STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

May 27, 2026

Mr. Jonathan Judkins
Loring Development Authority
Limestone, ME 04750

Sent via electronic mail
Delivery confirmation requested

RE: *Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0102581*
Maine Waste Discharge License (WDL) Application #W007926-5S-H-R
Proposed Draft MEPDES Permit Renewal

Dear Mr. Judkins,

Enclosed is a **proposed draft** MEPDES renewal permit and Maine WDL which the Department proposes to issue 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.

By copy of this letter, the Department is requesting comments on the proposed draft permit from various state and federal agencies and from any other parties who have notified the Department of their interest in this matter.

The comment period begins today, Wednesday, May 27, 2026, and ends on Friday, June 26, 2026. All comments on the proposed draft permit must be received in the Department of Environmental Protection office on or before the close of business **Friday, June 26, 2026.** Failure to submit comments in a timely fashion may result in the proposed draft/license permit document being issued as drafted.

Comments in writing should be submitted to my attention at the following address:

Maine Department of Environmental Protection
Bureau of Water Quality
Division of Water Quality Management
17 State House Station
Augusta, ME 04333-0017

If you have any questions regarding the matter, please feel free to call me at 207-458-8706 or email me at Bekah.Farmer@Maine.gov

Sincerely,

Bekah Farmer
Division of Water Quality Management
Bureau of Water Quality

Enclosure

cc: Laura Crossley, DEP
Gerard Charette, DEP
Wendy Garland, DEP
Scott Belair, DEP
Gregg Wood, DEP

Lori Mitchell, DEP
Michael Cobb, USEPA
Richard Carvalho, USEPA
Kathryn Rosenberg, USEPA
Shannon Hill, Mi'kmaq Nation
Sharri Venno, Houlton Band of Maliseet Indians
Steve Gagnon, MRWA
Chris Cossette, MRWA
Kristen Hebert, MRWA

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

IN THE MATTER OF

LORING DEVELOPMENT AUTHORITY	)	MAINE POLLUTANT DISCHARGE
d/b/a MAD DAM TREATMENT PLANT	)	ELIMINATION SYSTEM PERMIT
CARIBOU, AROOSTOOK COUNTY, ME	)	AND
DRINKING WATER TREATMENT PLANT	)	
ME0102581	)	WASTE DISCHARGE LICENSE
W007926-5S-H-R **APPROVAL**	)	**RENEWAL**

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

APPLICATION SUMMARY

On August 29, 2024, the Department accepted as complete for processing an application from LDA for the renewal of combination Waste Discharge License (WDL) #W007926-5S-G-R / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0102581, which was issued on July 3, 2019, for a five-year term. The 7/3/19 permit authorized a monthly average discharge of 0.080 million gallons per day (MGD) of filter cleaning (backwash) wastewater and settling tank wastewater for the Mad Dam Treatment Plant, a quasi-municipal drinking water treatment plant via Outfall #001A to the Little Madawaska River, Class B, in Caribou, Maine.

PERMIT SUMMARY

Terms and conditions: This permitting action is carrying forward all the terms and conditions from the previous permitting action and it is:

1. Revising footnotes in Special Condition B, *Effluent Limitations and Monitoring Requirements* to be consistent with other MEPDES permits subsequent to LDA's 2019 permit; and
2. Removing a requirement in Special Condition F, *Monitoring and Reporting* to submit a physical copy of data submitted electronically for the Discharge Monitoring Reports (DMRs), to be consistent with other MEPDES permits subsequent to LDA's 2019 permit.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated May 27, 2026, 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 above noted application of the LORING DEVELOPMENT AUTHORITY to discharge a monthly average discharge of 0.080 MGD of filter cleaning (backwash) wastewater and settling tank wastewater from a quasi-municipal drinking water treatment plant via Outfall #001A to the Little Madawaska River, Class B, in Caribou, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. *Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits*, revised July 1, 2002, copy attached.
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 from the effective 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 Department Rule *Concerning the Processing of Applications and Other Administrative Matters*, 06-096 C.M.R. Ch. 2(20)(A) (effective September 15, 2024)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS ____ DAY OF _____, 2026.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____

For MELANIE LOYZIM, Commissioner

Date of initial receipt of application: August 9, 2024

Date of application acceptance: August 29, 2024

This Order prepared by Bekah Farmer, BUREAU OF WATER QUALITY

SPECIAL CONDITIONS

A. 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 August 29, 2024; 2) the terms and conditions of this permit; and 3) only from Outfall #001A. Discharges of wastewater from any other point source(s) 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.

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge drinking water filter cleaning (backwash) wastewater, and settling tank wastewater from **Outfall #001A** to the Little Madawaska River. Such discharges are limited and must be monitored by the permittee as specified below[(1)]:

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	**Daily Maximum**	**Monthly Average**	**Daily Maximum**	**Measurement Frequency**	**Sample Type**
Flow *[50050]*	0.080 MGD *[03]*	Report MGD *[03]*	---	---	2/Month[(2)] *[2/30]*	Metered *[MT]*
TSS *[00530]*	20 lbs./day *[26]*	40 lbs./day *[26]*	30 mg/L *[19]*	60 mg/L *[19]*	2/Month[(2)] *[02/30]*	Composite[(3)] *[CP]*
Settleable Solids *[00545]*	---	---	---	0.3 mL/L *[25]*	2/Month[(2)] *[02/30]*	Composite[(3)] *[CP]*
pH *[00400]*	---	---	---	6.0 – 9.0 SU *[12]*	2/Month[(2)] *[02/30]*	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).

FOOTNOTES: See Page 5 of this permit for applicable footnotes

SPECIAL CONDITIONS

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

FOOTNOTES:

1. **Sampling** – Any change in sampling location must be approved by the Department in writing. The permittee must conduct sampling and analysis in accordance with; a) methods approved by 40 Code of Federal Regulations (C.F.R.) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 C.F.R. 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 for wastewater. Samples that are sent to a POTW pursuant to *Waste discharge licenses*, 38 M.R.S. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Accreditation Rules*, 10-144 C.M.R. Ch. 263 (last amended March 15, 2023). Laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of 10-144 C.M.R. Ch. 263. If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 C.F.R. 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.

   In accordance with 40 C.F.R. § 122.44(i)(1)(iv), the permittee must monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 or required under 40 C.F.R. chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) The method has the lowest ML of the analytical methods approved under 40 C.F.R. Part 136 or required under 40 C.F.R. chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers either to the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in the following ways: they may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

   Sampling Locations

   All effluent monitoring must be conducted at a location following the last treatment unit in the treatment process, including dechlorination, as to be representative of end-of-pipe effluent characteristics.

2. **Twice per Month Monitoring** − Monitoring required at a minimum frequency of 2/month must be collected no less than 14 days between sampling events, unless specifically authorized by the Department's compliance inspector.

3. **Composite samples** − Samples must consist of 24-hour composites collected with an automatic composite sampler. Alternatively, when weather conditions and/or equipment prevents automatic compositing and upon Department

SPECIAL CONDITIONS

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

notification, the permittee may manually composite a minimum of eight grab samples collected at one-hour intervals during the working day at the facility. The permittee must indicate the type of sample collected on the DMR.

C. 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 usages 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 usages designated by the classification of the receiving waters.
3. The permittee must not discharge effluent that imparts color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their classification.
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.

D. 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 to 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.

E. OPERATIONS AND 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.

SPECIAL CONDITIONS

E. OPERATIONS AND MAINTENANCE (O&M) PLAN (cont'd)

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.

F. 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 (DMR) 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 electronically to the Department in support of the electronic DMR may be attached to the electronic DMR and must be submitted no later than midnight on the 15th day of the month following the completed reporting period.

G. REOPENING OF PERMIT FOR MODIFICATION

In accordance with 38 M.R.S. § 414-A(5) and upon evaluation of the tests results specified by 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 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 monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

H. 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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

DATE:	**May 27, 2026**
PERMIT NUMBER:	**ME0102581**
WASTE DISCHARGE LICENSE:	**W007926-5S-H-R**
NAME AND ADDRESS OF APPLICANT:	**LORING DEVELOPMENT AUTHORITY** **154 DEVELOPMENT DRIVE, SUITE F** **LIMESTONE, MAINE 04750**
COUNTY:	**AROOSTOOK**
NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):	**MAD DAM TREATMENT PLANT** **225 MAD DAM ROAD** **CARIBOU, MAINE 04736**
RECEIVING WATER CLASSIFICATION:	**LITTLE MADAWASKA RIVER/CLASS B**
COGNIZANT OFFICIAL CONTACT INFORMATION:	**MR. JONATHAN JUDKINS** **INTERIM CEO/PRESIDENT** **(207) 328-7005** **JJUDKINS@loring.org**
ALTERNATE CONTACT:	**KRISTEN HEBERT** **CONTRACTOR** **(207) 841-8920** **KHEBERT@WATERSHEDMAINE.COM**

1. APPLICATION SUMMARY

a. **Application**: On August 29, 2024, the Department accepted as complete for processing an application from Loring Development Authority (LDA) for the renewal of combination Waste Discharge License (WDL) #W007926-5S-G-R/Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0102581, which was issued on July 3, 2019. The 7/3/2019 permit authorized a monthly average discharge of 0.080 million gallons per day (MGD) of filter cleaning (backwash) wastewater and settling tank wastewater for a quasi-municipal drinking water treatment plant via Outfall #001A to the Little Madawaska River, Class B, in Caribou, Maine.

b. **Source Description**: The LDA operates a drinking water treatment plant on the eastern shore of the Little Madawaska River in Caribou, Maine to supply potable water to a population of approximately 1,000 people living and/or working on the former Loring Air Force base in Limestone, Maine. Construction of the facility was completed in 1958. The drinking water treatment facility was designed to treat a monthly average of up to 2.25 million gallons of river water per day, although current potable water production is significantly lower. The LDA obtains raw water from an impoundment created by the Little Madawaska River Dam. A 16-inch diameter intake pipe located approximately 10-15 feet from the eastern

1. APPLICATION SUMMARY (cont'd)

shore of the Little Madawaska River serves as the raw water conduit to the treatment facility. The intake pipe is covered by various sized rock that serves as a primary filter for coarse material present in the river.

A map showing the location of the treatment facility and the receiving water is included as **Attachment A** of this fact sheet.

Raw water is pumped to two (2) 250,000-gallon subsurface settling/flocculation tanks where an aluminum-based coagulant is added to promote flocculation and settling of solids. The flow is then evenly distributed to three (3) downflow dual media filter beds. The facility has four filter beds, although it only uses three. Following filtration, the flow is conveyed to a 140,000-gallon clearwell. Filtered water is pumped from the clearwell and treated with hypochlorite and hydrofluorosilicic acid, chemicals that do not come into contact with the wastewater stream.

The sand filter beds must be periodically cleaned through filter backwash procedures to remove the accumulation of filtered material and to ensure proper and efficient function of the filter media.

c. **Wastewater Treatment**: The facility generates wastewater from two distinct processes: 1) sand filter cleaning events that include a backwash cycle that is performed once every 50 hours of operation; and 2) settling/flocculation tank drain-down events that are performed twice a year, during the spring and the fall, on average. See **Attachment B** for a flow schematic.

Each filter cleaning cycle generates an average of 26,000 gallons of wastewater. Two of the three filter units are cleaned one time each month, on average. In addition to the weekly filter cleaning cycles, the facility also generates up to approximately 250,000 gallons of wastewater at a time from the yearly draining of the 250,000-gallon settling/ coagulation/ flocculation tank utilized during the treatment of the source waters. All wastewater generated from these processes is conveyed to an enclosed structure referred to as the coagulation building, which consists of a 40,000-gallon settling tank and a 400,000-gallon settling/flow equalization tank as described in the following paragraphs.

Filter cleaning cycles are initiated using the SCADA system. This procedure drains approximately 9,000 gallons of unfiltered or partially-filtered water remaining in a filter bed to the 40,000-gallon settling tank. After the filter bed has been drained, filtered water is pumped from the clearwell up through the filter bed (backwash) that starts low but reaches a maximum rate of 3,400 gallons per minute for a total of 10 to 12 minutes, which generates approximately 26,000 gallons of wastewater. Wastewater is pumped from the 40,000-gallon settling tank to one of two (2) settling/treatment lagoons. The lagoons were designed to settle solids and drain supernatant through an outfall to the Little Madawaska River.

Each of the two 250,000-gallon settling/coagulation/flocculation tanks are drained for cleaning and sludge removal once during the fall and once during the spring. The LDA alternates the tank cleaning events such that only one tank is drained for cleaning at a time. Wastewater generated during the tank draining sequence

1. APPLICATION SUMMARY (cont'd)

is conveyed to the 400,000-gallon settling/flow equalization tank located within the coagulation building. The wastewater is pumped to one of the two lagoon cells for additional settling prior to discharge.

The LDA utilizes two sedimentation lagoon cells in parallel such that wastewater is discharged to only one cell at a time. Each cell measures approximately 260 feet long by 100 feet wide. The lagoons were constructed with a gravel based material. Each lagoon cell was designed so supernatant decants to an overflow weir and into a collection system comprised of 8-inch diameter PVC pipe material. The effluent collection system was designed to convey treated wastewater to the Little Madawaska River in Caribou for discharge. Outfall #001A terminates in a concrete headwall approximately 50 feet inland from the normal high water line of the river. The outfall structure was designed such that wastewater exits the pipe and flows through a vegetated swale which serves as a conduit to the river. Based on this design, wastewater discharge from Outfall #001A is not considered to achieve complete and rapid mixing with the receiving water.

The LDA maintains an 18-inch diameter emergency overflow pipe, which is connected to the 40,000-gallon settling tank basin located within the coagulation building and a 24-inch diameter emergency overflow pipe, which is connected to the 400,000-gallon settling/flow equalization basin. The pipes are designed to capture wastewater that exceeds the capacity of the two settling basins and convey the waste for discharge, via a vegetated swale, to the Little Madawaska River at a location immediately adjacent to Outfall #001A. The LDA reported that there have been no known discharges via these emergency overflow pipes since the facility was constructed due, in part, to the ability to pump excess water directly to the treatment lagoons. Special Condition A of this permit, *Authorized Discharges*, prohibits the LDA from discharging wastewater from any other point source other than Outfall #001A and requires that the discharge from any other point source be reported to the Department in accordance with Standard Condition B(5), *Bypasses*, of this permit. This prohibition applies to the discharge of wastewater from either of the LDA's two emergency overflow pipes located in the coagulation building.

2. PERMIT SUMMARY

a. **Terms and Conditions**: This permitting action is carrying forward all the terms and conditions of the previous permitting action and it is:

1. Revising footnotes in Special Condition B, *Effluent Limitations and Monitoring Requirements* to be consistent with other MEPDES permits subsequent to LDA's 2019 permit; and

2. Removing a requirement in Special Condition F, *Monitoring and Reporting* to submit a physical copy of data submitted electronically for the Discharge Monitoring Reports (DMRs) to be consistent with other MEPDES permits subsequent to LDA's 2019 permit.

b. **History**: This section provides a summary of significant licensing actions and milestones that have been completed for LDA.

2. PERMIT SUMMARY (cont'd)

March 13, 1986 – The Department issued WDL #W006654-46-A-N to the Loring Air Force Base for the discharge of wastewater from four (4) separate outfall pipes with different effluent characteristics and receiving waters. The WDL permitted the discharge of 2.5 MGD of secondary treated sanitary wastewater via Outfall #001 to the Little Madawaska River, the discharge of an unspecified quantity of filter cleaning (backwash) wastewater via Outfall #002 to the Little Madawaska River, and the discharge of an unspecified quantity of treated storm water from an oil/water separator via Outfall #003 and Outfall #004 to Greenlaw Brook.

February 5, 1996 – The Department issued WDL #W007926-ZA-C-R to the Air Force Base Conversion Agency (AFBCA) for the daily maximum discharge of 0.08 MGD of filter cleaning backwash wastewater from a drinking water treatment plant to the Little Madawaska River in Caribou, Maine for a five-year term.

September 19, 2000 – The U.S. Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0090174 to the LDA for the daily maximum discharge of 0.08 MGD of filter cleaning backwash wastewater from a drinking water treatment plant to the Little Madawaska River via Outfall #001A for a five-year term. The permit also renewed authorization for the discharge of secondary treated sanitary wastewater to the Little Madawaska River via Outfall #001A and treated storm water from an oil/water separator to Greenlaw Brook via Outfall #003A and Outfall #004A.

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES permit program in Maine, excluding areas of special interest to Maine Indian Tribes. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System program and MEPDES permit #ME0102581 has been utilized as the primary reference number for this facility. On March 26, 2011, the USEPA authorized the Department to administer the MEPDES program in Indian territories of the Penobscot Nation and Passamaquoddy Tribe.

June 14, 2004 – The Department issued WDL #W007926-5S-D-R / MEPDES Permit #ME0102581 to the LDA for a five-year term. The permit authorized a discharge of 0.020 MGD.

April 15, 2009 – The Department issued WDL #W007926-5S-E-R / MEPDES Permit #ME0102581 to the LDA for a five-year term. The permit authorized a discharge of 0.08 MGD.

May 6, 2014 – The Department issued WDL #W007926-5S-F-R / MEPDES Permit #ME0102581 to the LDA for a five-year term. The permit authorized a discharge of 0.08 MGD.

July 3, 2019 – The Department issued WDL #W007926-5S-G-R / MEPDES Permit #ME0102581 to the LDA for a five-year term. The permit authorized a discharge of 0.08 MGD.

August 9, 2024 – LDA submitted a complete application to the Department to renew the MEPDES permit. The application was accepted for processing on

2. PERMIT SUMMARY (cont'd)

August 29, 2024 and was assigned WDL # W007926-5S-G-R / MEPDES #ME0102581.

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, requires 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 *Surface Water Toxics Control Program,* 06-096 C.M.R. Ch. 530, require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 C.M.R. Ch. 584 (last amended February 16, 2020), 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)(2)(c) classifies the Little Madawaska River, at the point of discharge, as Class B waters. *Standards for classification of fresh surface waters*, 38 M.R.S. § 465(2) describes the standards for Class B waters as follows:

3. Class B waters. Class B shall be the 3rd highest classification.

A. Class B waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired.

B. Class B waters must be of sufficient quality to support all aquatic species indigenous to those waters without detrimental changes in the resident biological community. The dissolved oxygen content of Class B waters may not be less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the one-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas. Between April 15th and October 31st, the number of Escherichia coli bacteria in these waters may not exceed a geometric mean of 64 CFU or MPN per 100 milliliters over a 90-day interval or 236 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval.

C. Discharges to Class B waters may not cause adverse impact to aquatic life in that the receiving waters must be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community.

4. RECEIVING WATER QUALITY STANDARDS (cont'd)

(1-A) For the purpose of allowing the discharge of aquatic pesticides or chemicals approved by the department and conducted by the department, the Department of Inland Fisheries and Wildlife or an agent of either agency to restore resident biological communities affected by an invasive species, the department may find that the discharged effluent will not cause adverse impact to aquatic life as long as the materials and methods used do not cause a significant loss of any nontarget species and allow restoration of nontarget species. The department may find that an unavoidable, temporary loss of nontarget species does not constitute a significant loss of nontarget species.

(2) For the purpose of allowing the discharge of aquatic pesticides approved by the department for the control of mosquito-borne diseases in the interest of public health and safety, the department may find that the discharged effluent will not cause adverse impact to aquatic life as long as the materials and methods used provide protection for nontarget species. When the department issues a license for the discharge of aquatic pesticides authorized under this subparagraph, the department shall notify the municipality in which the application is licensed to occur and post the notice on the department's publicly accessible website.

5. REASONABLE POTENTIAL

Pursuant to 33 U.S.C. § 1311(b)(1)(C) and 40 C.F.R. § 122.44(d)(1), NPDES permits must contain any requirements in addition to technology based effluent limitations (TBELs) that are necessary to achieve water quality standards established under 33 U.S.C. § 1311(b)(1)(C). In addition, limitations "must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard (WQS), including State narrative criteria for water quality," 40 C.F.R. § 122.44(d)(1)(i). To determine if the discharge causes, or has the reasonable potential to cause or contribute to an excursion above any WQS, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. [40 C.F.R. § 122.44(d)(1)(ii)].

If the permitting authority determines the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain water quality-based effluent limitations (WQBELs) for that pollutant [40 C.F.R. § 122.44(d)(1)(i)].

6. RECEIVING WATER QUALITY CONDITIONS

The State of Maine Department of Environmental Protection 2018/2020/2022 Integrated Water Quality Monitoring and Assessment Report (Report), prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the Little Madawaska River (Assessment Unit ID ME0101000413_145R01), which includes the receiving water at the point of discharge, as *Category 4-B: Rivers and Streams Impaired by Pollutants – Pollution Control Requirements Reasonably Expected to Result in Attainment* for polychlorinated biphenyls (PCBs). The comment field in the report states:

> *5/18/2015: Monitoring in 2012 showed that PCBs in fish tissue are still elevated. Prior to the 2014 cycle, this segment was incorrectly described as 'From source including Green Pond and Chapman Pit'. The fish consumption advisories, upon which the PCB cause of impairment of this segment is based, is for 'Little Madawaska River and tributaries from (Little) Madawaska Dam to Grimes Mill Road'; furthermore, Chapman Pit and Green Pond are located on Greenlaw Brook. In the 2014 cycle, the location description for this segment was updated to 'From (Little) Madawaska Dam to Grimes Mill Road, including tributaries (except Greenlaw Brook)'; the mapping was corrected and length updated from 20.5 to 31.7 miles. Chapman Pit and Green Pond were moved into the adjacent segment Greenlaw Brook, ME0101000413_145R02; for more details see the comment in that segment. Hazardous waste remediation project is complete (Superfund) - 4-B expected to attain standards. Erroneously listed for benthic invertebrates in 2006-8; biomonitoring results attained Class B in 2001, 2004 and 2008. Macroinvertebrate Cause removed in 2010; listing inadvertently included in 2010 report in Category 4-B.*

The Report also 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 4-A (Total Maximum Daily Load [TMDL] Completed) due to USEPA approval of a Regional Mercury TMDL in December 2007. Maine has a fish consumption advisory for fish taken from all freshwaters due to mercury. Many waters, and many fish from any given water, 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 recommending limits on consumption for all freshwater fish. Maine has instituted statewide programs for removal and reduction of mercury sources."

The Department has no information at this time that the discharge from the LDA, as permitted, will cause or contribute to the failure of the receiving water to meet designated uses of its ascribed classification.

The Department's Biological Monitoring Program has not conducted any sampling downstream of this facility to determine current water quality conditions.

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. **Flow**: The previous permitting action contained, and this permitting action is carrying forward, a monthly average discharge flow limitation and a daily maximum discharge flow reporting requirement of 0.080 MGD, which is considered representative of wastewater flows generated by this facility. This permitting action is maintaining the established minimum monitoring frequency requirement for discharge flow of twice per month based on Department best professional judgment (BPJ).

The Department reviewed Discharge Monitoring Reports (DMRs) that were submitted for the period of December 2020 through November 2025. A review of data indicates the following:

Flow (N = 60)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.08	0.00 – 0.02	0.01
Daily Maximum	Report	0.00 – 0.03	0.01

b. **Dilution Factors**: In accordance with 06-096 C.M.R. Ch. 530(4)(A), the department has determined the dilution flows for the Loring Development Authority's discharge using daily flow data from the USGS gauge on the Little Madawaska River (NWIS 01017290) for the 2008-2025 record period. For the monthly average design flow of 0.08 MGD, the dilution calculations are as follows:

Mod. Acute:
¼ Q10 = 3.65 cfs ⇒ [(3.65 cfs)(0.6464) + 0.080 MGD]/(0.080 MGD) = 30.5:1

Acute:
1Q10 = 14.6 cfs ⇒ [(14.6 cfs)(0.6464) + 0.080 MGD]/(0.080 MGD) = 119:1

Chronic:
7Q10 = 17.8 cfs ⇒ [(17.8 cfs)(0.6464) + 0.080 MGD]/(0.080 MGD) = 145:1

Human Health:
Harmonic Mean:=116 cfs⇒ [(116 cfs)(0.6464) + 0.080 MGD]/ (0.080 MGD) = 938:1

06-096 C.M.R. Ch. 530(4)(B)(1) states that analyses using numeric acute criteria for aquatic life must be based on one-fourth of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The regulation also states 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 proportion of the stream design, up to including all of it. The Loring Development Authority's outfall terminates above the high-water mark of the river; therefore, the discharge does not receive rapid and complete mixing with the receiving water. Consequently, the department is using the default stream flow of one-fourth of the 1Q10 in acute evaluations of this discharge.

c. **Total Suspended Solids (TSS)**: The previous permitting action contained, and this permitting action is carrying forward, monthly average and daily maximum concentration limits of 30 mg/L and 60 mg/L, respectively, based on Department BPJ of BPT for discharges from drinking water treatment facilities in Maine. The

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

previous permitting action contained, and this permitting action is carrying forward, monthly average and daily maximum mass limits of 20 lbs./day and 40 lbs./day, respectively, for TSS. The mass limits were derived using the concentration limits specified above, the established discharge flow limit of 0.080 MGD, and a conversion factor of 8.34 lbs./gallon of water as follows:

Monthly Average Mass: (30 mg/L)(8.34 lbs./gallon)(0.080 MGD) = 20 lbs./day

Daily Maximum Mass: (60 mg/L)(8.34 lbs./gallon)(0.080 MGD) = 40 lbs./day

This permitting action is carrying forward the established monitoring frequency requirement of twice per month based on best professional judgment.

A summary of TSS data as reported on the DMRs submitted to the Department for the period of December 2020 through November 2025 is as follows:

TSS Concentration (N = 60)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	< 2.5[(1)] – 3	< 2.5[(1)]
Daily Maximum	60	< 2.5[(1)] – 3	< 2.5[(1)]

TSS Mass (N = 60)

Value	Limit (lbs./day)	Range (lbs./day)	Average (lbs./day)
Monthly Average	20	0 – 1	0
Daily Maximum	40	0 – 1	0

Footnote 1: 2.5 mg/L is the standard detection limit for TSS.

d. **Settleable Solids**: The previous permitting action contained, and this permitting action is carrying forward, a daily maximum concentration limit of 0.3 mL/L for settleable solids, which is considered a BPT for discharges from drinking water treatment facilities in Maine. This permitting action is carrying forward the established monitoring frequency requirement of twice per month based on best professional judgment.

Settleable solids monitoring from DMRs submitted to the Department for the period of December 2020 through November 2025 showed a range of < 0.1 mL/L to 0.1 mL/L with an average of < 0.1 mL/L.

e. **pH**: The previous permitting action contained, and this permitting action is carrying forward, a pH range limit of 6.0 – 9.0 standard units (SU), which is considered BPT by the Department. This permitting action is carrying forward a minimum monitoring frequency requirement of twice per month for pH based on Department BPJ.

A summary of pH data as reported on the DMRs submitted to the Department for the period of December 2020 through November 2025 is as follows:

pH (N = 60)

Value	Limit (S.U.)	Range (S.U.)
Range	6.0 – 9.0	6.8 – 8.1

No excursions occurred during this period.

8. ANTI-BACKSLIDING

Federal regulation 40 C.F.R. § 122.44(l) contains the criteria for what is often referred to as the anti-backsliding provisions of the Federal Water Pollution Control Act (Clean Water Act). In general, the regulation states that except for provisions specified in the regulation, effluent limitations, standards, or conditions must be at least as stringent as the final effluent limitations, standards or conditions in the previous permit.

Applicable exceptions include: (1) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation and (2) information is available which was not available at the time of the permit issuance (other than revised regulations, guidance, or test methods) and which would justify the application of less stringent effluent limitations at the time of permit issuance. All limitations in this permit are equally or more stringent than those in the previous permit.

9. ANTI-DEGRADATION

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 Little Madawaska River to meet standards for Class B classification.

10. PUBLIC COMMENTS

Public notice of this application was made in the *Aroostook Republican* newspaper on or about August 21, 2024. 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 C.M.R. Ch. 522 (effective January 12, 2001).

11. DEPARTMENT CONTACTS

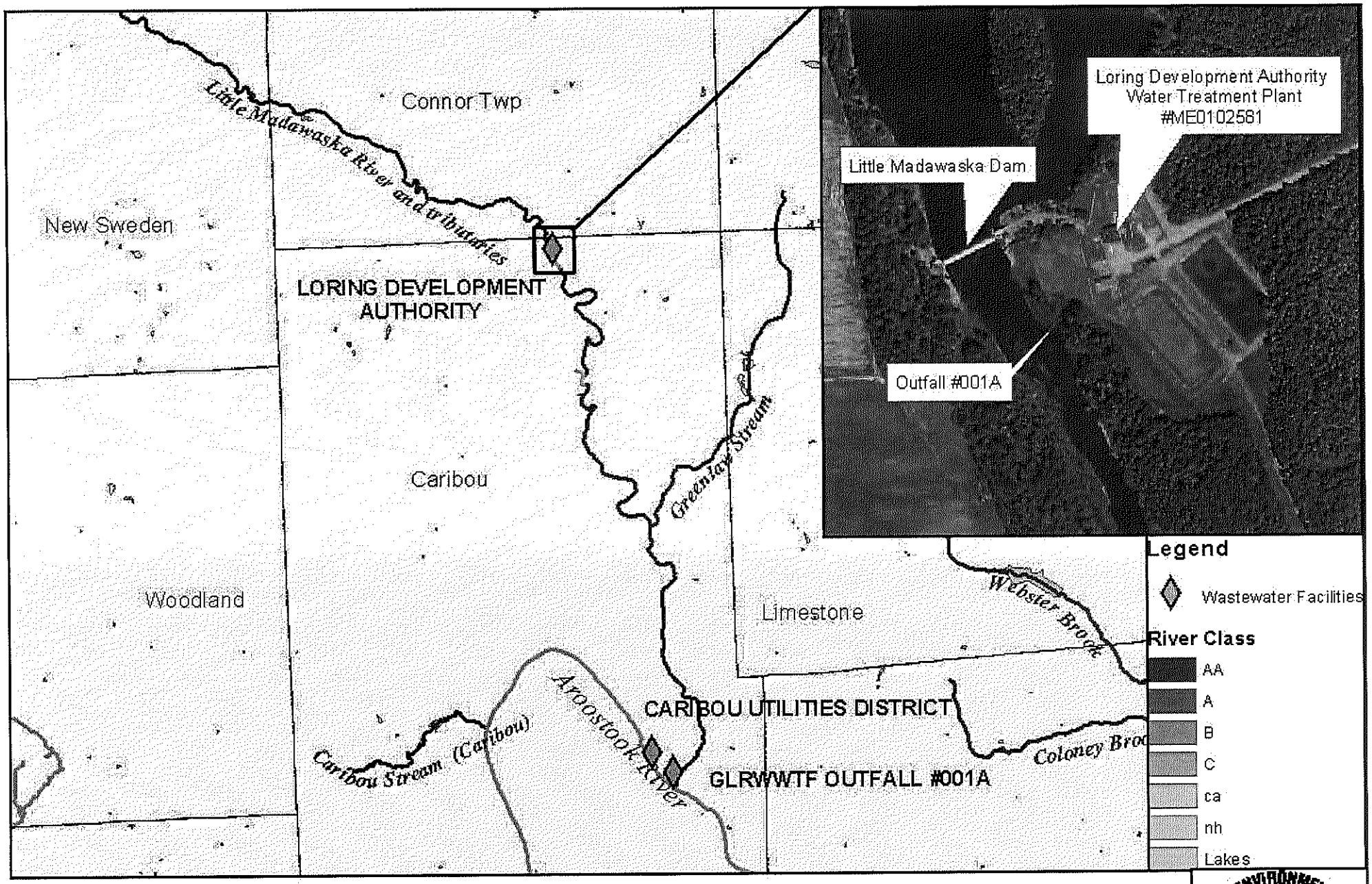
Additional information concerning this permitting action may be obtained from, and written comments sent to:

Bekah Farmer
Department of Environmental Protection - Bureau of Water Quality
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 458-8706
e-mail: Bekah.Farmer@Maine.gov

12. RESPONSE TO COMMENTS

This section reserved for future comments.

ATTACHMENT A



Caribou, Loring Development Authority

Map Created by Maine DEP
November 22, 2013

ATTACHMENT B

Mad Dam Water Treatment Plant Wastewater Flow Diagram