



STATE OF MAINE
DEPARTMENT OF
ENVIRONMENTAL PROTECTION



JANET L. MILLS
GOVERNOR

GERALD D. REID
COMMISSIONER

Mr. Sid Hazelton
General Manager
Auburn Water District
286 Cart Street
Auburn, ME. 04212
E-mail: shazelton@awsd.org

May 20, 2019

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0002712
Maine Waste Discharge License (WDL) #W009100-5U-C-M
Final Permit Modification

Dear Mr. Hazelton:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL **modification** which was approved by the Department of Environmental Protection. Please read this permit/license renewal and its attached conditions carefully. Compliance with this permit/license will protect water quality.

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

If you have any questions regarding the matter, please feel free to call me at 287-7693. Your Department compliance inspector copied below is also a resource that can assist you with compliance. Please do not hesitate to contact them with any questions.

Thank you for your efforts to protect and improve the waters of the great state of Maine!

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Water Quality

Enc.

cc: Lori Mitchell, DEP/CMRO Stuart Rose, DEP/CMRO Linda Bacon, DEP/CMRO
James Pellerin, IFW Sophia Scott, DHHS Sandy Mojica, USEPA
Marelyn Vega, USEPA Shelley Puleo, USEPA

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

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143



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

DEPARTMENT ORDER

IN THE MATTER OF

AUBURN WATER DISTRICT)	MAINE POLLUTANT DISCHARGE
AUBURN, ANDROSCOGGIN COUNTY, MAINE)		ELIMINATION SYSTEM PERMIT
CHEMICAL DISCHARGE)	AND
ME0002712)	WASTE DISCHARGE LICENSE
W009100-5U-C-M)	MODIFICATION
	APPROVAL	

Pursuant to the provisions of the *Federal Water Pollution Control Act*, Title 33 USC, §1251, *Conditions of Licenses*, 38 M.R.S. § 414-A, and applicable regulations, the Department of Environmental Protection (Department hereinafter) has considered the application of the AUBURN WATER DISTRICT (AWD/District/permittee hereinafter), with its supportive data, agency review comments, and other related material on file and FINDS THE FOLLOWING FACTS:

MODIFICATION SUMMARY

The AWD has submitted an application to the Department to modify combination Maine Pollutant Discharge Elimination System (MEPDES) permit ME0002712/Maine Waste Discharge License (WDL) #W009100-5U-B-R issued by the Department on April 3, 2018, for a five-year term. The April 3, 2018, permit authorized the discharge of an algaecide (a pesticide by definition) to Lake Auburn to control the growth of algae. Lake Auburn is a public drinking water supply for the cities of Lewiston and Auburn and the Auburn Water District (AWD) extracts unfiltered water from the lake and supplies it to its customers for consumption via a network of piping infrastructure. The Maine Department of Health and Human Services has made the determination that Lake Auburn has been experiencing episodic algal blooms that may pose a threat to public health for people who utilize the drinking water supplied by the AWD. An algaecide treatment was conducted during the summer of 2018.

MODIFICATION(S) GRANTED OR DENIED

The permittee is seeking authorization to treat the upper 30 feet of 1,250 acres of the lake with aluminum sulfate and sodium aluminate in an effort to strip accumulated phosphorus from the water column and partially inactive phosphorus in the surficial sediments. Reducing the phosphorus in the water column and sequestering it in the sediment will assist in mitigating the risks of undesirable algal blooms. See Attachment B of the Fact Sheet of this modification for a map depicting the treatment area.

CONCLUSIONS

Based on the findings in the attached Fact Sheet, dated April 12, 2019, and subject to the terms and conditions of this permit, the Department makes the following

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 water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
 - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and
 - (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharge will be subject to effluent limitations that require application of best practicable treatment as defined in 38 M.R.S. § 414-A(1)(D).

ACTION

Based on the findings and conclusions as stated above, the Department APPROVES the application of the AUBURN WATER DISTRICT to discharge aluminum sulfate and sodium aluminate to Lake Auburn to control algal growth which the Maine Department of Health and Human Services has deemed a potential public health threat, SUBJECT TO THE ATTACHED CONDITIONS, including:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits," revised July 1, 2002, copy attached to MEPDES permit #ME0002712/WDL W009100-5U-B-R issued by the Department on April 3, 2018, for a five-year term.
2. The attached Special Conditions, including any effluent limitations and monitoring requirements.
3. All the terms and conditions of MEPDES permit #ME0002712/WDL W009100-5U-B-R issued by the Department on April 3, 2018, not modified by this permit modification remain in effect and enforceable.
4. This permit becomes effective upon the date of signature below and expires on April 3, 2023. Chemical applications will be limited to one application or series of applications not to exceed six (6) months in length and the permittee will be limited to two applications or series of applications over the five-year term of the permit. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the terms and conditions of this permit and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [Maine Administrative Procedure Act, 5 M.R.S. § 10002 and Rules Concerning the Processing of Applications and Other Administrative Matters, 06-096 CMR 2(21)(A) (last amended June 9, 2018)].

DONE AND DATED AT AUGUSTA, MAINE, THIS 21 DAY OF May, 2019.

COMMISSIONER OF ENVIRONMENTAL PROTECTION

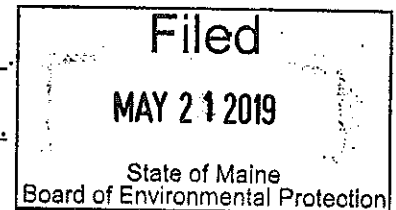
BY: [Signature]
For Gerald D. Reid, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application March 26, 2019

Date of application acceptance March 26, 2019

Date filed with Board of Environmental Protection _____



This Order prepared by GREGG WOOD, BUREAU OF WATER QUALITY

SPECIAL CONDITIONS

A. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent must not contain a visible oil sheen, foam, or floating solids which would impair the usages designated for the classification of the receiving waters.
2. The effluent must not contain materials in concentrations or combinations which are hazardous or toxic to non-target aquatic life; or which would impair the usages designated for the classification of the receiving water.
3. The discharge must not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their class.
4. Notwithstanding specific conditions of this permit, the discharge must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

B. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge License (WDL)/Maine Pollutant Discharge Elimination System (MEPDES) permit, accepted for processing on March 26, 2019, and 2) the terms and conditions of this permit. Discharges of waste water to a surface waterbody from any other point source are not authorized under this permit, and must be reported in accordance with Standard Condition D(1)(f), *Twenty-four hour reporting*, of this permit.

C. NOTIFICATION REQUIREMENTS

At least three (3) days prior to the commencement of a discharge, the permittee is required to notify the Department's compliance inspector and the Department's Lake Assessment Section Leader to inform them of the discharge event(s). In accordance with Standard Condition D, the permittee must notify the Department of any substantial change (realized or anticipated) in the volume or character of pollutants being introduced into the receiving waters.

D. OPERATORS RESPONSIBILITIES

1. **Operator** – For the purpose of this permit, means any entity associated with the application of pesticides or chemicals which results in a discharge to Lake Auburn that meets either of the following two criteria:
 - (a) **Applicator** – For the purpose of this permit is defined as any entity who performs the application of a pesticide or chemical or who has day-to-day control of the application (i.e., they are authorized to direct workers to carry out those activities); or
 - (b) **Decision maker** – For the purpose of this permit is defined as any entity with control over the decision to perform pesticide or chemical applications including the ability to modify those decisions.

SPECIAL CONDITIONS

D. OPERATORS RESPONSIBILITIES (cont'd)

Operators must comply with all applicable statutes, regulations and other requirements including, but not limited to requirements contained in the labeling of pesticide products approved under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) labeling. Although the FIFRA label and labeling requirements are not effluent limitations, it is illegal to use a registered pesticide inconsistent with its labeling. If Operators are found to have applied a pesticide in a manner inconsistent with any relevant water-quality related FIFRA labeling requirements, the Department will presume that the effluent limitation to minimize pesticides entering the waters of the State has been violated under the MEPDES permit. The U.S Environmental Protection Agency (EPA) considers many provisions of FIFRA labeling such as those relating to application sites, rates, frequency, and methods, as well as provisions concerning proper storage and disposal of pesticide wastes and containers to be requirements that are necessary to protect water quality.

2. Applicator Responsibilities

- a. To meet the effluent limitations of this permit, all Applicators must implement the following conditions to minimize the discharge of algaecides or chemicals to Lake Auburn through the use of Pest Management Measures (PMMs). For the purposes of this permit, PMMs are defined as any practice used to meet the effluent limitations that comply with manufacturer specifications, industry standards and recommended industry practices related to the application, relevant legal requirements and other provisions that a prudent Operator would implement to reduce and/or eliminate algaecide or chemical discharges to Lake Auburn.
- b. Use only the amount of algaecide or chemicals and frequency of algaecide or chemical application necessary to control the target pest (in this case algae), using equipment and application procedures appropriate for this task.
- c. Maintain application equipment in proper operating condition, including requirement to calibrate, clean, and repair such equipment and prevent leaks, spills, or other unintended discharges.
- d. Assess weather conditions (e.g. temperature, precipitation and wind speed) in the treatment area to ensure application is consistent with all applicable federal requirements.

SPECIAL CONDITIONS

D. OPERATORS RESPONSIBILITIES (cont'd)

3. Decision Makers Responsibilities

a. General

1. To meet the effluent limitations in this permit, all Decision-makers must minimize the discharge of algaecide or chemicals to Lake Auburn from the application of algaecide or chemicals through the use of PMMs.
2. To the extent the Decision-maker determines the amount of algaecide or chemical or frequency of the application, the Decision-maker must use only the amount of algaecide or chemical and frequency of algaecide or chemical application necessary to control the target pest.

b. Identify the Problem

1. Identify areas with pest problems and characterize the extent of the problems, including, for example, water use goals not attained (e.g. human health, fisheries, recreation);
2. Identify target pest(s);
3. Identify possible factors causing or contributing to the pest problem (e.g., nutrients);
4. Establish any pest and site-specific action threshold(s). Action threshold is defined as the point at which pest populations or environmental conditions necessitate that pest control action be taken based on economic, human health, aesthetic, or other effects. An action threshold may be based on current and/or past environmental factors that are or have been demonstrated to be conducive to pest emergence and/or growth, as well as past and/or current pest presence. Action thresholds are those conditions that indicate both the need for control actions and the proper timing of such actions

- c. Pest Management Options.** Prior to any algaecide or chemical application that will result in a discharge to Lake Auburn, the Decision Maker must select and implement efficient and effective means of PMMs that minimize discharges resulting from the application of algaecide or chemicals to control algae. In developing the PMM for each pest management area, the Decision-maker must evaluate the following management options,

SPECIAL CONDITIONS

D. OPERATORS RESPONSIBILITIES (cont'd)

including a combination of these management options, considering impact to water quality, impact to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical or physical methods
4. Cultural methods
5. Biological control agents
6. Pesticides or chemicals

d. Algaecide or Chemical Use. If an algaecide or chemical is selected to manage the algae, the Decision-maker must:

1. Conduct surveillance in an area that is representative of the pest problem prior to each algaecide or chemical application to assess the pest management area and to determine when the action threshold(s) is met; and
2. Reduce the impact on the environment and non-target organisms by applying the algaecide or chemical only when the action threshold has been met and at a dosage rate that minimizes effects to non-target organisms while remaining effective for target species.

E. WATER QUALITY-BASED EFFLUENT LIMITATIONS

All Operators must control discharges as necessary to meet applicable numeric and narrative state water quality standards for any discharges authorized under this permit, with compliance required upon beginning such discharge.

If at any time an Operator becomes aware (e.g., through self-monitoring or by notification from the state or third party), or the State determines that the Operator's discharge causes or contributes to an excursion of any applicable water quality standard, the Operator must take appropriate corrective action(s) up to and including the ceasing of the discharge, if necessary.

SPECIAL CONDITIONS

F. MONITORING

- a. **Visual Monitoring Requirements for Pesticide or Chemical Applicators** - During any algaecide or chemical application with discharges authorized under this permit, all Applicators must, when considerations for safety and feasibility allow, visually assess the area to and around where algaecides or chemicals were applied for possible and observable adverse incidents (defined in Special Condition G(4)(b) of this permit) caused by application of algaecide or chemicals, including the unanticipated death or distress of non-target organisms and disruption of wildlife habitat, recreational or municipal water use.
- b. **Visual Monitoring Requirements for all Operators** - During any Operator post-application surveillance of any algaecide or chemical application with discharges authorized under this permit, all Operators must visually assess the area to and around where algaecides or chemicals were applied for possible and observable adverse incidents caused by application of pesticides or chemicals, including the unanticipated death or distress of non-target organisms and disruption of wildlife habitat, recreational or municipal water use.

See Special Condition H, *Recordkeeping And Reporting*, §a(10) of this permit for recordkeeping requirements.

G. PESTICIDE/CHEMICAL DISCHARGE MANAGEMENT PLAN (P/CDMP)

Prior to the application of an algaecide or chemical, the Decision maker must prepare a P/CDMP and submit it to the Department for review and comment.

The P/CDMP does not contain effluent limitations; the effluent limitations are specified in Special Conditions D and E of this permit. The P/CDMP documents how Decision-makers will implement the effluent limitations in Special Conditions D and E of this permit, including the evaluation and selection of PMMs to meet those effluent limitations in order to minimize discharges. In the P/CDMP, Decision-makers may incorporate by reference any procedures or plans in other documents that meet the requirements of this permit. If Decision-makers rely upon other documents to comply with the effluent limitations in this permit, such as a pre-existing pest management plan, the Decision-maker must attach to the P/CDMP a copy of any portions of any documents that are used to document the implementation of the effluent limitations.

SPECIAL CONDITIONS

G. PESTICIDE/CHEMICAL DISCHARGE MANAGEMENT PLAN (P/CDMP) (cont'd)

- a. **Contents of the P/CDMP.** The P/CDMP must include the following elements:
 1. **Pesticide/Chemical Discharge Management Team** - Decision-makers must identify all the persons (by name and contact information) that compose the team as well as each person's individual responsibilities, including:
 - a. Person(s) responsible for managing pests in relation to the pest management area.
 - b. Person(s) responsible for developing and revising the P/CDMP; and
 - c. Person(s) responsible for developing, revising, and implementing corrective actions and other effluent limitation requirements;
 2. **Problem Identification** - Decision-makers must document the following:
 - a. **Pest problem description.** Document a description of the pest problem at the pest management area, including identification of the target pest(s), source(s) of the pest problem, and source of data used to identify the problem.
 - b. **Action Threshold(s).** Describe the action threshold(s) for the pest management area, including data used in developing the action threshold(s) and method(s) to determine when the action threshold(s) has been met.
 - c. **General location map.** In the plan, include a general location map (e.g., USGS quadrangle map, a portion of a city or county map, or other map) that identifies the geographic boundaries of the area to which the plan applies and location of Lake Auburn and;
 - d. **Water quality standards.** Document any water(s) identified as impaired by a substance which either is an active ingredient or a degradate of such an active ingredient.
 3. **Pest Management Options Evaluation** - Decision-makers must document the evaluation of the pest management options, including combination of the pest management options, to control the target pest(s). Pest management options include the following: No action, prevention, mechanical/physical methods, cultural methods, biological control agents, pesticides and chemicals. In the evaluation, Decision-makers must consider the impact to water quality, impact to non-target organisms, feasibility, cost effectiveness, and any relevant previous PMMs.

SPECIAL CONDITIONS

G. PESTICIDE/CHEMICAL DISCHARGE MANAGEMENT PLAN (P/CDMP) (cont'd)

4. Response Procedures

a. Spill Response Procedures - At a minimum, Decision-makers must have

1. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases to waters of the State. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the P/CDMP team.
2. Procedures for notification of appropriate facility personnel, emergency response agencies,

b. Adverse Incident Response Procedures – For the purposes of this permit means an unusual or unexpected incident that an Operator has observed upon inspection or of which the Operator otherwise become aware, in which:

- (1) There is evidence that a person or non-target organism has likely been exposed to a algaecide or chemical residue, and
- (2) The person or non-target organism suffered a toxic or adverse effect.

The phrase toxic or adverse effects includes effects that occur within waters of the State on non-target plants, fish or wildlife that are unusual or unexpected (e.g., effects are to organisms not otherwise described on the algaecide or chemical product label or otherwise not expected to be present) as a result of exposure to an algaecide or chemical residue, and may include:

- Distressed or dead juvenile and small fishes
- Washed up or floating fish
- Fish swimming abnormally or erratically
- Fish lying lethargically at water surface or in shallow water
- Fish that are listless or nonresponsive to disturbance
- Stunting, wilting, or desiccation of non-target submerged or emergent aquatic plants
- Other dead or visibly distressed non-target aquatic organisms (amphibians, turtles, invertebrates, etc.)

SPECIAL CONDITIONS

G. PESTICIDE/CHEMICAL DISCHARGE MANAGEMENT PLAN (P/CDMP) (cont'd)

The phrase, toxic or adverse effects, also includes any adverse effects to humans (e.g., skin rashes) or domesticated animals that occur either from direct contact with or as a secondary effect from a discharge (e.g., sickness from consumption of plants or animals containing pesticides or chemicals) to waters of the State that are temporally and spatially related to exposure to a algaecide or chemical residue (e.g., vomiting, lethargy). At a minimum, Decision-makers must have:

1. Procedures for responding to any adverse incident resulting from algaecide or chemical applications;
 2. Procedures for notification of the adverse incident, both internal to the Decision-maker's agency/organization and external. Contact information for state/federal permitting agency, nearest emergency medical facility, and nearest hazardous chemical responder must be in locations that are readily accessible and available.
 5. **Signature Requirements-** Decision-makers must sign, date and certify the P/CDMP in accordance with Standard Conditions entitled, *Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits,* revised July 1, 2002,
- b. P/CDMP Availability.** Decision-makers must retain a copy of the current P/CDMP, along with all supporting maps and documents, at the address provided in the application for this permit. The P/CDMP and all supporting documents must be readily available, upon request, and copies of any of these documents provided, upon request, to the State, federal, or local agencies governing discharges or pesticide or chemical applications within their respective jurisdictions.

H. RECORDKEEPING AND REPORTING

a. Decision makers

1. Copy of the application submitted to the Department and any correspondence exchanged between the Decision-maker or Applicator and the Department specific to coverage under this permit;
2. Information on each treatment area to which algaecides or chemicals are discharged, including a description of treatment area, including location and size of treatment area and identification of any waters of the State, either by name or by location, to which algaecide(s) or chemical(s) are discharged;
3. Target pest(s) and explanation of need for pest control;
4. Description of pest management measure(s) implemented prior to the first algaecide or chemical application;

SPECIAL CONDITIONS

H. RECORDKEEPING AND REPORTING (cont'd)

5. Company name and contact information for the pesticide or chemical applicator and documentation of equipment calibration;
6. Name of each algaecide or chemical product used including the U.S. Environmental Protection Agency (EPA) and State of Maine Department of Agriculture's Board of Pesticide registration number if applicable;
7. Quantity of each algaecide or chemical product applied to each treatment area;
8. Algaecide or chemical application start date;
9. Algaecide or chemical application end date; and
10. Whether or not visual monitoring and or ambient water quality monitoring was conducted during algaecide or chemical application and/or post-application and if not, why not and whether monitoring identified any possible or observable adverse incidents caused by application of algaecides or chemicals.

Ambient water quality sampling and analysis must be conducted in accordance with; a) methods approved in 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 Human Services. Samples that are sent to a publicly owned treatment works licensed pursuant to *Waste discharge licenses*, 38 M.R.S. § 413 or laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended February 13, 2000).

All analytical test results must be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department or as specified by other approved test methods.

SPECIAL CONDITIONS

H. RECORDKEEPING AND REPORTING (cont'd)

Within 90 days following the discharge of the pesticide(s) or chemical(s), the Decision maker must submit a report to the Department with documentation addressing items H(a)2-H(a)10 of this permit including a summary of any analytical test results associated with ambient water quality monitoring. The report must be submitted to the Department's compliance inspector at the following address:

Department of Environmental Protection
Southern Maine Regional Office
Bureau of Water Quality
Division of Water Quality Management
312 Canco Road
Portland, Maine 04103

I. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time and with notice to the permittee, modify this permit to; 1) include effluent limits necessary to control specific pollutants 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.

J. SEVERABILITY

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

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

FACT SHEET

Date: April 12, 2019

PERMIT NUMBER: ME0002712

LICENSE NUMBER: W009100-5U-C-M

NAME AND ADDRESS OF APPLICANT:

**AUBURN WATER DISTRICT
P.O. Box 414, 268 Court Street
Auburn, ME. 04212-0414**

COUNTY: **Androscoggin County**

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

**Lake Auburn
Auburn, Maine**

RECEIVING WATER(S)/CLASSIFICATION: **Lake Auburn/Class GPA**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER:

**Mr. Sid Hazelton, P.E.
Superintendent
Auburn Water District
Tel: 207-784-6469
e-mail: shazelton@awsd.org**

1. APPLICATION SUMMARY

- a. Application: - The Auburn Water District (AWD/District/permittee) has submitted an application to the Department to modify combination Maine Pollutant Discharge Elimination System (MEPDES) permit ME0002712/Maine Waste Discharge License (WDL) #W009100-5U-B-R issued by the Department on April 3, 2018, for a five-year term. The April 3, 2018, permit authorized the discharge of an algaecide (a pesticide by definition) to Lake Auburn to control the growth of algae. Lake Auburn is a public drinking water supply for the cities of Lewiston and Auburn and the Auburn Water District (AWD) extracts unfiltered water from the lake and supplies it to its customers for consumption via a network of piping infrastructure.

1. APPLICATION SUMMARY (cont'd)

The Maine Department of Health and Human Services made the determination that Lake Auburn has been experiencing episodic algal blooms that may pose a threat to public health for people who utilize the drinking water supplied by the AWD. An algaecide treatment was conducted during the summer of 2018. See the discussion in **Attachment A** of this Fact Sheet regarding the background in the need for the algaecide treatment.

The AWD has been monitoring Lake Auburn closely since calendar year 2010 to try and determine if the algal issues are being caused by internal recycling of phosphorus in the sediment, phosphorus loading from watershed runoff or a combination or both. Based on the data available at this time, watershed management is an essential part of overall water quality management in Lake Auburn. The AWD and Lewiston Water District are well aware of this and have an active program, but it appears that current loading is excessive at times, mainly in association with major storms. Stormwater management is therefore recommended, with a focus on the first flush volume which usually transports a disproportionately large fraction of the phosphorus load. The details of such a program are not part of this effort, and while the limitations placed on such management by jurisdiction, technological constraints, and cost are acknowledged, greater effort is warranted. And even with successful watershed management there will be ongoing issues in the lake related to anoxia and internal phosphorus release from sediment. Both oxygenation and phosphorus inactivation are applicable in-lake approaches to improving water quality in Lake Auburn.

Among the two primary alternatives, phosphorus inactivation carries similar or less capital cost and much lower ongoing operational cost. Among the phosphorus inactivation alternatives, dosing stations offer support for watershed management but will not address the increased background concentration of phosphorus that makes the lake more susceptible to algae blooms when new inputs are substantial (i.e., after storms or during anoxic events beyond the deepest waters). A sediment phosphorus inactivation project at a dose on the order of 40 to 50 g/m² over 1250 acres project would greatly reduce current and potential future phosphorus concentrations at a cost approaching \$3 million. However, a lower dose treatment at 2 mg/L of sodium aluminate and aluminum sulfate for the upper 30 feet over 1250 acres, amounting to a sediment dose of 18 g/m², should achieve similar results for about a decade at a cost of <\$1 million. This should reduce the in-lake average phosphorus concentration to <10 µg/L and provide relief from sediment phosphorus loading for at least a decade, providing an appropriate timeframe for enhanced watershed management. As such treatments are additive with regard to sediment phosphorus, additional later treatment remains an option as warranted.

At this time, it is recommended that areas >30 feet deep within Lake Auburn be treated with a dose of 18 g/m², equivalent to 2 mg/L in the upper 30 feet of water over an area of 1250 acres, for the purpose of stripping accumulated phosphorus from the water column and partially inactivating surficial sediment. This would be accomplished via an application of aluminum sulfate and sodium aluminate. See Attachment B of this permit modification for a map depicting the treatment area.

2. CONDITIONS OF PERMITS

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

3. RECEIVING WATER STANDARDS

Maine law 38 M.R.S., §465-A(1) classifies Lake Auburn as a Class GPA waterbody and describes the standards for classification of Class GPA waterbodies as follows;

Class GPA shall be the sole classification of great ponds and natural ponds and lakes less than 10 acres in size.

- A. Class GPA waters must be of such quality that they are suitable for the designated uses of drinking water after disinfection, recreation in and on the water, fishing, agriculture, industrial process and cooling water supply, hydroelectric power generation, navigation and as habitat for fish and other aquatic life. The habitat must be characterized as natural.
- B. Class GPA waters must be described by their trophic state based on measures of the chlorophyll "a" content, Secchi disk transparency, total phosphorus content and other appropriate criteria. Class GPA waters must have a stable or decreasing trophic state, subject only to natural fluctuations and must be free of culturally induced algal blooms that impair their use and enjoyment. The number of *Escherichia coli* bacteria of human and domestic animal origin in these waters may not exceed a geometric mean of 29 per 100 milliliters or an instantaneous level of 194 per 100 milliliters.
- C. There may be no new direct discharge of pollutants into Class GPA waters. The following are exempt from this provision:
 - (1) Chemical discharges for the purpose of restoring water quality approved by the department;
 - (2) Aquatic pesticide or chemical discharges approved by the department and conducted by the department, the Department of Inland Fisheries and Wildlife or an agent of either agency for the purpose of restoring biological communities affected by an invasive species;
 - (3) Storm water discharges that are in compliance with state and local requirements and

3. RECEIVING WATER STANDARDS (cont'd)

- (4) Discharges of aquatic pesticides approved by the department for the control of mosquito-borne diseases in the interest of public health and safety using materials and methods that provide for protection of 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.

Discharges into these waters licensed prior to January 1, 1986 are allowed to continue only until practical alternatives exist. Materials may not be placed on or removed from the shores or banks of a Class GPA water body in such a manner that materials may fall or be washed into the water or that contaminated drainage may flow or leach into those waters, except as permitted pursuant to section 480-C. A change of land use in the watershed of a Class GPA water body may not, by itself or in combination with other activities, cause water quality degradation that impairs the characteristics and designated uses of downstream GPA waters or causes an increase in the trophic state of those GPA waters.

4. TERMS AND CONDITIONS

Maine law, 38 M.R.S., §414-A(1-A) states as follows;

1-A. *License for copper sulfate applications in public water supplies.* The commissioner may issue licenses to treat public water supplies with copper sulfate or related compounds. The commissioner may not issue more than 2 consecutive licenses for the same body of water.

A. A license may only be issued if the Department of Human Services, Division of Health Engineering has determined that:

- (1) An abundant growth of algae producing taste or odor exists to such a degree that the water supply is in danger of becoming unhealthful or unpalatable
- (2) The abundance of algae is a sporadic event. For purposes of this section, "sporadic" means occurring not more than 2 years in a row; and
- (3) The algae cannot effectively be controlled by other methods.

B. Any license issued under this subsection is for one application or series of applications not to exceed 6 months, as provided in the terms of the license.

C. The commissioner shall impose all conditions necessary to meet the requirements of this section and all other relevant provisions of law.

4. TERMS AND CONDITIONS (cont'd)

06-096 CMR, Chapter 514, *Regulations Concerning the Use of Aquatic Pesticides*, states as follows:

1. Definition. An aquatic pesticide is any substance (including biological agents) applied in, on or over the waters of the State or in such a way as to enter those waters for the purpose of inhibiting the growth or controlling the existence of any plant or animal in those waters.
2. Criteria for Approving a License to Use Aquatic Pesticides
 - A. Except as provided in 38 M.R.S., Section 362-A, no permit for aquatic pesticide use will be issued for a pesticide which is not registered for the intended use by the United States Environmental Protection Agency and the Maine Department of Agriculture.
 - B. No permit for aquatic pesticide use will be issued unless the applicant or agent for the applicant is certified and licensed in aquatic pest control by the Maine Board of Pesticides Control.
 - C. A permit for aquatic pesticide use will be issued only if the applicant provides adequate protection for non-target species.
 - D. A permit for aquatic pesticide use will be issued only if the applicant can demonstrate a significant need to control the target species and that pesticide control offers the only reasonable and effective means to achieve control of the target species. Demonstration of significant need may include, but not be limited to, health risk, economic hardship, or loss of use.
 - E. In addition to paragraphs (A) through (D), any discharge of aquatic pesticides, alone or in combination with all other discharges, shall meet all other applicable requirements of Maine's waste discharge laws including, but not limited to, the provisions of 38 M.R.S., Sections 464 and 465.

For the purposes of this permit, the term pesticide means (1) any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, (2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant, and (3) any nitrogen stabilizer, except that the term "pesticide" shall not include any article that is a "new animal drug" within the meaning of section 201(w) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321(w)), that has been determined by the Secretary of Health and Human Services not to be a new animal drug by a regulation establishing conditions of use for the article, or that is an animal feed within the meaning of section 201(x) of such Act (21 U.S.C. 321(x)) bearing or containing a new animal drug. The term "pesticide" does not include liquid chemical sterilant products (including any

4. TERMS AND CONDITIONS (cont'd)

device, as defined in section 201 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321). For purposes of the preceding sentence, the term “critical device” includes any device that introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body and the term “semi-critical device” includes any device that contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body [FIFRA Section 2(u)].

The term “pesticide” applies to algacides, insecticides, herbicides, fungicides, rodenticides, and various other substances used to control pests. The definition encompasses all uses of pesticides authorized under FIFRA including uses authorized under sections 3 (registration), 5 (experimental use permits), 18 (emergency exemptions), 24(c) (special local needs registrations), and 25(b) (exemptions from FIFRA).

A. **Applicators & Decision Makers** - In this permit, all Operators are classified as either “Applicators” or “Decision-makers” or both. An Applicator is an entity who performs the application of a pesticide or chemical or who has day-to-day control of the application (i.e., they are authorized to direct workers to carry out those activities) that results in a discharge to waters of the State. A Decision-maker is an entity with control over the decision to perform pesticide or chemical applications, including the ability to modify those decisions that result in discharges to water of the State. As such, more than one Operator may be responsible for compliance with this permit for any single discharge from the application of pesticides.

This permit delineates the non-numeric effluent limitations into tasks that Department expects the Applicator to perform and tasks the Decision-maker to perform. In doing so, the permit assigns the Applicator and the Decision-maker different responsibilities.

1. **Applicators’ Responsibilities** - Special Condition D(2) of this permit contains the general technology-based effluent limitations that *all* Applicators must perform. These effluent limitations are generally preventative in nature, and are designed to minimize pesticide discharges into waters of the State. All Applicators are required to minimize the discharge of pesticides or chemicals to waters of the State by doing the following:

a. **To the extent not determined by the Decision-maker, use only the amount of pesticide or chemical and frequency of pesticide or chemical application necessary to control the target pest, using equipment and application procedures appropriate for this task.**

It is illegal to use a pesticide in any way prohibited by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) labeling. Also, use of pesticides must be consistent with any other applicable state or federal laws. To minimize the total amount of pesticide discharged, Operators must use only the amount of pesticide and frequency of pesticide application necessary to control the target pest. Using only the amount of pesticide and

4. TERMS AND CONDITIONS (cont'd)

frequency of pesticide application needed ensures maximum efficiency in pest control with the minimum quantity of pesticide. Using only the amount and frequency of applications necessary can result in cost and time savings to the user. To minimize discharges of pesticide, Operators should base the rate and frequency of application on what is known to be effective against the target pest.

b. Maintain pesticide or chemical application equipment in proper operating condition, including requirement to calibrate, clean, and repair such equipment and prevent leaks, spills, or other unintended discharges.

Common-sense and good housekeeping practices enable pesticide or chemical users to save time and money and reduce the potential for unintended discharge of pesticides and chemicals to waters of the State. Regular maintenance activities should be practiced and improper pesticide or chemical mixing and equipment loading should be avoided. When preparing the pesticides or chemicals for application be certain that they are mixed correctly and prepare only the amount of material that is needed. Carefully choose the pesticide or chemical mixing and loading area and avoid places where a spill will discharge into Waters of the State. Some basic practices Operators should consider are:

- Inspect pesticide or chemical containers at purchase to ensure proper containment;
- Maintain clean storage facilities for pesticides and chemicals;
- Regularly monitor containers for leaks;
- Rotate pesticide and chemical supplies to prevent leaks that may result from long term storage; and
- Promptly deal with spills following manufacturer recommendations.

To minimize discharges of pesticides and chemicals, Applicators must ensure that the rate of application is calibrated (i.e. nozzle choice, droplet size, etc.) to deliver the appropriate quantity of pesticide or chemical needed to achieve greatest efficacy against the target pest. Improperly calibrated pesticide or chemical equipment may cause either too little or too much pesticide or chemical to be applied. This lack of precision can result in excess pesticide or chemical being available or result in ineffective pest control. When done properly, equipment calibration can assure uniform application to the desired target and result in higher efficiency in terms of pest control and cost. It is important for Applicators to know that pesticide or chemical application efficiency and precision can be adversely affected by a variety of mechanical problems that can be addressed through regular calibration. Sound maintenance practices to consider are:

- Choosing the right spray equipment for the application.
- Ensuring proper regulation of pressure and choice of nozzle to ensure desired application rate.
- Calibrating spray equipment prior to use to ensure the rate applied is that required for effective control of the target pest.

4. TERMS AND CONDITIONS (cont'd)

- Cleaning all equipment after each use and/or prior to using another pesticide or chemical unless a tank mix is the desired objective and cross contamination is not an issue.
- Checking all equipment regularly (e.g., sprayers, hoses, nozzles, etc.) for signs of uneven wear (e.g., metal fatigue/shavings, cracked hoses, etc.) to prevent equipment failure that may result in inadvertent discharge into the environment.
- Replacing all worn components of pesticide or chemical application equipment prior to application.

c. Assess weather conditions (e.g. temperature, precipitation, and wind speed) in the treatment area to ensure application is consistent with all applicable federal requirements.

Weather conditions may affect the results of pesticide or chemical application. Applicators must assess the treatment area to determine whether weather conditions are suitable for pesticide or chemical application.

- 2. Decision-makers' Responsibilities** Special Condition D(3) of this permit contains the effluent limitations that Decision-makers must perform. The permit requires the Decision-makers, to the extent Decision-makers determine the amount of pesticide or chemical or frequency of pesticide or chemical application, to minimize the discharge of pesticides and chemicals to waters of the State from the application of pesticides or chemicals, through the use of Pest Management Measure (PMMs), by using only the amount of pesticide or chemical and frequency of pesticide or chemical application necessary to control the target pest. For the purposes of this permit PMMs are defined as any practice used to meet the effluent limitations that comply with manufacturer specifications, industry standards and recommended industry practices related to the application of pesticides or chemicals, relevant legal requirements and other provisions that a prudent Operator would implement to reduce and/or eliminate pesticide or chemical discharges to waters of the State.

Decision-makers are required to meet technology-based effluent limitations that are based on integrated pest management principles. The permit is requiring certain Decision-makers to also comply with different technology-based effluent limitation than Applicators because they are considered the Best Available Technology Economically Achievable for these Operators. These requirements are aimed at reducing discharge of pesticides or chemicals to waters of the State and lessening the adverse effects of pesticides or chemicals that are applied. These requirements are divided into three different sections:

- Identify the problem,
- Pest management options
- Pesticide or chemical use

4. TERMS AND CONDITIONS (cont'd)

Prior to each application or series of applications, Decision-makers must identify the problem prior to pesticide or chemical application, consider using a combination of chemicals and non-chemical PMMs, and perform surveillance before pesticide or chemical applications to reduce environmental impacts. This permit is requiring these additional technology-based effluent limitation requirements from Decision-makers and not the Applicators because the measures necessary to meet these requirements are within the control of the Decision-makers, not the Applicators.

Integrated pest management, as defined in FIFRA, is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks. Integrated pest management is not a single pest control method but, rather, a series of pest management evaluations, decisions and controls. A more detailed description of each specific requirement is as follows;

- a. **Identify the Problem** - Decision-makers are required to identify the pest problem, identify the target pest, and establish an action threshold. Understanding the pest biology and ecology will provide insight into selecting the most effective and efficient PMMs (pesticidal or non-pesticidal methods), and in developing an action threshold. For the purposes of this permit, action threshold is defined as the point at which pest populations or environmental conditions cannot be tolerated necessitating that pest control action be taken based on economic, human health, aesthetic, or other effects. An action threshold helps determine both the need for control actions and the proper timing of such actions. It is a predetermined pest level that is deemed to be unacceptable. Action thresholds, often expressed as number of pests per unit area, can vary by pest, by site, and by season. As Operators gain insight and experience into specific pest management settings, the action levels can be revised up or down. To identify the problem at a treatment area, Decision-makers may use existing data to meet the conditions of this permit or use relevant historical site data.
- b. **Pest Management Options** - Decision-makers are required to implement efficient and effective means of PMMs that most successfully minimize discharges to waters of the State resulting from the application of pesticides or chemicals. Decision-makers must evaluate both pesticide/non-pesticide and chemical/non-chemical methods. Decision-makers must consider and evaluate the following options: no action, prevention, mechanical/physical methods, cultural methods, biological control agents, and pesticides or chemicals. In the evaluation of these options, Decision-makers must consider impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness. Combinations of various management options are frequently the most effective PMM.

4. TERMS AND CONDITIONS (cont'd)

- c. **Pesticide or Chemical Use** - Decision-makers are required to conduct pest surveillance in an area that is representative of the pest problem and reduce the impact on the environment. Pest surveillance is important to properly time the need for pest control. To reduce the impact on the environment and non-target organisms, Operators are required to only apply a pesticide or chemical when the action threshold has been met. As noted earlier, action thresholds help determine both the need for control actions and the proper timing of such actions.

B. Pesticide/Chemical Discharge Management Plan (P/CDMP)

Distinct from the technology-based or water quality-based effluent limitation provisions in the permit, Special Condition G of this permit requires Decision-makers to prepare a P/CDMP to document the implementation of PMMs being used to comply with the effluent limitations set forth in this permit. In general, Special Condition G of this permit requires that the following be documented in the P/CDMP:

- Pesticide/chemical discharge management team information;
- Problem identification;
- Pest management options evaluation;
- Response procedures pertaining to spills and adverse incidents;
- Documentation to support eligibility considerations under other federal laws, and

The P/CDMP must be kept up-to-date and modified whenever necessary to document any corrective actions as necessary to meet the effluent limitations in this permit.

The requirement to prepare a P/CDMP is not an effluent limitation because it does not restrict quantities, rates, and concentrations of constituents that are discharged. Instead, the requirement to develop a P/CDMP is a permit "term or condition" authorized under Sections 402(a)(2) and 308 of the Clean Water Act. The P/CDMP requirements set forth in the permit are terms or conditions because the Operator is documenting information on how it is complying with the effluent limitations (and inspection and evaluation requirements) contained elsewhere in the permit. Thus, the requirement to develop a P/CDMP and keep it updated is no different than other information collection conditions, as authorized by section 402(a)(2), in other permits. Failure to have a P/CDMP is a violation of the permit.

While Special Condition D of the permit requires the Operator to select PMMs to meet the effluent limitations in this permit, the PMMs themselves described in the P/CDMP are not effluent limitations because the permit does not impose on the Operator the obligation to comply with the PDMP; rather, the permit imposes on the Operator the obligation to meet the effluent limitations prescribed in Special Conditions D, E, and F of this permit. Therefore, the Operator is free to change as appropriate the PMMs used to meet the effluent limitations contained in the permit. This flexibility helps ensure that the Operator is able to adjust its practices as necessary to ensure

4. TERMS AND CONDITIONS (cont'd)

continued compliance with the permit's effluent limitations. However, the permit also contains a recordkeeping condition that requires that the P/CDMP be updated with any such changes in the Operator's practices. See Special Condition H of this permit. Thus, if an Operator's on-the-ground practices differ from what is in the P/CDMP, this would constitute a violation of the permit's recordkeeping requirement to keep the P/CDMP up-to-date, and not per se a violation of the permit's effluent limitations, which are distinct from the P/CDMP. The Department recognizes, however, that because the P/CDMP documents how the Operator is meeting the effluent limitations contained in the permit, not following through with actions identified by the Operator in the P/CDMP as the method of complying with the effluent limitations in the permit is relevant to evaluating whether the Operator is complying with the permit's effluent limitations.

Operators must comply with all applicable statutes, regulations and other requirements including, but not limited to requirements contained in the labeling of pesticide products approved under Federal Insecticide, Fungicide, and Rodenticide Act labeling ("FIFRA labeling"). Although the FIFRA label and labeling requirements are not effluent limitations, it is illegal to use a registered pesticide inconsistent with its labeling. If Operators are found to have applied a pesticide in a manner inconsistent with any relevant water-quality related FIFRA labeling requirements, the Department will presume that the effluent limitation to minimize pesticides entering the waters of the State has been violated under the permit. The Department considers many provisions of FIFRA labeling -- such as those relating to application sites, rates, frequency, and methods, as well as provisions concerning proper storage and disposal of pesticide wastes and containers -- to be requirements that affect water quality.

If an Applicator applies a pesticide or chemical at higher than the allowable rate, which results in excess product being discharged into waters of the State, the Department would find that this application was a misuse of the pesticide under the FIFRA label or chemical label and because of the misuse; the Department might also determine that the effluent limitation that requires the Operator to minimize discharges of pesticide or chemical products to waters of the State was also violated, depending on the specific facts and circumstances. Therefore, pesticide use inconsistent with certain FIFRA labeling requirements could result in the Operator being held liable for permit or water quality violations as well as a FIFRA violation.

1. Contents of the P/CDMP - The P/CDMP prepared under this permit must meet specific requirements in Special Condition G of this permit. Generally, Decision-makers must document the following:

- A pesticide or chemical discharge management team;
- A description of the pest management area and the pest problem;
- A description of pest management options evaluation;
- Response procedures for spill response and adverse incident response; and
- Any eligibility considerations under other federal laws.

4. TERMS AND CONDITIONS (cont'd)

- a. **Pesticide/Chemical Discharge Management Team** - The permit requires that a qualified individual or team of individuals be identified to manage pesticide or chemical discharges covered under the permit. Identification of a pesticide or chemical discharge management team ensures that appropriate persons (or positions) are identified as necessary for developing and implementing the plan. Inclusion of the team in the plan provides notice to staff and management (i.e., those responsible for signing and certifying the plan) of the responsibilities of certain key staff for following through on compliance with the permit's conditions and limits.

The pesticide or chemical discharge management team is responsible for developing and revising the P/CDMP, implementing and maintaining the PMMs to meet effluent limitations, and taking corrective action where necessary. Team members should be chosen for their expertise in the relevant areas to ensure that all aspects of pest management are considered in developing the plan. The P/CDMP must clearly describe the responsibilities of each team member to ensure that each aspect of the P/CDMP is addressed. The Department expects most Decision-makers will have more than one individual on the team, except for those with relatively simple plans and/or staff limitations. The permit requires that team members have ready access to any applicable portions of the P/CDMP and the permit.

- b. **Problem Identification** - This section includes the pest problem description, action threshold(s), a general location map, and water quality standards.

1. **Pest Problem Description** - The permit requires that the P/CDMP include a description of the pest problem at the pest management area. A detailed pest management area description assists Decision-makers in subsequent efforts to identify and set priorities for the evaluation and selection of PMMs taken to meet effluent limitations set forth in Special Conditions D & E and in identifying necessary changes in pest management. The description must include identification of the target pest(s), source of the pest problem, and source of data used to identify the problem. The permit allows use of historical data or other available data (e.g., from another similar site) to identify the problem at the site. If other site data is used, the permittee must document in this section why data from the site is not available or not taken within the past year and explain why the data is relevant to the site. Additionally, the pest management area descriptions should include any sensitive resources in the area, such as unique habitat areas, rare or listed species, or other species of concern that may limit pest management options.
2. **Action Threshold(s)** - The permit requires that the P/CDMP include a description of the action threshold(s) established for the target pest, including a description of how they were determined and method(s) to determine when the action threshold(s) has been met. An action threshold is a level of pest prevalence (or other indicator) at which an Operator takes action to reduce the pest population.

4. TERMS AND CONDITIONS (cont'd)

3. **General Location Map** - The P/CDMP must also contain a general location map of the site that identifies the geographic boundaries of the area to which the plan applies and location of Lake Auburn.

c. **Description of Pest Management Measures (PMM) Options Evaluation** - The permit requires that the P/CDMP include a description of the PMMs implemented to meet the applicable technology-based or water quality-based effluent limitations. The description must include a brief explanation of the PMMs used at the site to reduce the pesticide or chemical discharge, including evaluation and implementation of the six management options (no action, prevention, mechanical/physical methods, cultural methods, biological control agents, pesticides and chemicals). Decision-makers must consider impact to non-target organisms, impact to water quality, feasibility, and cost effectiveness when evaluating and selecting the most efficient and effective means of PMMs to minimize pesticide or chemical discharges to waters of the State.

1. **No Action** - No action is to be taken, although pest problem has been identified. This may be appropriate in cases where, for example, available pest management options may cause secondary or non-target impacts that are not justified, no available controls exist, or the pest population is stable at a level that does not impair water body uses.
2. **Prevention** - Preventing introductions of possible pest is the most efficient way to reduce the threat of nuisance species. Identifying primary pathways of introduction and actions to cut off those pathways is essential to prevention. Through a better understanding of the transportation and introduction of pest, private entities and the public have the necessary knowledge to assist in local pest control by reducing conditions that encourage the spread of pest in their immediate surroundings. Increasing public awareness of algae, its impacts, and what individuals can do to prevent proliferation is critical for prevention.
3. **Mechanical or Physical Methods** - Mechanical control techniques will vary depending on the pest. Mechanical and biological controls will be the appropriate method in some cases, or a part of a combination of methods. In some instances, the need for chemical pesticide use in and adjacent to the affected habitat can be reduced or virtually eliminated with proper execution of PMMs.
4. **Cultural Methods** - Cultural techniques include water-level drawdown.
5. **Biological Control Agents** - Biological control of algae may be achieved through the introduction of diseases, predators, or parasites. While biological controls generally have limited application for control of weeds and algae, the Operator should fully consider this option in evaluating pest management options.

4. TERMS AND CONDITIONS (cont'd)

6. **Pesticides/Chemicals** - Aquatic herbicides are chemicals specifically formulated for use in water to kill or control aquatic plants. Aquatic herbicides are sprayed directly onto floating or emergent aquatic plants as well as plants at or near the water's edge or are applied to the water in either a liquid or pellet form. Systemic herbicides are capable of killing the entire plant. Contact herbicides cause the parts of the plant in contact with the herbicide to die back, leaving the roots alive and able to regrow. Non-selective, broad spectrum herbicides will generally affect all plants that they come in contact with. Selective herbicides will affect only some plants.

All six management options may not be available for the treatment area. However, the P/CDMP must include documentation of how the six management options, including combination of these options, were evaluated prior to selecting a site specific PMMs.

5. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

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

6. PUBLIC COMMENTS

Public notice of this application was made in the Lewiston Sun Journal newspaper on or about February 14, 2018. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

7. DEPARTMENT CONTACTS

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

Gregg Wood
Division of Water Quality Management
Bureau of Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017
e-mail: gregg.wood@maine.gov

Telephone (207) 287-7693

8. RESPONSE TO COMMENTS

During the period of April 12, 2019, through the effective date of this final agency action, the Department solicited comments on the draft permit modification. The Department did not receive any substantive comment on the draft permit. Therefore, no response to comments has been prepared.

ATTACHMENT A

Algaecide Application

Though not a permittee, the City of Lewiston's Water Division has been a partner in the preparation of the materials contained in the discharge application and has served as a co-Decision Maker throughout the process to date and is listed as a member of the Pest Discharge Management Plan (PDMP) team. Both the AWD and the City of Lewiston are members of the non-governmental organization, Lake Auburn Watershed Protection Commission.

The permittee is seeking authorization to apply copper sulfate up to approximately 1,140 acres (divided into two 570-acre areas with the option to treat either or both) of Lake Auburn on an as needed basis during the five-year term (2018 – 2023) of this permit. The proposed treatment will take place in the general vicinity of the intake for the public water supply. See the attached map depicting the two treatment areas. During the summers of 2011 and 2012, Lake Auburn experienced algal blooms that raised health concerns expressed by the Maine Department of Health and Human Services (DHHS) as the AWD has a waiver from filtration requirements under the Safe Drinking Water Act given the historic clarity of Lake Auburn. The AWD and DHHS are concerned that if algal production in the lake approaches 2012 levels, the increased turbidity may decrease the effectiveness of the ultraviolet treatment of the water and harmful bacteria may enter the water distribution system posing a health risk to AWD customers.

The algae of concern are cyanobacteria (blue-green algae) more specifically *Microcystis* and *Anabaena*. These algae have been most abundant in Lake Auburn in late summer of calendar years 2011 and 2012. Cyanobacteria is common in lakes with elevated nutrient levels. Nutrients, predominately phosphorus, are introduced into the lake water column as storm water runoff or are internally recycled in late summer when surface waters are cooling and may more easily mix with bottom water in response to wind action releasing phosphorus from the sediment and transporting it upwards into the water column. When phosphorus is available and growing conditions favorable, algal reproduction can result in nuisance algal bloom conditions.

The permittee proposes to dissolve copper sulfate crystals in lake water in a mix tank on board an application vessel. The aqueous copper solution will be introduced into the lake between 0-20 feet in a pattern and dosing to achieve an in-lake target concentration between 0.05 mg/L and 0.10 mg/L in the treatment area(s). The application will be conducted for no more than three consecutive days. The final target concentration will be determined within two days of the application based on lab assays with actual algae assemblages that are representative of lake conditions. The timing of the application will be linked to detected increases in algae, as measured by turbidity and visual observations as a surrogate and supported by algal analysis.

The permittee proposes to conduct visual monitoring of the treatment area for dead, dying or distressed organisms, especially fish, within 24 hours before and after treatment and one week after treatment. The permittee proposes to sample for zooplankton and phytoplankton within the treatment area with 24 hours before and after treatment in accordance with a schedule found in the PDMP.

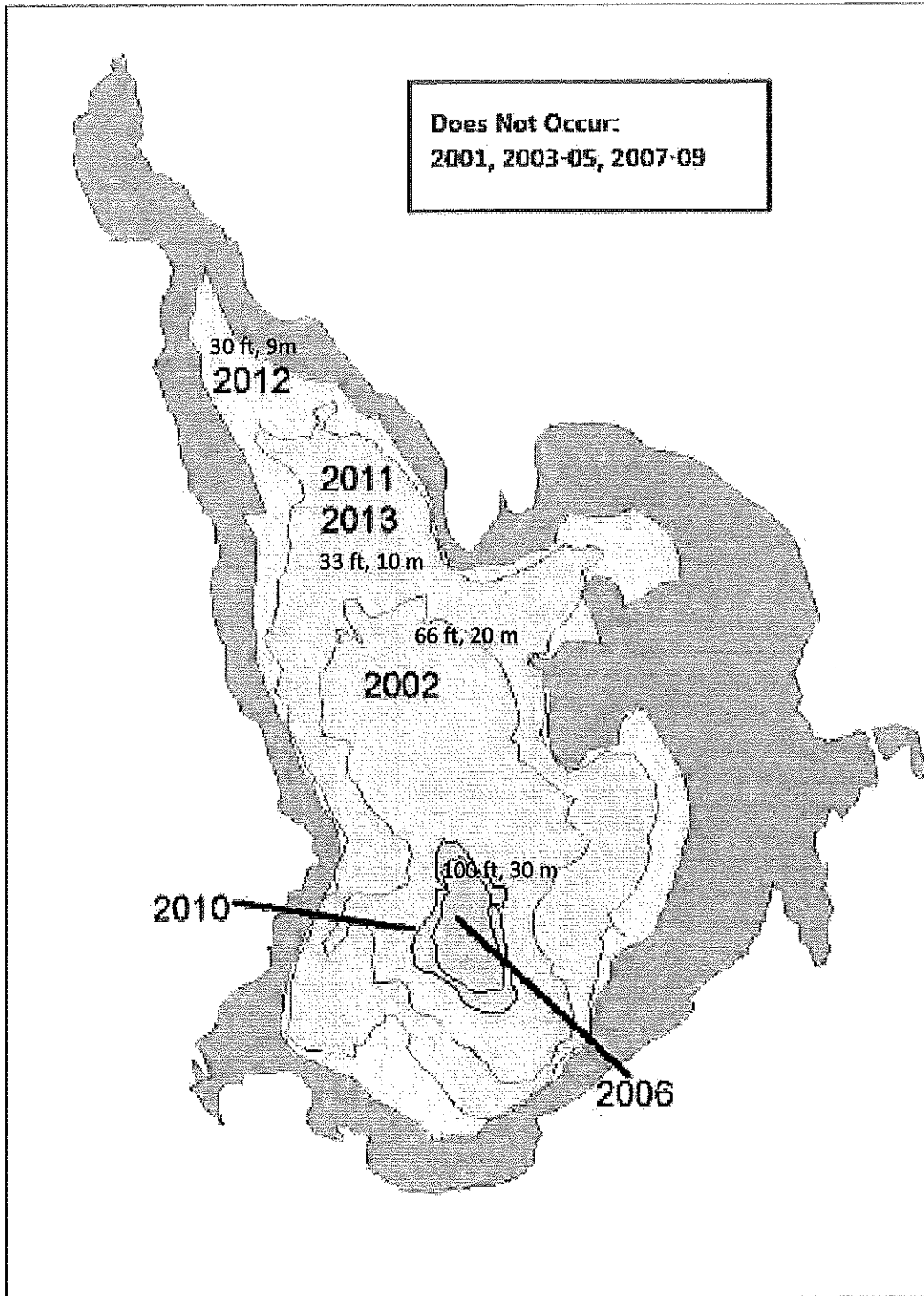
In-lake copper concentrations will be determined at 5 locations within the treatment area on the day of treatment, once within 30 minutes of treatment and then again near the end of the treatment. Samples will be composite samples of the upper 6 meters (20 feet) of the water column. Special Condition H of this permit requires the permittee to submit a report to the Department on or before 90 days after the treatment is complete.

The February 20, 2018, application submitted to the Department contains a letter from Maine's DHHS, Division of Environmental Health stating that an overabundance of cyanobacteria (*Anabaena*, *Microcystis* and *Gloeotrichia*) poses a potential public health threat due to the potential for the production of cyanotoxins which can cause illness or fatality if ingested. In addition, the existing water treatment plant cannot adequately treat for pathogens in water having a turbidity above 5NTUs and this level would cause DHHS to impose a "boil water order." The DHHS supports the application of the algaecide to Lake Auburn should the turbidity rise (>1.5 NTU) as a result of cyanobacteria growth, as long as the algaecide meets National Sanitation Foundation (NSF) 60 standards and the chemical application will result in an in-lake concentration of 0.1 mg/L of total copper. Consultants for the AWD have made a best professional judgment that an application dosing of 0.065 mg/L is more likely but the final dosing will depend on real time lab assays and actual algal assemblage.

The February 20, 2018, application submitted to the Department also contains a letter from Maine's Department of Inland Fisheries and Wildlife (DIFW) stating that if administered as proposed in the permittee's Pesticide Discharge Management Plan (PDMP), the interim strategy to address water quality concerns via the one time use of copper sulfate should not result in long term impacts to fisheries management plans and if successful, may reduce oxygen loss in the hypolimnion that resulted in the 2012 lake trout kill.

ATTACHMENT B

Figure 2. Extent of low oxygen in Lake Auburn over time.





DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: November 2018

Contact: (207) 287-2452

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) an administrative process before the Board of Environmental Protection (Board); or (2) a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This information sheet, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S. §§ 341-D(4) & 346; the *Maine Administrative Procedure Act*, 5 M.R.S. § 11001; and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 C.M.R. ch. 2.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed more than 30 calendar days after the date on which the Commissioner's decision was filed with the Board will be dismissed unless notice of the Commissioner's license decision was required to be given to the person filing an appeal (appellant) and the notice was not given as required.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017. An appeal may be submitted by fax or e-mail if it contains a scanned original signature. It is recommended that a faxed or e-mailed appeal be followed by the submittal of mailed original paper documents. The complete appeal, including any attachments, must be received at DEP's offices in Augusta on or before 5:00 PM on the due date; materials received after 5:00 pm are not considered received until the following day. The risk of material not being received in a timely manner is on the sender, regardless of the method used. The appellant must also send a copy of the appeal documents to the Commissioner of the DEP; the applicant (if the appellant is not the applicant in the license proceeding at issue); and if a hearing was held on the application, any intervenor in that hearing process. All of the information listed in the next section of this information sheet must be submitted at the time the appeal is filed.

INFORMATION APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time the appeal is submitted:

1. *Aggrieved Status.* The appeal must explain how the appellant has standing to maintain an appeal. This requires an explanation of how the appellant may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions, or conditions objected to or believed to be in error.* The appeal must identify the specific findings of fact, conclusions regarding compliance with the law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.
3. *The basis of the objections or challenge.* For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing requirements that the appellant believes were not properly considered or fully addressed.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those matters specifically raised in the written notice of appeal.
6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for public hearing must be filed as part of the notice of appeal, and must include an offer of proof in accordance with Chapter 2. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.
7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed evidence must be submitted with the appeal. The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered in an appeal only under very limited circumstances. The proposed evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Specific requirements for supplemental evidence are found in Chapter 2 § 24.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, and is made easily accessible by the DEP. Upon request, the DEP will make application materials available during normal working hours, provide space to review the file, and provide an opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer general questions regarding the appeal process.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed, the license normally remains in effect pending the processing of the appeal. Unless a stay of the decision is requested and granted, a license holder may proceed with a project pending the outcome of an appeal, but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, and will provide the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, any materials submitted in response to the appeal, and relevant excerpts from the DEP's application review file will be sent to Board members with a recommended decision from DEP staff. The appellant, the license holder if different from the appellant, and any interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. The appellant and the license holder will have an opportunity to address the Board at the Board meeting. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, the license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court (see 38 M.R.S. § 346(1); 06-096 C.M.R. ch. 2; 5 M.R.S. § 11001; and M.R. Civ. P. 80C). A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452, or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.
