STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

GERALD D. REID
COMMISSIONER

May 22, 2020

Mr. Danny Daigle
Moosehead Sanitary District
P.O. Box 1141
Greenville, ME. 04441
moosandis@yahoo.com

Sent via electronic mail
Delivery confirmation requested

RE: ICIS Tracking Number # MEU502119
Maine Waste Discharge License (WDL) Application # W002119-6C-E-R
Proposed Draft License Renewal

Dear Mr. Daigle:

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.

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 on May 21, 2020 and ends on June 22, 2020. All comments on the proposed draft permit must be received in the Department of Environmental Protection office on or before the close of business on June 22, 2020. Failure to submit comments in a timely fashion will 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
Aaron.A.Dumont@maine.gov

If you have any questions regarding the matter, please feel free to contact me.

Sincerely,

Aaron Dumont
Division of Water Quality Management
Bureau of Water Quality
Aaron.A.Dumont@maine.gov
Phone: 207-287-1939

Enclosure

cc: Gary Brooks, DEP/NMRO
Lori Mitchel, DEP/CMRO
Marelyn Vega, USEPA
Richard Carvalho, USEPA

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

DEPARTMENT ORDER

IN THE MATTER OF

MOOSEHEAD SANITARY DISTRICT	)	PROTECTION AND IMPROVEMENT
GREENVILLE, PISCATAQUIS CTY, MAINE	)	OF WATERS
SURFACE WASTEWATER DISPOSAL SYSTEM	)	
MEU502119	)	WASTE DISCHARGE LICENSE
W002119-6C-E-R **APPROVAL**	)	**RENEWAL**

Pursuant to *Conditions of licenses*, 38 M.R.S. § 414-A, and applicable regulations, the Department of Environmental Protection (Department) has considered the application of the MOOSEHEAD SANITARY DISTRICT (MOOSEHEAD S.D./licensee), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

On May 2, 2019, the Department accepted as complete for processing an application from the licensee for the renewal of Waste Discharge License (WDL) #W-002119-6C-D-R which was issued by the Department on September 17, 2014, for a five-year term. The 9/17/2014 license authorized Moosehead S.D. to treat and discharge sanitary wastewater, up to 1,242,131 gallons per week to Spray Irrigation Field Outfall #008A (April 1 – November 30), as well as up to 3,035,370 gallons per week to the Enhanced Spray Irrigation/Snowmaking Field, Outfall #009A (April 1 – October 31) and effluent snow making of up to 61 million gallons per year (as Outfall #SM1A from November 1 – March 31), to groundwater, Class GW-A, in Greenville, Maine.

LICENSE SUMMARY

This licensing action is carrying forward all the terms and conditions of the previous licensing action.

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CONCLUSIONS

Based on the findings summarized in the attached and incorporated Fact Sheet dated May 21, 2020, and subject to the special and standard conditions that follow, 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 natural 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 discharge 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).

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ACTION

THEREFORE, the Department APPROVES the above noted application of the MOOSEHEAD SANITARY DISTRICT to operate a surface wastewater disposal system with a total design capacity of 0.17 MGD, of which the following quantities of sanitary wastewater will be treated and disposed of via spray irrigation:

1,242,131 gallons per week for Outfall #008A (April 1 – November 30, 36.6 acres); and
3,035,370 gallons per week for Outfall #009A (April 1- October 31, 26 acres).

A total annual maximum of 61 million gallons may be treated and disposed of via snowmaking at Outfall #009A from November 1 through March 31.

Wastewater is authorized to be applied onto the surface of the land in Greenville, 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 license and the authorization to discharge become effective upon the date of signature below and expire 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 license, the authorization to discharge and the terms and conditions of this license and all 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 Matters*, 06-096 CMR 2(21)(A) (amended June 9, 2018)].

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____ 2020.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
GERALD D. REID, Commissioner

Date filed with Board of Environmental Protection_____

Date of initial receipt of application: May 1, 2019
Date of application acceptance: May 2, 2019

This Order prepared by Aaron Dumont, BUREAU OF WATER QUALITY

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Beginning the effective date of this license, the licensee is authorized to operate a surface wastewater treatment and disposal system. The **STORAGE LAGOON EFFLUENT** (**OUTFALL #001)** must be limited and monitored as specified below[(1)(2)]:

Effluent Characteristic	**Discharge Limitations**		**Minimum Monitoring Requirements**	
	Daily Minimum	**Daily Maximum**	**Measurement Frequency**	**Sample Type**
Biochemical Oxygen Demand *[00310]*	---	100 mg/L *[19]*	1/Month[(3)] *[01/30]*	Grab *[GR]*
Total Suspended Solids *[00530]*	---	100 mg/L *[19]*	1/Month[(3)] *[01/30]*	Grab *[GR]*
Nitrate-Nitrogen *[00620]*	---	Report mg/L *[19]*	1/Month[(3)] *[01/30]*	Grab *[GR]*
pH (Standard Units) *[00400]*	---	Report S.U. *[12]*	1/Month[(3)] *[01/30]*	Grab *[GR]*
Lagoon Freeboard *[82564]*	3 feet[(4)] *[27]*	---	2/Year[(5)] *[02/YR]*	Measure[(6)] *[MS]*
Metals (Total): Arsenic, Cadmium, Chromium, Copper, Lead, Nickel and Zinc *[01002, 01027, 01034, 01042, 01051, 01067, 01092]*	---	Report µg/L *[28]*	Annually *[01/YR]*	Grab *[GR]*

The bracketed italicized numeric values in the table above and the tables that follow are code numbers that the Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 9 – 10 of this license for applicable footnotes.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

2. The application of treated sanitary wastewater to the land at **SPRAY IRRIGATION FIELD OUTFALL #008A** (36.6 acres) via a spray irrigation system must be limited to the time period of **April 1 to November 30 of each calendar year** and as specified below:

Effluent Characteristic	**Discharge Limitations**			**Minimum Monitoring Requirements**	
	Monthly Total	**Weekly Maximum**	**Daily Maximum**	**Measurement Frequency**	**Sample Type**
Application Rate *[51125]*	---	1,242,131 gallons**(8)** *[8G]*	---	1/Week *[01/07]*	Calculate *[CA]*
Flow – Total Gallons *[51500]*	Report (gallons) *[80]*	---	---	1/Month *[01/30]*	Calculate *[CA]*

The bracketed italicized numeric values in the table above and the tables that follow are code numbers that the Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 9 – 10 of this license for applicable footnotes.

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SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

3. The application of treated sanitary wastewater to the land at the **ENHANCED SPRAY IRRIGATION/SNOWMAKING FIELD OUTFALL #009A /#SM1A** (26 acres) via a spray irrigation/snowmaking system must be limited and monitored as specified below:

SPRAY IRRIGATION APPLICATION IS LIMITED TO APRIL 1 through OCTOBER 31
SNOWMAKING IS LIMITED TO NOVEMBER 1 through MARCH 31

Effluent Characteristic	**Discharge Limitations**				**Minimum Monitoring Requirements**	
	Annual Total	**Monthly Total**	**Weekly Maximum**	**Daily Maximum**	**Measurement Frequency**	**Sample Type**
Spray Irrigation (#009A) Application Rate *(April 1 – October 31)* *[51125]*	---	---	3,035,370 gallons[8] *[8G]*	---	1/Week *[01/07]*	Calculate *[CA]*
Spray Irrigation (#009A) Flow *(April 1 – October 31)* *[51125]*	---	Report (Gallons) *[80]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Snow Making (#SM1A) Application Rate *(November 1 – March 31)* *[51128]*	61 Million Gallons[9] *[8E]*	---	---	---	1/Month *[01/30]*	Calculate *[CA]*
Snow Making (#SM1A) Flow *(November 1 – March 31)* *[51128]*	---	Report (Gallons) *[8D]*	---	---	1/Month *[01/30]*	Calculate *[CA]*

The bracketed italicized numeric values in the table above and the tables that follow are code numbers that the Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 9 – 10 of this license for applicable footnotes.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

4. **GROUNDWATER MONITORING WELLS** MW-1, MW-2, MW-3, MW-5, MW-6, MW-8, MW-10, MW-11, MW-12 (Compliance Tracking ID's: MW002A, MW003A, MW004A, MW005A, MW006A, MW007A, MW010A, MW011A, and MW012A, respectively) must be limited and monitored as specified below[(1)]:

Monitoring Characteristic	Limitations	Minimum Monitoring Requirements	
	Daily Maximum	**Measurement Frequency**	**Sample Type**
Depth to Water Level Below Land Surface *[72019]*	Report (feet)[(10)] *[27]*	2/Year[(5)] *[02/YR]*	Measure *[MS]*
Nitrate-Nitrogen *[00620]*	10 mg/L *[19]*	2/Year[(5)] *[02/YR]*	Grab *[GR]*
Specific Conductance [(11,12)] *[00095]*	Report (umhos/cm) *[11]*	2/Year[(5)] *[02/YR]*	Grab *[GR]*
Temperature [(11)] *[00011]*	Report (°C) *[04]*	2/Year[(5)] *[02/YR]*	Grab *[GR]*
pH (Standard Units) [(11)] *[00400]*	Report (S.U.) *[12]*	2/Year[(5)] *[02/YR]*	Grab *[GR]*
Total Suspended Solids *[00530]*	Report (mg/L) *[19]*	2/Year[(5)] *[02/YR]*	Grab *[GR]*
Metals (Total): Arsenic, Cadmium, Chromium, Nickel and Zinc *[01002, 01027, 01034, 01067, 01092]*	Report µg/L *[28]*	1/5 Years[(7)] *[01/5Y]*	Grab *[GR]*
Metals (Total): Copper and Lead *[01042, 01051]*	Report µg/L *[28]*	Annually *[01/YR]*	Grab *[GR]*

The bracketed italicized numeric values in the table above and the tables that follow are code numbers that the Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 9 – 10 of this license for applicable footnotes.

SPECIAL CONDITIONS

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

5. Sampling of the **LAGOON UNDERDRAIN SYSTEM (OUTFALL #UD1A**) must be conducted as specified below:

Monitoring Characteristic	**Limitations**		**Minimum Monitoring Requirements**	
	Weekly Average	**Daily Maximum**	**Measurement Frequency**	**Sample Type**
Flow Rate *[00058]*	---	Report GPM *[78]*	3/Year**(13)** *[03/YR]*	Estimate *[ES]*
Specific Conductance *[00095]*	---	Report (umhos/cm) *[11]*	3/Year**(13)** *[03/YR]*	Grab *[GR]*
Temperature *[00011]*	---	Report (°C) *[04]*	3/Year**(13)** *[03/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.

FOOTNOTES: See Pages 9 through 10 of this license for applicable footnotes.

SPECIAL CONDITIONS

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

FOOTNOTES: Special Condition A(1), A(2), A(3), A(4), A(5)

Sampling – Any change in sampling location must be approved by the Department in writing. The licensee must conduct 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 for wastewater. Samples that are sent to a publicly owned treatment works (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 Certification Rules*, 10-144 CMR 263 (effective December 19, 2018). Laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of 10 – 144 CMR 263. If the licensee monitors any pollutant more frequently than required by the license using test procedures approved under 40 CFR Part 136 or as specified in this license, the results of this monitoring must be included in the calculation and reporting of the data submitted in the discharge monitoring report (DMR).

1. **Storage Lagoon Effluent Sampling Location** − Storage lagoon effluent sampling must be conducted at a point after the pump in the distribution line prior to the spray field(s) and must be representative of what is sprayed on the spray-irrigation fields.

2. **Storage Lagoon Effluent Sampling** − Storage lagoon effluent sampling must be conducted at a minimum frequency of once per month during the months of **April, May, August, and October** of each year, unless otherwise specified by the Department. The District is not required to test for the monthly parameters during a month in which no wastewater was disposed of via the disposal system.

3. **Storage Lagoon Effluent Sampling Frequency** − Storage lagoon effluent sampling must be conducted at a minimum frequency of once per month during the months of **April, May, August, and October** of each year, unless otherwise specified by the Department. The District is not required to test for the monthly parameters during a month in which no wastewater was disposed of via the disposal system.

4. **Lagoon Freeboard** – Lagoon freeboard is limited as specified in Special Condition I. *Lagoon Maintenance,* #3.

5. **Measurement Frequency –** The licensee must sample the specified parameter during the months of **May and October** of each year, unless otherwise specified by the Department.

6. **Lagoon Freeboard Measurement** – Lagoon freeboard must be reported as the mathematical difference between the water level in the lagoon and the lowest elevation point in the lagoon berm. It must be measured to the nearest one tenth ($1/10^{th}$) of a foot, with the minimum monthly value

SPECIAL CONDITIONS

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

FOOTNOTES

reported on the DMR. If site conditions prevent safe or accurate measurements, the licensee must estimate this value and indicate this to the Department.

7. **Screening Level Metals Testing** – The licensee must conduct one round of testing for the specified metals **during the fourth calendar quarter of the fourth year of the license**, unless otherwise specified by the Department copper and lead are to be sampled annually.

8. **Weekly Maximum for Spray Irrigation** – "Weekly" is defined as Sunday through Saturday. The licensee must measure the flow of wastewater to the irrigation area by the use of a flow measuring device that is checked for calibration at least once per calendar year. For DMR reporting purposes, the licensee must report the highest weekly application rate for the month in the applicable box on the form. Compliance with weekly reporting requirements must be reported for the month in which the calendar week ends. See Footnote 9 for conditions specific to spray irrigation on the snowmaking field.

9. **Annual Limit** – The enhanced spray irrigation/snowmaking field (as #SM1A) is subject to an annual snowmaking application limit of 61 million gallons of wastewater between November 1 and March 31 each year. The enhanced spray irrigation/snowmaking (as #009A) is also subject to spray irrigation application rates between April 1 and October 31 each year as noted in Special Condition A.3 (table), Footnote 8, and other applicable conditions contained in this license. In addition to the amount of wastewater applied per month via spray irrigation and snowmaking respectively, the licensee must report the season cumulative amount of effluent snowmaking applied to date.

10. **Depth to Water Level** − Depth to water level must be measured to the nearest one-tenth ($1/10^{th}$) of a foot as referenced from the surface of the ground at the base of the monitoring well.

11. **Field Measurements** − Temperature and pH are considered to be "field" parameters and are to be measured in the field via instrumentation. Specific conductance (calibrated to 25.0° C) may be measured either in the field or the laboratory pursuant to sampling guidance above. The licensee is required to test for these parameters whether wastewater was disposed of via the spray-irrigation system or not.

12. **Specific Conductance** − Temperature must be calibrated to 25.0°C. Specific Conductance values indicating a statistically significant trend upwards or sudden spikes from previous levels may necessitate the need for additional groundwater testing requirements to determine causes and effects as related to spray irrigation/drip dispersal activities.

13. **Lagoon Underdrain Monitoring** − Lagoon underdrain sampling must be conducted in the months of of **July, August, and September** of each year, unless otherwise specified by the Department.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent must not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the use designated by the classification of the groundwater.

2. The effluent must not lower the quality of any classified body of groundwater below such classification, (groundwater is a classified body of water under 38 M.R.S. § 465-C) or lower 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 minimum of a **Maine Grade III** biological certificate (or Registered Maine 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 licensee is authorized to discharge only in accordance with: 1) the licensee's General Application for Waste Discharge License, accepted for processing on May 2, 2019; 2) the terms and conditions of this license; and 3) only to the existing spray-irrigation fields. Discharges of wastewater from any other point source(s) are not authorized under this license, and must be reported in accordance with Standard Condition D(1)(F), *Twenty-four hour reporting*, of this license.

E. NOTIFICATION REQUIREMENT

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

1. 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 license issuance.

2. For the purposes of this section, notice regarding substantial change must include information on:

    a. the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and

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

SPECIAL CONDITIONS

F. GENERAL OPERATIONAL CONSTRAINTS

1. All wastewater must receive biological treatment through a properly designed, operated and maintained treatment system prior to disposal via spray irrigation.

2. The spray-irrigation facilities must be effectively maintained and operated at all times so that there is no discharge to surface waters, nor any contamination of groundwater which will render it unsatisfactory for use as a public drinking water supply.

3. The surface wastewater disposal system must not cause the lowering of the quality of the groundwater, as measured in the groundwater monitoring wells specified by this license, below the State Primary and Secondary Drinking Water Standards specified in the Maine State Drinking Water Regulations pursuant to *Drinking Water Regulations*, 22 M.R.S. §2611.

   In the event that groundwater monitoring results indicate lowering of the existing groundwater quality, the licensee may be required to take immediate remedial action(s), which may include, but not be limited to, adjustment of the irrigation schedule or application rates, a reduction of the pollutant loading, groundwater remediation, or ceasing operation of the system until the groundwater attains applicable standards.

4. The Department must be notified as soon as the licensee becomes aware of any threat to public health, unlicensed discharge of wastewater, sanitary system overflows (SSO's) or any malfunction that threatens the proper operation of the system. Notification must be made in accordance with the attached Standard Condition D of this license. A *sanitary sewer overflow* (SSO) is the release of raw sewage from a sanitary collection system prior to reaching the treatment plant or facility. Spills out of manholes, into basements, onto municipal or private property, etc, and into the waters of the State are all considered to be SSO's.

5. The licensee must maintain a file on the location of all system components and relevant features. Each component must be mapped and field located sufficiently to allow adequate inspections and monitoring by both the licensee and the Department.

6. System components including collection pipes, tanks, manholes, pumps, pumping stations, spray disposal fields, and monitoring wells must be identified and referenced by a unique system identifier in all logs and reports.

7. The licensee must at all times maintain in good working order and operate at maximum efficiency all wastewater collection, treatment and/or control facilities. Within one hour after start-up of the spray-irrigation system, the licensee must inspect the spray-irrigation site or have other means to check the system for leakage in the piping system and determine if individual sprayheads and pump(s) are functioning as designed, and verify that application rates are appropriate for the existing site conditions. The procedures used to determine the system is functioning as designed must be described in the facility's O&M manual. Should significant malfunctions or leaks be detected, the licensee must shut down the malfunctioning/leaking sections of the spray system and make necessary repairs before resuming operation. The licensee must cease irrigation if runoff is observed outside the designated boundaries of the spray field(s).

SPECIAL CONDITIONS

F. GENERAL OPERATIONAL CONSTRAINTS (cont'd)

The licensee must field calibrate equipment to ensure proper and uniform spray applications when operating. Calibration involves collecting and measuring application rate at different locations within the application area. A description of the calibration procedures and a log sheet that have been used for recording calibration results must be included as part of the Operations & Maintenance manual.

8. The licensee must maintain a daily log of all spray irrigation and snowmaking operations which records the date, weather, rainfall, areas irrigated, volume sprayed (gallons), application rates (daily and weekly), and other relevant observations/comments from daily inspections. The log must be in accordance with the general format of the *"Monthly Operations Log"* form provided as **Attachment A** of this license, or other format approved by the Department. Weekly application rates must be reported in accordance with the general format of the *"Spray Application Report by Week"* form provided as **Attachment B** of this license or other format as approved by the Department. The *Monthly Operations Log and Spray Application Report by Week* for each month must be submitted to the Department as an attachment to the monthly DMRs in a format approved by the Department. Copies will also be maintained on site for Department review and for license operation maintenance purposes.

G. SPRAY IRRIGATION OPERATIONAL CONSTRAINTS, LOGS, AND REPORTS

1. Suitable vegetative cover must be maintained. Wastewater must not be applied to areas without sufficient vegetation or ground cover as to prevent erosion or surface water runoff outside the designated boundaries of the spray fields. The licensee must have an updated facilities management plan that includes provisions for maintaining the spray irrigation area in optimum condition for the uptake of nutrients and moisture holding capacity.

2. At least 10 inches of separation from the ground surface to the groundwater table must be present prior to spray irrigating.

3. No wastewater must be spray irrigated following a rainfall accumulation exceeding 1.0 inches within the previous 24-hour period. A rain gauge must be located on site to monitor daily precipitation. The licensee must also manage application rates by taking into consideration the forecast for rain events in the 48-hour period in the future.

4. No wastewater must be spray irrigated where there is snow present on the surface of the ground or there is any evidence of frost or frozen ground within the upper 10 inches of the soil profile.

5. No traffic or equipment must be allowed in the spray-irrigation field(s) except where installation occurs or where normal operations and maintenance are performed (this must include forest management operations).

6. Prior to the commencement of spray irrigation for the season, the licensee must notify the Department's compliance inspector in writing that they have verified that soil conditions are appropriate (absence of frozen ground, soil conditions, moisture, etc.) for spray irrigation.

SPECIAL CONDITIONS

G. SPRAY IRRIGATION OPERATIONAL CONSTRAINTS, LOGS, AND REPORTS (cont'd)

7. The licensee must install the equivalent of one groundwater level inspection well per spray field to verify that 10 inches of separation from the ground surface to the observed groundwater level is present prior to spraying. Depths to groundwater must be recorded in accordance with the general format of *"Monthly Operations Log"* provided as **Attachment A** of this license or other format as approved by the Department.

8. Snow from effluent must only be made when conditions are conducive to snowmaking or ice making. When conditions are such that the effluent from the snow guns results in a liquid being sprayed on the site, the operator will cease snowmaking operations until proper conditions exist. Snowmaking will be interrupted to prevent runoff occurring off the site.

H. VEGETATION MANAGEMENT

1. The licensee must remove grasses and other vegetation such as shrubs and trees if necessary so as not to impair the operation of the spray-irrigation system, to ensure uniform distribution of wastewater over the desired application area and to optimize nutrient uptake and removal.

2. The vegetative buffer zones along the perimeter of the site must be maintained to maximize vegetation and forest canopy density in order to minimize off-site drift of spray.

I. LAGOON MAINTENANCE

1. The banks of the lagoon must be inspected periodically during the operating season (at least two times per year) and properly maintained at all times. There must be no overflow through or over the banks. Any signs of leaks, destructive animal activity or soil erosion of the banks must be repaired immediately.

2. The banks of the lagoon must be maintained to keep them free of woody vegetation and other vegetation that may be detrimental to the integrity of the bank and/or lagoon liner. The waters within the lagoons must be kept free of all vegetation (i.e. grasses, reeds, cattails, etc) that hinders the operation of the lagoon.

3. The licensee must maintain lagoon freeboard at design levels or at least three (3) feet, whichever is greater, for all lagoons at the facility.

4. The treatment and storage lagoons must be dredged as necessary to maintain the proper operating depths in all lagoons that will provide best practicable treatment of the wastewater. All material removed from the lagoon(s) must be properly disposed of in accordance with all applicable State and Federal rules and regulations.

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SPECIAL CONDITIONS

J. INSPECTIONS AND MAINTENANCE

The licensee must periodically inspect all system components to ensure the facility is being operated and maintained in accordance with the design of the system. Maintenance logs must be maintained for each major system component including pumps, pump stations, septic tanks, lagoons, spray apparatus, and pipes. At a minimum, the logs must include the unique identifier [see Special Condition F(6)], the date of maintenance performed, name(s) of person(s) performing the maintenance, and other relevant system observations.

K. GROUNDWATER MONITORING WELLS AND WATER QUALITY MONITORING PLAN DETAILS

1. The licensee must maintain an approved groundwater quality monitoring plan prepared by a professional qualified in water chemistry. The plan must include historical current monitoring data for each monitoring point, represented in tabular and graphical form.

2. All monitoring wells must be equipped with a cap and lock to limit access and must be maintained in a secured state at all times. The integrity of the monitoring wells must also be verified annually in order to insure representative samples of groundwater quality.

3. The Department reserves the right to require increasing the depth of and/or relocating any of the groundwater monitoring wells if the well is frequently dry or is determined not to be representative of groundwater conditions.

L. OPERATIONS AND MAINTENANCE (O&M) PLAN AND SITE PLAN(S)

This facility must have a current written comprehensive O&M Plan. The plan must provide a systematic approach by which the licensee must at all times, properly operate and maintain all facilities and the systems of treatment and control (and related appurtenances) which are installed or used by the licensee to achieve compliance with the conditions of this license. One item of importance is the management of the spray application sites such that the spray sites are given ample periods of rest to prevent over application.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the licensee 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 the Department personnel upon request.

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

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SPECIAL CONDITIONS

M. PUBLIC ACCESS TO LAND APPLICATION SITES AND SIGNAGE

Access to the land application sites must be limited during the season of active site use. The licensee must install signs measuring at least 8 ½" x 11", in areas of concern around the perimeter of the lagoon and spray irrigation sites that inform the general public that the area is being used to dispose of sanitary wastewaters. The signs must be constructed of materials that are weather resistant. The licensee must annually inspect and make any necessary repairs to the signage to comply with this condition.

N. 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 Discharge Monitoring Reports (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 DEP 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. 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. 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
Eastern Maine Regional Office
Bureau of Water Quality
Division of Water Quality Management
106 Hogan Road
Bangor, Maine 04401

O. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to **receive** and **introduce** into the treatment process or solids handling stream up to **an annual maximum of 32,000 gallons** of transported wastes, subject to the following terms and conditions:

SPECIAL CONDITIONS

O. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY (cont'd)

1. "Transported wastes" means any liquid non-hazardous waste delivered to a wastewater treatment facility by a truck or other similar conveyance that has different chemical constituents or a greater strength than the influent described on the facility's application for a waste discharge license. Such wastes may include, but are not limited to septage, industrial wastes or other wastes to which chemicals in quantities potentially harmful to the treatment facility or receiving water have been added.

2. Of the 32,000 gallons authorized by this license, the licensee may receive and introduce into the treatment process or solids handling stream up to a daily maximum of 1,700 gallons per day (GPD) of septage wastes.

3. The character and handling of all transported wastes received must be consistent with the information and management plans provided in application materials submitted to the Department.

4. At no time must the addition of transported wastes cause or contribute to effluent quality violations. Transported wastes may not cause an upset of or pass through the treatment process or have any adverse impact on the sludge disposal practices of the wastewater treatment facility. Wastes that contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation must be refused. Odors and traffic from the handling of transported wastes may not result in adverse impacts to the surrounding community. If any adverse effects exist, the receipt or introduction of transported wastes into the treatment process or solids handling stream must be suspended until there is no further risk of adverse effects.

5. The permittee must maintain records for each load of transported wastes in a daily log which must include at a minimum the following:

   (a) The date;
   (b) The volume of transported wastes received;
   (c) The source of the transported wastes;
   (d) The person transporting the transported wastes;
   (e) The results of inspections or testing conducted;
   (f) The volumes of transported wastes added to each treatment stream; and
   (g) The information in (a) through (d) for any transported wastes refused for acceptance.

   These records must be maintained at the treatment facility for a minimum of five years.

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

SPECIAL CONDITIONS

O. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY (cont'd)

7. Holding tank wastewater from domestic sources to which no chemicals in quantities potentially harmful to the treatment process have been added must not be recorded as transported wastes but should be reported in the treatment facility's influent flow.

8. During wet weather events, transported wastes may be added to the treatment process or solids handling facilities only in accordance with a current Wet Weather Flow Management Plan approved by the Department pursuant to Special Condition G that provides for full treatment of transported wastes without adverse impacts.

9. In consultation with the Department, chemical analysis is required prior to receiving transported wastes from new sources that are not of the same nature as wastes previously received. The analysis must be specific to the type of source and designed to identify concentrations of pollutants that may pass through, upset or otherwise interfere with the facility's operation.

10. Access to transported waste receiving facilities may be permitted only during the times specified in the application materials and under the control and supervision of the person responsible for the wastewater treatment facility of his/her designated representative.

11. The authorization is subject to annual review and, with notice to the permittee and other interested parties of record, may be suspended or reduced by the Department as necessary to ensure full compliance with Chapter 555 of the Department's rules and the terms and conditions of this permit.

P. REOPENING OF LICENSE FOR MODIFICATION

In accordance with 38 M.R.S. § 414-A(5) and upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this licensing action, new site specific information, or any other pertinent test results or information obtained during the term of this license, the Department may, at any time and with notice to the licensee, modify this license 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.

Q. SEVERABILITY

In the event that any provision(s), or part thereof, of this license is declared to be unlawful by a reviewing court, the remainder of the license 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

Monthly Operations Log

MOOSEHEAD SANITARY DISTRICT **#W002119-6C-D-R / #MEU502119**

(Month/Year) (_____/_____) Weekly Application Rate: _____ gallons/week

	A	B	C	D	E	G	H
Day	Date	Precipitation Previous 24 hours (inches)	Air Temp (℉)	Weather	Wind-Direction/ Speed (mph)	Total Gallons Pumped	Name of Field(s) Used
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						
	26						
	27						
	28						
	29						
	30						
	31						
Monthly Total =							

ATTACHMENT B

MOOSHEAD SANITARY DISTRICT **Spray Application Report by Week** **(Month/Year) (_____/_____)**

#W002119-6C-D-R / #MEU502119 Weekly Application Rate _____ gallons/week

Field Name/#	Effective Spray Area (Acres, when all used)	Weekly Limit (Gallons)	Actual Spray Application Rates (Gallons per acre)					Number of Exceptions to Weekly Limit	Monthly Average
			Week 1	Week 2	Week 3	Week 4	Week 5		
Spray Field #008A	36.6	1,242,131							
Spray / Snow Field #009A	26	116,745							

Note: 1 acre-inch is equivalent to 27,150 gallons of liquid
27,150 gallons per acre is equivalent to 1.0 inch

Total Number of Exceptions

A spray-field's weekly application rate is the total gallons sprayed (Sunday through Saturday) divided by the size of the spray-field in acres or the size in acres of that portion of the spray field utilized.

Signature of Responsible Official: _____, Date _____

ATTACHMENT C

Depth to Groundwater (Tenths of Feet)

MOOSEHEAD SANITARY DISTRICT **(Month/Year) (_____/_____)**

#W002119-6C-D-R / #MEU502119

Field Name/#	Monitoring Location	Depth to Groundwater (Measured From Ground Surface in Tenths of Feet)					Number of Exceptions	Monthly Average Depth
		Week 1	Week 2	Week 3	Week 4	Week 5		
Spray Field #008A								
Spray / Snow Field #009A								
					Total Number of Exceptions			

Note: Special Condition G of the License requires that a depth of 10 inches from the ground surface to the groundwater table must be present prior to spraying.

Signature of Responsible Official:_____, Date _____

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **May 21, 2020**

COMPLIANCE TRACKING NUMBER: **MEU502119**
WASTE DISCHARGE LICENSE: **W002119-6C-E-R**

NAME AND ADDRESS OF APPLICANT:

MOOSEHEAD SANITARY DISTRICT
P.O. BOX 1141
SPRUCE STREET
GREENVILLE, MAINE 04441

COUNTY: **PISCATAQUIS**

NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):

MOOSEHEAD SANITARY DISTRICT
P.O. BOX 1141
SPRUCE STREET
GREENVILLE, MAINE 04441

RECEIVING WATER CLASSIFICATION: **Groundwater/Class GW-A**

COGNIZANT OFFICIAL CONTACT INFORMATION:

MR. DANNY J. DAIGLE
PLANT MANAGER
(207)-695-3849
EMAIL: moosandis@yahoo.com

1. APPLICATION SUMMARY

On May 2, 2019, the Department of Environmental Protection (Department) accepted as complete for processing an application from the Moosehead Sanitary District (licensee) for the renewal of Waste Discharge License (WDL) #W-002119-6C-D-R which was issued by the Department on September 17, 2014, for a five-year term. The 9/17/2014 license authorized Moosehead S.D. to treat and discharge sanitary wastewater, up to 1,242,131 gallons per acre per week to Spray Irrigation Field Outfall #008A (April 1 – November 30), as well as up to 3,035,370 gallons per acre per week to the Enhanced Spray Irrigation/Snowmaking Field, Outfall #009A (April 1 – October 31) and effluent snow making of up to 61 million gallons per year (as Outfall #SM1A from November 1 – March 31), to groundwater, Class GW-A, in Greenville, Maine.

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2. LICENSE SUMMARY

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

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

January 29, 2003 – The Department issued WDL W-002119-5L-B-R to the Moosehead S.D. for renewal of its WDL to operate a surface wastewater disposal system for the treatment and disposal of sanitary wastewater through spray irrigation and effluent snowmaking in Greenville, Maine. The WDL was issued for a five-year period. This action superseded WDL W-002119-59-A-R issued on July 27, 1988 and all prior Department actions beginning with WDL 2119 issued on April 26, 1978.

July 6, 2004 − The Department administratively modified WDL W-002119-5L-B-R to eliminate requirements for a soil monitoring program for the Moosehead S.D. spray irrigation and snowmaking sites.

January 13, 2009 – Moosehead S.D. submitted a timely application for renewal of its surface wastewater disposal system WDL. The application was assigned WDL W-002119-6C-C-R/PCS Tracking MEU502119.

June 3, 2009 – The Department issued WDL W-002119-6C-C-R/MEU502119 for a five-year term.

September 17, 2014 – The Department issued WDL #W002119-6D-R/MEU502119 for a five-year term.

May 1, 2019 − The licensee submitted a timely and complete General Application to the Department for renewal of the December l7, 2013 MEPDES permit. The application was accepted for processing on May 2, 2019 and was assigned WDL W002119-6C-E-R/MEU502119.

c. Source Description: Moosehead S.D. receives sanitary wastewater from residential and commercial customers within the Town of Greenville as well as smaller volumes of cooling water from Greenville Steam, floor drain holding tank wastewater from the town garage, and drinking water filter backwash from Aqua Maine. The Moosehead S.D. wastewater collection system and treatment facility became operational in 1979. The facility was designed based on a population of 1,500 users with an average daily flow capacity of 0.17 MGD. The Moosehead S.D. collection system consists of 14-miles of sanitary sewers and storm sewers and seven pump stations but contains no Combined Sewer Overflows (CSOs). Moosehead S.D. requested and was approved to accept septage waste into its treatment facility in the last license renewal. Evaluations for I/I removal are ongoing and sewer manhole inspections and repairs are scheduled to begin in the spring of 2014. A map showing the location of the treatment facility is included as Fact Sheet **Attachment A**.

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2. LICENSE SUMMARY (cont'd)

d. Wastewater Treatment: The Moosehead S.D. wastewater treatment and disposal system consists of three aerated facultative biological treatment lagoons, two treated effluent storage lagoons, and a combined summer/winter land application system for the disposal of treated effluent.

Wastewater generated in the Town of Greenville is conveyed to the sanitary district facility through the wastewater collection system described above. The Moosehead S.D. lagoon treatment system consists of three earthen lagoons with synthetic liners. The aerated lagoons have volumes of 3.1 million gallons (MG), 1.5 MG, and 1.5 MG, and are each designed for 10-feet of liquid depth and 3-feet of freeboard. After the treatment lagoon system, treated wastewater is routed to a 33.2 MG (4.44 million cubic foot) storage lagoon with two compartments. At the design flow of 0.17 MGD, wastewater remains in the treatment lagoon system for 27 to 36 days depending on whether the second and third lagoons are operated in parallel or series, then can be stored in the storage lagoon system for up to 180 days. When appropriate conditions exist, Moosehead S.D. disposes of the treated wastewater via land application as described below.

1. Spray Irrigation − Between April 1st and November 30th and between April 1st and October 31st of each year, wastewater from the storage lagoon may be conveyed to Moosehead S.D.'s spray irrigation fields (Outfall #008A, 36.6-acres) and enhanced spray irrigation / snow making field (Outfall #009A, 26-acres), respectively for spray irrigation. Due to the decrease in population in the region, as well as the efforts to control I/I along the collection system, during the past five years, the Moosehead S.D. has been utilizing only the enhanced spray irrigation field. The enhanced spray irrigation/snow making field is designated as Outfall #009A for its spray irrigation activities and #SM1A for its snowmaking activities. The spray irrigation field (Outfall #008A) is authorized to receive a weekly maximum of 1,242,131 gallons of treated wastewater for disposal, whereas the enhanced spray irrigation / snow making field (Outfall #009A) is authorized to receive a weekly maximum of 3,035,370 of wastewater. The spray irrigation activities must be conducted pursuant to License Special Conditions F, *General Operational Constraints,* Special Condition G, *Spray Irrigation and Snowmaking Operational Constraints, Logs, and Reports*, and other related requirements contained herein. The enhanced spray irrigation / snow making field (#009A/#SM1A) is subject to additional requirements related to effluent snowmaking, as described below. The Moosehead S.D. utilizes 10 spray irrigation nozzles and moves them about the spray fields as conditions necessitate. Each spray head distributes water in a circular pattern measuring 224 feet in diameter.

2. Snowmaking: Between November 1st and March 31st of each year, wastewater from the storage lagoon is converted to snow via compressed air and stored in piles on the enhanced spray irrigation/snow making field (#SM-1, 26-acres). Two fixed snow towers are used to distribute the snow over the parcel. The snow storage area has been designed to accept up to a maximum of 61 million gallons per snowmaking season (November – March). Water from the snow piles is slowly released to the environment via evaporation (assume 15%) during the snowmaking process, sublimation (assume 20%) of the snow piles over time, and infiltration into the ground as the snow piles melt in the spring and early summer. Other similar sites licensed by the Department have been modeled assuming melting would occur during the months of March (5%), April (15%), May (30%), June (40%) and July (10%). On average, the application rate of 61 million gallons of snow melting water over a period of 22 weeks on 26 acres is 3.9 inches/week or 107,000 gallons per week.

2. LICENSE SUMMARY (cont'd)

The Greenville site is in an area of hilly topography which slopes downward to the northwest of the site. The overall slope is 3-15% percent. The site was formerly used as woodland and agricultural fields, and the overstory canopy is of a mixture of hardwood and softwood.

e. Groundwater Monitoring Wells. The Moosehead S.D monitors the following groundwater monitoring wells for compliance with this WDL.

Monitoring Wells	Compliance Tracking Identifier	Location
MW-1	002A	Upgradient background well, east of the spray field and northeast of the spray/snow field.
MW-2	003A	Downgradient well, west of the treatment lagoons and north of the spray field.
MW-3	004A	Downgradient well, on the western edge of the spray field and northwest of the spray/snow field.
MW-5	006A	Downgradient well, on the northwestern edge of the spray field and west of the spray/snow field.
MW-6	007A	Downgradient well, west of the spray field and property boundary.
MW-8	005A	Downgradient overburden well, within the eastern portion of the spray/snow field, southwest of the site "duck pond".
MW-10	010A	Upgradient background well, south of the storage lagoons and southeast of the spray field and spray/snow field.
MW-11	011A	Downgradient well, within the southwestern portion of the spray field and southwest of the spray/snow field.
MW-12	012A	Downgradient well, within the northerly portion of the spray field and southwest of the treatment lagoons.

3. CONDITIONS OF LICENSE

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 application of best practicable treatment (BPT), be consistent with applicable state law, and ensure that the receiving waters attain the State water quality standards as described in Maine's Water Classification System.

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4. RECEIVING WATER QUALITY STANDARDS

Classification of Ground Waters, 38 M.R.S. § 470 classifies the groundwater at the point of discharge as Class GW-A receiving waters. *Standards of Classification of Ground Water,* 38 M.R.S., Section 465-C(1), describes the standards for waters classified as Class GW-A as the highest classification of groundwater and must be of such quality that it can be used for public water supplies. These waters must be free of radioactive matter or any matter that imparts color, turbidity, or odor which would impair use of these waters, other than that occurring from natural phenomena.

5. TREATMENT

Slow-rate land irrigation treatment is an environmentally sound and appropriate technology for best practicable treatment and disposal of sanitary wastewater. The soils and vegetation within the irrigation area will provide adequate filtration and absorption to preserve the integrity of the soil and both the surface and groundwater quality in the area.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Lagoon Effluent (Outfall 001A)

Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): Previous licensing action established, and this licensing action is carrying forward, a daily maximum limit of 100 mg/L for BOD_5 and TSS, which is considered by the Department as a best practicable treatment (BPT) standard for spray irrigation facilities, along with a 1/Month monitoring frequency.

A review of the Discharge Monitoring Reports (DMRs) for the period of September 2014 – August 2019 indicates the following:

BOD_5 Concentration (n =10)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Daily Maximum	100	14 – 74	35

TSS Concentration (n = 10)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Daily Maximum	100	21 – 51	33

pH (n = 10)

Value	Limit (SU)	Range (SU)	Mean (SU)
Daily Maximum	6.0 – 9.0	7.0 – 7.8	7.25

Nitrite-Nitrogen and Nitrate-Nitrogen – Nitrogen compounds are by-products of the biological breakdown of ammonia and organic nitrogen and are inherent in domestic sanitary wastewater. Because nitrogen compounds are weakly absorbed by soil, they function as reliable indicators of contamination from waste disposal sites. Also, elevated levels of nitrite-nitrogen and nitrate-nitrogen in the drinking water supply are of human health concern. The previous licensing action established, and this permit is carrying forward a monitoring requirement and license limit of 1.0 mg/L for nitrite-nitrogen and is carrying forward the monitoring requirement and license limit of 10 mg/L for nitrate-nitrogen. The license limits are National Primary Drinking Water Standards.

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

A review of the Discharge Monitoring Reports (DMRs) for the period of September 2014 – August 2019 indicates the following:

Nitrite-Nitrogen (n=10)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily Maximum	Report mg/L	1.0 – 44.0	12.7

Freeboard: Freeboard is the vertical distance from the surface water level in the lagoon to a point that is even with the top of the lagoon dike wall. This licensing action eliminates the condition to monitor freeboard as it is conditioned in the license Under Special Condition I. *Lagoon Maintenance* (3). It should also be noted that as part of the application materials, Moosehead S.D. submitted the following narrative:

> "This facility has 6 months of storage capacity at design flow and we are at 70% of that. The ponds are 30' deep and changes in level are not drastic even on a monthly basis."

A review of the Discharge Monitoring Reports (DMRs) for the period of September 2014 – August 2019 indicates the following:

Freeboard (n=10)

Value	Minimum (feet)	Maximum (feet)	Mean (feet)
Report Daily Minimum	3	30	13

Total Metals – The previous permitting action carried forward, and this permitting action is carrying forward the requirement for the licensee to test the lagoon effluent for the following total metals: arsenic, cadmium, chromium, nickel, and zinc once every five years. This permitting action is also carrying forward the annual testing requirement for copper and lead.

The purpose of lagoon effluent monitoring for metals specified in this license is to evaluate the concentration of these pollutants for which National Primary Drinking Water Standards (NPDWS) pursuant to 40 CFR Part 141 or Secondary Maximum Contaminant Levels (SMCL) pursuant to 40 CFR Part 143.3 have been established, and to assist in discerning whether any increases in groundwater levels may be attributed to the wastewater applied to the ground surface.

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

A review of the Discharge Monitoring Reports (DMRs) for the period of September 2014 – August 2019 indicates the following:

Total Metals (n=1)

Arsenic	**Limit (ug/L)**	**Maximum (ug/L)**
Daily Maximum	Report	1.90
Cadmium	**Limit (ug/L)**	**Maximum (ug/L)**
Daily Maximum	Report	0.20
Chromium	**Limit (ug/L)**	**Maximum (ug/L)**
Daily Maximum	Report	1.10
Copper	**Limit (ug/L)**	**Maximum (ug/L)**
Daily Maximum	Report	7.40
Lead	**Limit (ug/L)**	**Maximum (ug/L)**
Daily Maximum	Report	0.30
Nickel	**Limit (ug/L)**	**Maximum (ug/L)**
Daily Maximum	Report	2.70
Zinc	**Limit (ug/L)**	**Maximum (ug/L)**
Daily Maximum	Report	17.70

B. Spray Irrigation Fields (#008A 36.6 acres)

Application Rates −The previous licensing action established a seasonal (April 1st − November 30th) weekly maximum wastewater application rate of 33,938 gallons per acre per week and a weekly maximum application total rate of 1,242,131 gallons per week. See **Attachment B** of this fact sheet for a diagram of the spray irrigation field locations.

C. Enhanced Spray Irrigation Field Outfall #009A (26 acres)

Application Rate and Flow: The previous licensing action established a seasonal (April 1st – October 31st) weekly maximum wastewater application rate of for outfall #009A of 116,745 gallons per acre per week and a weekly maximum application total rate of 3,035,370 gallon per week.

A review of the Discharge Monitoring Reports (DMRs) for spray irrigation Outfall #009 for the period of September 2014 – August 2019 indicates the following:

Weekly Application Rate

Weekly Maximum (gallons/acre)	**Minimum (gallons/acre)**	**Maximum (gallons/acre)**	**Mean (gallons/acre)**
116,745	62,233	110,250	93,671

Total Monthly Flow

Monthly Total Limit (gallons)	**Minimum (gallons)**	**Maximum (gallons)**	**Mean (gallons)**
Report	3,096,500	10,578,600	5,626,108

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

D. SNOWMAKING FIELD OUTFALL #SM1A

Annual Total Snowmaking: The previous licensing action established, and this license is carrying forward, an annual total limit of 61 million gallons to be applied from November 1 through March 31 to the Enhanced Spray Irrigation/Snowmaking field.

A review of the Discharge Monitoring Reports (DMRs) for the period of September 2014 – August 2019 indicates the following:

Annual Total Gallons Snowmaking

Annual Total Limit	Year	Total (gallons)
61 million gallons	2014	11,000,000
	2015	60,000,000
	2016	38,000,000
	2017	N/A
	2018	N/A
	2019	33.8

E. Groundwater Monitoring Wells

MW-1, MW-, 2, MW-3, MW-5, and MW-6, MW-8, MW-10, MW-11, MW-12 (Compliance Outfalls #002A, 003A, 004A, 006A, 007A, 005A, 010A, 011A, and 012A, respectively) are monitored for the parameters listed in Special Condition A.4 of the license. These parameters, their monitoring frequency, and their applicable limits are being carried forward in this license. A review of the Discharge Monitoring Reports (DMRs) for the period of September 2014 – August 2019 indicates the following:

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

A review of the Discharge Monitoring Reports (DMRs) for the period of September 2014 – August 2019 indicates the following:

Metals (Sample Date 10/31/2018)

Monitoring Well ID	Total Arsenic (µg/L)	Total Cadmium (µg/L)	Total Chromium (µg/L)	Total Copper (µg/L)	Total Lead (µg/L)	Total Nickel (µg/L)	Total Zinc (µg/L)
MW-1	1.9	0.2	1.1	7.4	0.3	2.7	17.7
MW-2	1.0	0.4	1.3	205	19.8	5.4	34.5
MW-3	3.5	0.5	4.6	292	7.8	7.6	34.7
MW-4	1.7	0.3	1.7	156	12.4	2.6	47.5
MW-5	2.1	0.2	2.9	119	2.7	5.0	20.7
MW-6	8.1	6.3	5.4	29.6	30.4	8.8	35.8
MW-7	1.0	0.2	1.0	2.6	0.6	4.1	9.8
MW-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-10	12.20	0.9	34.6	112	26.3	37.1	105
MW-11	1.0	0.3	1.0	1.4	0.6	1.2	3.8
MW-12	1.9	0.7	2.6	7.7	2.8	3	12.6

Depth to Water Level Below Land Surface (n=7)

Monitoring Well ID	Limit	Minimum (feet)	Maximum (feet)	Mean (feet)
MW-1	Report Daily Maximum	N/A	N/A	N/A
MW-2		6.0	9.0	7.4
MW-3		1.0	8.0	4.4
MW-4		8.0	13.0	10.4
MW-5		4.0	8.0	6.4
MW-6		0.7	6.0	2
MW-7		1.5	2.3	1.9
MW-8		N/A	N/A	N/A
MW-10		10.0	15.0	12
MW-11		-2.4	16.0	3
MW-12		5.0	13.0	8

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

Nitrate-Nitrogen (n=10)

Monitoring Well ID	Limit	Minimum (mg/L)	Maximum (mg/L)	Mean (mg/L)
MW-1	10 mg/L	0.5	1.5	1.02
MW-2		1.3	8.2	3.2
MW-3		0.5	1.0	0.9
MW-5		0.9	2.7	1.6
MW-6		0.5	1.0	0.9
MW-8		N/A	N/A	N/A
MW-10		0.5	1.0	0.9
MW-11		0.6	4.0	0.85
MW-12		0.5	1.0	0.85

Specific Conductance (n=7)

Monitoring Well ID	Limit	Minimum (umhos/cm)	Maximum (umhos/cm)	Mean (umhos/cm)
MW-1	Report Daily Maximum	N/A	N/A	N/A
MW-2		76	200	109
MW-3		10	32	21
MW-5		19	70	38
MW-6		7.0	36	21
MW-7		7.0	29	21
MW-8		N/A	N/A	N/A
MW-10		53	103	79
MW-11		42	178	78
MW-12		7.0	27	17.5

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

Temperature °C (n=10)

Monitoring Well ID	Limit	Minimum (°C)	Maximum (°C)	Mean (°C)
MW-1	Report Daily Maximum	N/A	N/A	N/A
MW-2		5.0	14	10.1
MW-3		4.0	17	10.2
MW-4		6.0	17	10.9
MW-5		6.0	14	10.0
MW-6		4.0	18	11.2
MW-7		3.8	18	11.0
MW-8		N/A	N/A	N/A
MW-10		7.5	14	10.3
MW-11		5.5	19	11.5
MW-12		4.2	18	12.0

pH

Monitoring Well ID	Limit	Minimum (S.U.)	Maximum (S.U.)
MW-1 (n=10)	Report Daily Maximum	7	7.8
MW-2 (n=7)		4.7	6.1
MW-3 (n=8)		5.0	6.3
MW-4 (n=8)			
MW-5 (n=7)		5.5	6.7
MW-6 (n=9)		5.2	6.2
MW-7 (n=9)		4.8	6.4
MW-8 (n/a)		N/A	N/A
MW-10 (n=7)		5.6	7.3
MW-11 (n=10)		5.4	6.7
MW-12 (n=10)		5.2	6.7

F. Lagoon Underdrain Monitoring Requirements – Previous licensing action established, and this license is continuing lagoon under-drain monitoring requirements for: flow rate; specific conductance; and temperature, to occur three times per year (in the months of July, August, and September). These requirements are being carried forward in this licensing action based on Department best professional judgment of appropriate underdrain monitoring requirements.

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SPECIAL CONDITIONS

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

A review of the Discharge Monitoring Reports (DMRs) for the period of September 2014 – August 2019 indicates the following:

Storage Lagoon Underdrain System (Outfall #UD1)

Parameter	Minimum	Maximum	Average
Flow Rate (gal/minute)	13.0	13.0	13.0
Specific Conductance	350 umhos/cm	350 umhos/cm	350 umhos/cm
Temperature (ºC)	16	23	18.5

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As licensed, 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 water body to meet standards for Class GW-A classification.

8. PUBLIC COMMENTS

Public notice of this application was made in *Moosehead Matters* newspaper on or about May 1, 2019. 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

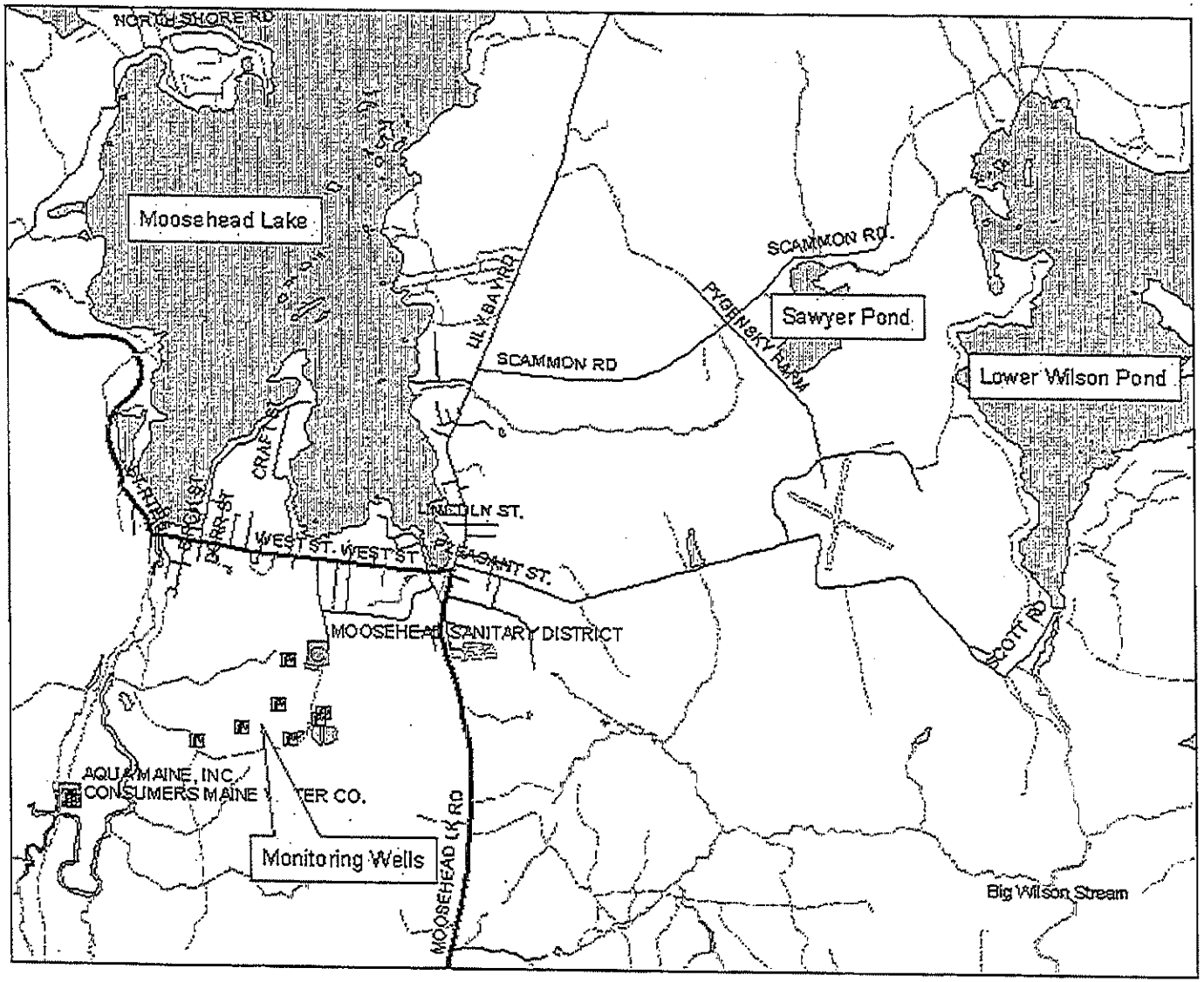
Additional information concerning this licensing action may be obtained from, and written comments sent to:

Aaron Dumont
Bureau of Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-1939
e-mail: Aaron.A.Dumont@maine.gov

10. RESPONSE TO COMMENTS

Left blank until the end of the comment period.

ATTACHMENT A



Legend

Rivers
- AA
- A
- B
- C

Streams
- AA
- A
- B
- C

Ponds and Lakes

Wastewater_Facilities

Wastewater_Outfalls

Roads

JURISDICTION
- Town Road
- Town Road - Summer
- Town Road - Winter
- State-aided Highway
- State Highway
- Toll Highway
- Private Road
- Reservation Road
- Seasonal Parkway

N

0 0.2 0.4 0.8 1.2 1.6 Miles

Moosehead Sanitary District
Greeneville, Maine

Map created by:
Bob Stratton
Division of Water Quality Management
Maine Department of Environmental Protection

DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF MAINE