only) demonstrates no upward or downward trends indicating the lagoons remain secure. Monitoring results as summarized in Table 1 below.

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

Outfall #002A

Parameter	Range	Arithmetic Mean	Sample Size (n)
Flow, gallons/minute	1 - 50	18.7	13
Conductivity, umhos/cm	104- 375	275	13
Temperature, ˚C	10.5 – 18.2	14	13
Fecal Coliform Bacteria, #colonies/100ml	0 - 10	0.9	13

A review of the ground water monitoring well data on record with the Department for the period December 2011- September 2016 (applicable monitoring months only) demonstrates no upward or downward trends indicating ground water quality is not impacted by any lagoon leakage. Monitoring results as summarized in Table 2 below.

MW1A

Parameter	Range	Arithmetic Mean	Sample Size (n)
Conductivity, umhos/cm	193 - 280	246	5
Temperature, ˚C	7.9 – 10.7	9.4	5
pH, standard units	4.7 – 6.7	6.6	5
Nitrate (as N), mg/L	0.50 – 1.0	0.9	5
Total Sodium (as Na), mg/L	3.05 – 4.02	3.4	5
Chloride (as Cl), mg/L	3.8 – 5.5	4.6	5

Footnotes:

(1) The USEPA has established a primary maximum contaminant level (MCL) for nitrate which is the highest level of a contaminant allowed in drinking water and is an enforceable standard. The USEPA has established secondary drinking water standards (SDWS) for certain pollutants, which are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. The SDWS for chloride is 250 mg/L.

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

k. Total Phosphorus: *Waste Discharge License Conditions,* 06-096 CMR 523 specifies that water quality based limits are necessary when it has been determined that a discharge has a reasonable potential to cause or contribute to an excursion above any State water quality standard including State narrative criteria.[1] In addition, 06-096 CMR 523 specifies that water quality based limits may be based upon criterion derived from a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: USEPA's Water Quality Standards Handbook, October 1983, risk assessment data, exposure data, information about the pollutant from the U.S. Food and Drug Administration, and current USEPA criteria documents.[2]

USEPA's Quality Criteria for Water 1986 (Gold Book) puts forth an in-stream phosphorus concentration goal of less than 0.100 mg/L in streams or other flowing waters not discharging directly to lakes or impoundments, to prevent nuisance algal growth. The use of the 0.100 mg/L Gold Book value is consistent with the requirements of 06-096 CMR 523 noted above for use in a reasonable potential (RP) calculation.

Based on the above rationale, the Department has chosen to utilize the Gold Book value of 0.100 mg/L. It is the Department's intent to continue to make determinations of actual attainment or impairment based upon environmental response indicators from specific water bodies. The use of the Gold Book value of 0.100 mg/L for use in the RP calculation will enable the Department to establish water quality based limits in a manner that is reasonable and that appropriately establishes the potential for impairment, while providing an opportunity to acquire environmental response indicator data, numeric nutrient indicator data, and facility data as needed to refine the establishment of site specific water quality based limits for phosphorus. This permit may be reopened during the term of the permit to modify any reasonable potential calculations, phosphorus limits, or monitoring requirements based on new site-specific data.

Two effluent samples from the permittee were obtained in the summer of 2014. The average effluent concentration of those samples was 3.2 mg/L (3,200 micrograms per liter (µg/L)) and, for this exercise, is considered representative of the discharge from the facility. Three upstream samples were taken between 7/23/2014 and 8/27/2014. The minimum value detected was 5.2µg/l and the highest was 7.7µg/L. For the calculation below, we will be using 0.008 mg/L.

Using the following calculation, the District does not have a reasonable potential to exceed the USEPA's Total P Ambient Water Quality Gold Book goal of 0.100 mg/L (100 µg/L), or the Department's draft ambient water quality criterion of 0.030 mg/L for phosphorus in rivers and streams not feeding lakes.

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[1] *Waste Discharge License Conditions,* 06-096 CMR 523(5)(d)(1)(i) (effective date January 12, 2001)
[2] 06-096 CMR 523(5)(d)(1)(vi)(A)

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

Reasonable Potential Analysis

$$Cr = \frac{QeCe + QsCs}{Qr}$$

Qe = effluent flow	=	0.283 MGD
Ce = average effluent concentration	=	3.2 mg/L
Qs = 7Q10 flow of receiving water	=	91 MGD
Cs = upstream concentration	=	0.008 mg/L
Qr = receiving water flow (91 MGD + 0.283 MGD)	=	91.283 MGD
Cr = receiving water concentration		

$$Cr = \frac{(0.283 \text{ MGD} \times 3.2 \text{ mg/L}) + (91 \text{ MGD} \times 0.008 \text{ mg/L})}{91.283 \text{ MGD}} = 0.018 \text{ mg/L}$$

Cr = 0.018 mg/L < 0.100 (EPA Gold Book) mg/L⇒ **No Reasonable Potential**
Cr = 0.018 mg/L < 0.030 (Maine Draft Criterion) mg/L ⇒ **No Reasonable Potential**

No effluent limitation for phosphorus will be established in this permitting action.

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 B classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the *Star Herald* newspaper on or about May 31, 2016. 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 must 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).

9. DEPARTMENT CONTACTS

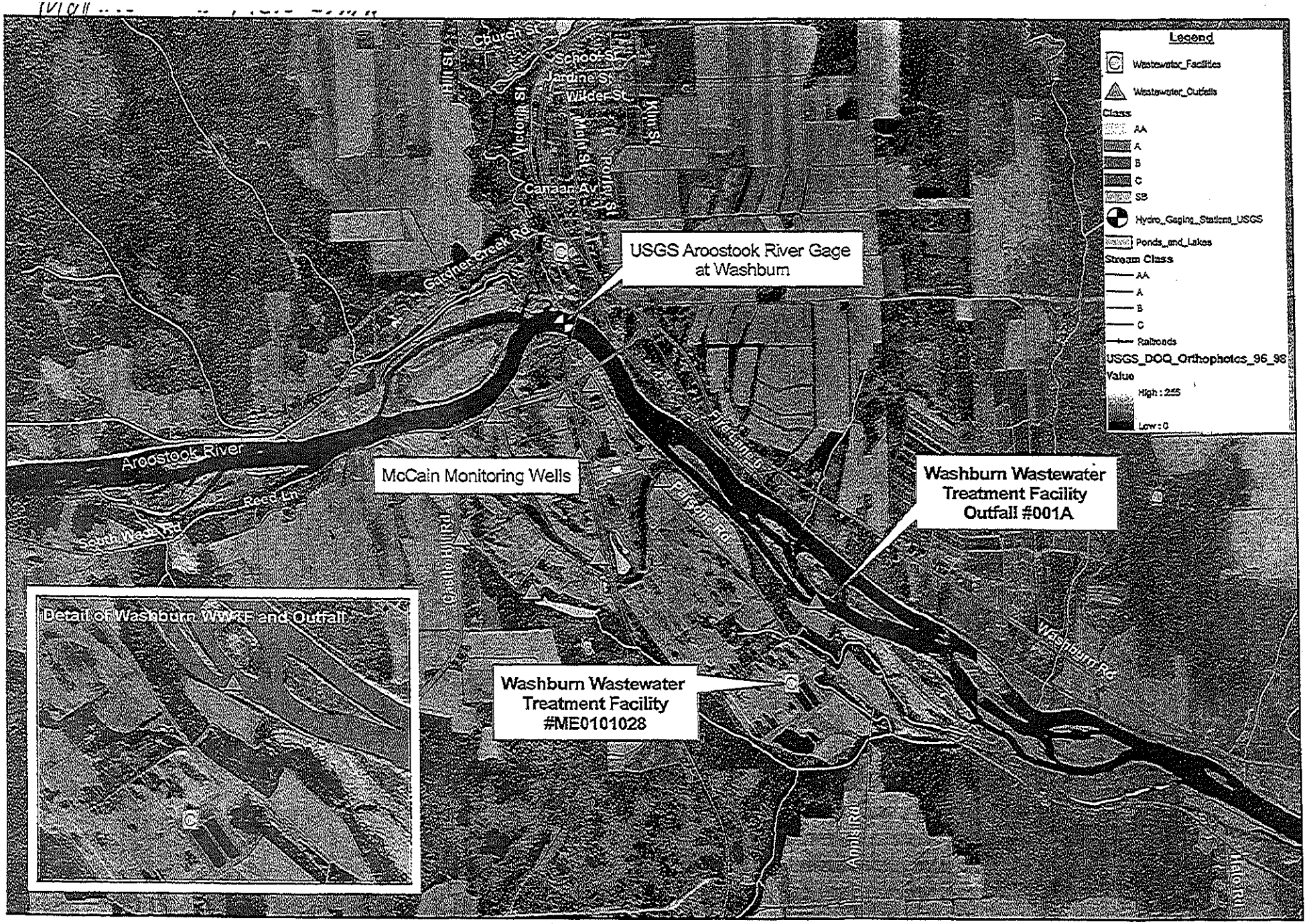
Additional information concerning this permitting action may be obtained from, and written comments sent to:

Rod Robert
Division of Water Quality Management
Bureau of Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 446-1875
e-mail: Rodney.Robert@maine.gov

10. RESPONSE TO COMMENTS

Reserved until the end of the formal 30-day public comment period.

ATTACHMENT A



Washburn Wastewater Treatment Facility on Aroostook River, Maine

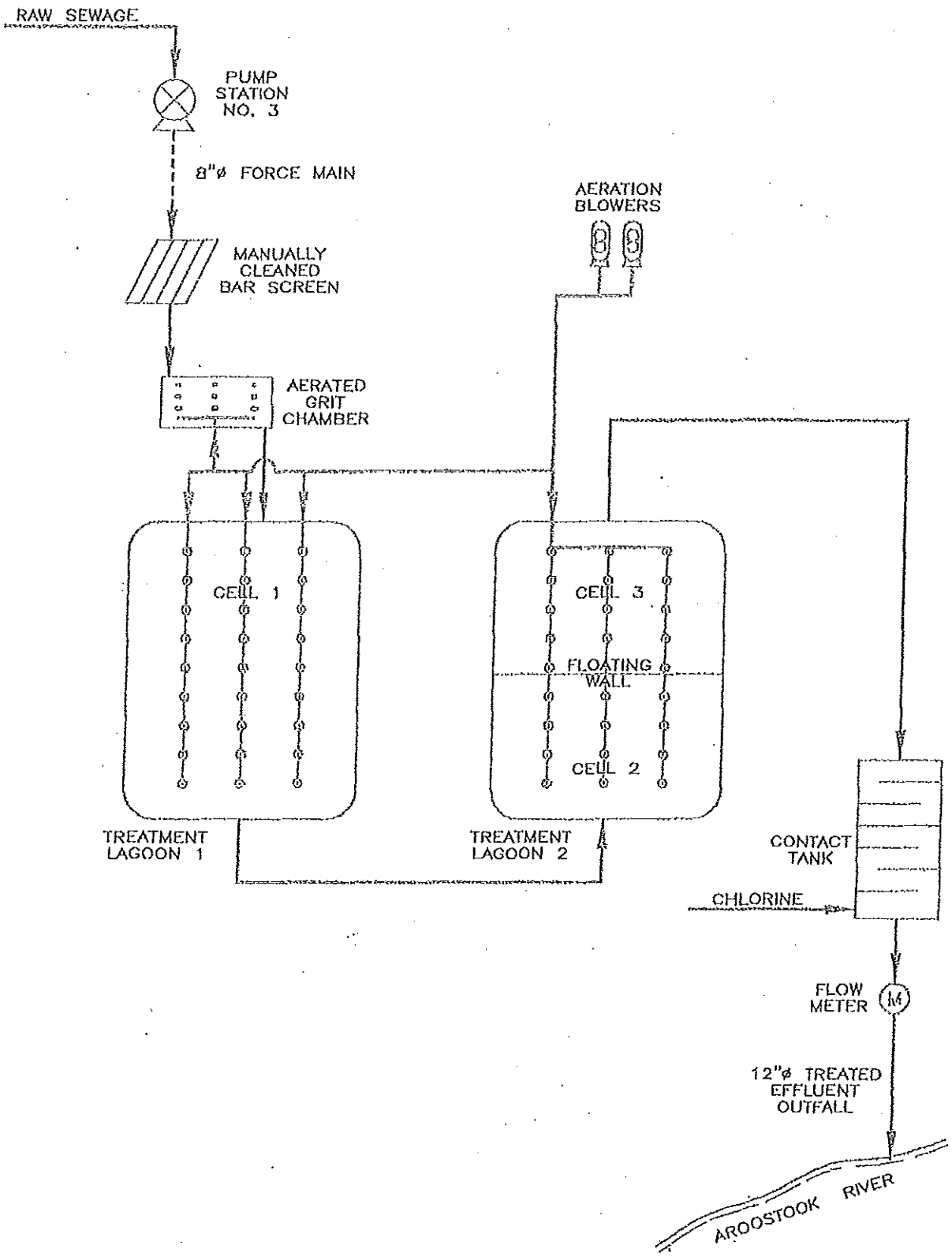
Map created by Maine DEP
November 2, 20

ATTACHMENT B

Attachment 2 A

FIGURE 1

WASHBURN'S WASTEWATER TREATMENT PROCESS UPGRADE



OLVER ASSOCIATES INC.

ENVIRONMENTAL ENGINEERS

280 MAIN STREET WINTERPORT, MAINE

ATTACHMENT C

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHAPTER 530.2(D)(4) CERTIFICATION

MEPDES#_____Facility Name_____

Since the effective date of your permit, have there been;		NO	YES Describe in comments section
1	Increases in the number, types, and flows of industrial, commercial, or domestic discharges to the facility that in the judgment of the Department may cause the receiving water to become toxic?	☐	☐
2	Changes in the condition or operations of the facility that may increase the toxicity of the discharge?	☐	☐
3	Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge?	☐	☐
4	Increases in the type or volume of hauled wastes accepted by the facility?	☐	☐

COMMENTS:

Name (printed): _____

Signature:_____Date: _____

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

This form may be used to meet the requirements of Chapter 530.2(D)(4). This Chapter requires all dischargers having waived or reduced toxic testing to file a statement with the Department describing changes to the waste being contributed to their system as outlined above. As an alternative, the discharger may submit a signed letter containing the same information.

Scheduled Toxicity Testing for the next calendar year

Test Conducted	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
WET Testing	☐	☐	☐	☐
Priority Pollutant Testing	☐	☐	☐	☐
Analytical Chemistry	☐	☐	☐	☐
Other toxic parameters [1]	☐	☐	☐	☐

Please place an "X" in each of the boxes that apply to when you will be conducting any one of the three test types during the next calendar year.

[1] This only applies to parameters where testing is required at a rate less frequently than quarterly.

ATTACHMENT D

MERCURY REPORT - Clean Test Only

Data Date Range: 02/Dec/1998-02/Dec/2016

Facility: WASHBURN WATER & SEWER DISTRICT **Permit Number:** ME0101028

Max (ng/l): 15.0000 **Average (ng/l):** 4.5498

Sample Date	Result (ng/l)	Lsthan	Clean
12/20/1999	3.20	N	T
01/13/2000	3.50	N	T
01/27/2000	4.30	N	T
03/01/2000	5.30	N	T
04/06/2000	5.70	N	T
08/08/2000	2.70	N	T
10/30/2000	2.50	N	T
12/19/2000	4.00	N	T
04/10/2001	9.20	N	T
07/30/2001	2.70	N	T
10/30/2001	1.10	N	T
01/09/2002	3.50	N	T
04/11/2002	12.00	N	T
06/26/2002	2.80	N	T
10/22/2002	1.00	Y	T
12/31/2002	2.60	N	T
03/17/2003	7.10	N	T
08/21/2003	1.00	Y	T
10/31/2003	3.30	N	T
12/31/2003	3.20	N	T
03/09/2004	3.70	N	T
06/28/2004	3.20	N	T
08/30/2004	3.60	N	T
01/24/2005	15.00	N	T
04/27/2005	6.20	N	T
05/18/2005	3.90	N	T
07/13/2005	12.00	N	T
08/12/2005	6.60	N	T
08/29/2005	3.93	N	T
09/28/2005	5.32	N	T
11/29/2005	5.43	N	T
03/06/2006	10.40	N	T
05/08/2006	6.18	N	T
07/16/2006	11.00	N	T
10/26/2006	7.71	N	T
12/31/2006	2.75	N	T
04/17/2007	5.40	N	T
06/12/2007	1.84	N	T
09/18/2007	4.06	N	T
10/31/2007	7.60	N	T
08/22/2008	4.80	N	T
10/03/2008	3.60	N	T
12/31/2008	1.90	N	T
03/09/2009	3.80	N	T
06/29/2009	5.60	N	T
10/29/2009	2.80	N	T
12/31/2009	3.80	N	T
05/03/2010	2.31	N	T
07/22/2010	2.77	N	T

09/27/2010	2.04	N	T
12/28/2010	2.82	N	T
03/02/2011	2.20	N	T
05/23/2011	2.90	N	T
07/20/2011	6.50	N	T
10/12/2011	3.20	N	T
01/25/2012	2.39	N	T
09/12/2013	2.44	N	T
11/19/2014	2.88	N	T
06/22/2015	6.00	N	T
09/28/2016	1.72	N	T

ATTACHMENT E

WET TEST REPORT

Data for tests conducted for the period

02/Dec/2011 -02/Dec/2016

WASHBURN NPDES= ME010102 Effluent Limit: Acute (%) = 0.357 Chronic (%) = 0.312

Species	Test	Percent	Sample date	Critical %	Exception	RP
TROUT	A_NOEL	50	08/09/2016	0.357		
TROUT	C_NOEL	50	08/09/2016	0.312		
WATER FLEA	A_NOEL	100	08/09/2016	0.357		
WATER FLEA	C_NOEL	25	08/09/2016	0.312		

FACILITY PRIORITY POLLUTANT DATA REPORT

Data Date Range: 13/Oct/2011 - 13/Oct/2016

Showing all data

Facility name: **WASHBURN** Permit Number: **ME0101028**

Parameter: ALUMINUM	**Test date**	**Result (ug/l)**	**Lsthan**
	06/21/2012	73.000	N
	05/29/2014	60.000	Y
	07/17/2014	60.000	Y
	05/26/2015	60.000	Y
	02/16/2016	60.000	Y
Parameter: AMMONIA	**Test date**	**Result (ug/l)**	**Lsthan**
	02/16/2016	22000.000	N
Parameter: ARSENIC	**Test date**	**Result (ug/l)**	**Lsthan**
	02/16/2016	1.000	Y
Parameter: CADMIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	02/16/2016	0.200	Y
Parameter: CHROMIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	02/16/2016	1.000	Y
Parameter: COPPER	**Test date**	**Result (ug/l)**	**Lsthan**
	06/21/2012	89.000	N
	08/03/2012	13.500	N
	08/09/2012	127.000	N
	09/27/2012	38.200	N
	10/02/2012	30.300	N
	10/12/2012	9.160	N
	11/30/2012	29.400	N
	12/20/2012	11.700	N
	01/17/2013	15.200	N
	02/14/2013	15.900	N
	03/07/2013	14.800	N
	04/18/2013	32.600	N
	05/22/2013	17.800	N
	07/31/2013	9.100	N
	08/15/2013	6.720	N
	10/24/2013	5.350	N
	12/02/2013	7.200	N
	01/09/2014	9.820	N
	02/20/2014	6.580	N
	03/20/2014	12.800	N
	04/28/2014	4.210	N
	05/29/2014	4.150	N
	07/17/2014	4.710	N
	10/16/2014	5.010	N
	11/20/2014	6.450	N
	12/19/2014	5.000	N
	01/29/2015	5.060	N
	02/19/2015	8.790	N
	04/17/2015	8.020	N
	05/26/2015	4.140	N

Facility name: **WASHBURN** Permit Number: **ME0101028**

	06/19/2015	7.540	N
	07/30/2015	4.680	N
	09/03/2015	2.630	N
	09/13/2015	2.870	N
	11/30/2015	12.500	N
	12/17/2015	8.400	N
	01/07/2016	9.730	N
	02/16/2016	9.300	N
Parameter: CYANIDE TOTAL	**Test date**	**Result (ug/l)**	**Lsthan**
	02/16/2016	5.000	Y
Parameter: LEAD	**Test date**	**Result (ug/l)**	**Lsthan**
	02/16/2016	0.288	N
Parameter: MERCURY	**Test date**	**Result (ug/l)**	**Lsthan**
	01/25/2012	0.002	N
	09/12/2013	0.002	N
	11/19/2014	0.003	N
	06/22/2015	0.006	N
Parameter: NICKEL	**Test date**	**Result (ug/l)**	**Lsthan**
	02/16/2016	1.320	N
Parameter: SILVER	**Test date**	**Result (ug/l)**	**Lsthan**
	02/16/2016	0.200	Y
Parameter: ZINC	**Test date**	**Result (ug/l)**	**Lsthan**
	02/16/2016	16.500	N