

**MODIFICATION OF
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

**Leicester Water Supply District
124 Pine Street
Leicester, MA 01524**

is authorized to discharge from the facility located at

**Leicester Water Supply District Treatment Facility
124 Pine Street
Leicester, MA 01524**

to receiving water named

French River (Town Meadow Brook)

in accordance with effluent limitations, monitoring requirements and other conditions set forth in the permit issued on September 30, 2010 and effective on that date. This draft permit modification adds a new footnote 14 (Page 3 and 6), and a new permit part, **Part I. G. COMPLIANCE SCHEDULE** (Page 15), to the permit issued on September 30, 2010 in order to provide a compliance schedule for meeting the permit aluminum limits.

This permit modification will become effective on the date of signature if no comments are received during public notice. If comments are received during public notice, this permit modification will be made effective no sooner than 30 days after signature

This permit modification and the authorization to discharge expire at midnight, September 29, 2015, the same date as the permit issued on September 30, 2010.

Signed this day of

Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

CONTINUED FROM PREVIOUS PAGE

A.1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from treated effluent from outfall serial number **001** to the French River (Town Meadow Brook). Such discharges shall be limited and monitored as specified below.

<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>				<u>MONITORING REQUIREMENTS¹</u>	
<u>PARAMETER</u>	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE TYPE</u>
ORTHOPHOSPHORUS (November 1 to March 31)	*****	*****	Report mg/l	*****	Report mg/l	1/WEEK	24-HOUR COMPOSITE ⁵
TOTAL RECOVERABLE COPPER ⁸	0.05 lbs/Day	*****	18 ug/l	*****	32 ug/l	2/MONTH	24-HOUR COMPOSITE ⁵
ALUMINUM ⁹	0.25 lbs/Day	*****	87 ug/l ¹⁴	*****	Report mg/l	1/MONTH	24-HOUR COMPOSITE ⁵
AMMONIA-NITROGEN (April 1 – April 30)	29.2 lbs/Day	29.2 lbs/Day	10 mg/l	10 mg/l	15 mg/l	2/WEEK	24-HOUR COMPOSITE ⁵
AMMONIA-NITROGEN (May 1 – May 31)	14.6lbs/Day	14.6 lbs/Day	5 mg/l	5 mg/l	7.5 mg/l	2/WEEK	24-HOUR COMPOSITE ⁵
AMMONIA-NITROGEN (June 1 – October 31)	5.8 lbs/Day	5.8 lbs/Day	2 mg/l	2 mg/l	3 mg/l	2/WEEK	24-HOUR COMPOSITE ⁵
AMMONIA-NITROGEN (November 1 – March 31)	Report lbs/Day	*****	Report mg/l	*****	*****	1/QUARTER	24-HOUR COMPOSITE ⁵
TOTAL KJELDAHL NITROGEN	Report lbs/Day	*****	Report mg/l	*****	*****	1/QUARTER	24-HOUR COMPOSITE ⁵
TOTAL NITRATE	Report lbs/Day	*****	Report mg/l	*****	*****	1/QUARTER	24-HOUR COMPOSITE ⁵
TOTAL NITRITE	Report lbs/Day	*****	Report mg/l	*****	*****	1/QUARTER	24-HOUR COMPOSITE ⁵
WHOLE EFFLUENT TOXICITY ^{10, 11, 12, 13}	Acute LC ₅₀ ≥ 100% Chronic C-NOEC ≥ 62%					2/YEAR	24-HOUR COMPOSITE ⁵

12. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear dose-response relationship. The "62% or greater" limit is defined as a sample which is composed of 62% (or greater) effluent, the remainder being dilution water.
13. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in **Attachment A (Freshwater Chronic Toxicity Test Procedure and Protocol) Section IV, DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the Self-Implementing Alternative Dilution Water Guidance which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. This guidance is found in Attachment G of *NPDES Program Instructions for the Discharge Monitoring Report Forms (DMRs)* which may be found on the EPA, Region I web site at <http://www.epa.gov/Region1/enforcementandassistance/dmr.html>. If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlined in **Attachment A**. Any modification or revocation to this guidance will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.
14. The Permittee shall comply with the aluminum limit in accordance with the facility upgrade schedule contained in Section G below. In the interim, the facility shall be operated in order to minimize the use of aluminum compounds to the extent practicable while meeting its total phosphorus limit.

Part I.A.1. (Continued)

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The pH of the effluent shall not be less than 6.5 or greater than 8.3 at any time.
- c. The discharge shall not cause objectionable discoloration of the receiving waters.
- d. The effluent shall not contain a visible oil sheen, foam, or floating solids at any time.
- e. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand. The percent

G. COMPLIANCE SCHEDULE

The permittee shall attain the monthly average aluminum limit according to the following schedule:

1. No later than March 31, 2012, the permittee shall complete an evaluation of treatment alternatives and submit to EPA and MassDEP a report containing the results of its evaluation and the status of its planning and design of the Facility improvements necessary to achieve the aluminum limit. As the aluminum levels in the effluent are related to the use of aluminum compounds for chemical removal of phosphorus, the evaluation is expected to focus on alternatives that will ensure attainment of both the aluminum and phosphorus effluent limits.
2. No later than June 30, 2012, the permittee shall notify EPA and MassDEP in writing of its determination as to whether the Facility improvements will implement chemical or biological phosphorus removal.
3. No later than March 31, 2013, the permittee shall complete design of the Facility improvements required to achieve the aluminum limit. The permittee shall submit to EPA and MassDEP a report describing the design and expected construction schedule.
4. No later than September 30, 2013, the permittee shall complete one of the following and provide a status report to EPA and MassDEP:
 - a. If the selected Facility improvements implement a chemical phosphorus removal process, the permittee shall complete construction of the Facility improvements required to achieve the aluminum limit by September 30, 2013; OR
 - b. If the selected Facility improvements include a biological phosphorus removal process, the permittee shall have initiated construction by September 30, 2013.
5. If the selected Facility improvements include a biological phosphorus removal process, the permittee shall complete construction of the Facility improvements required to achieve the aluminum limit no later than September 30, 2014, and shall provide a status report regarding the construction to EPA and MassDEP.
6. The aluminum limit shall go into effect on October 1, 2013 if the selected Facility improvements implement a chemical phosphorus removal process. The aluminum limit shall go into effect on October 1, 2014 if the selected Facility improvements include a biological phosphorus removal process.

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912**

FACT SHEET

**DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES) PERMIT MODIFICATION TO DISCHARGE TO THE WATERS OF
THE UNITED STATES**

NPDES NO: MA0101796

DATE OF PUBLIC NOTICE: June 10, 2011 – July 11, 2011

NAME AND ADDRESS OF APPLICANT:

Leicester Water Supply District
124 Pine Street
Leicester, MA 01524

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Leicester Water Supply District Treatment Facility
124 Pine Street
Leicester, MA 01524

RECEIVING WATER: French River (Segment MA42-02, Town Meadow Brook)

CLASSIFICATION: B - Warm Water Fishery

I. PROPOSED ACTION, TYPE OF FACILITY AND DISCHARGE LOCATION

This action is a proposed modification to the NPDES permit issued to the Leicester Water Supply District.

II. LIMITATIONS AND CONDITIONS

This modification adds a compliance schedule for achieving the permit aluminum limit through addition of a new **Part I. G. COMPLIANCE SCHEDULE** to the permit, and new footnote 14 to the aluminum limit referencing the compliance schedule.

All other conditions of the existing Permit, including effluent limitations and monitoring requirements, will remain unchanged.

III. BASIS FOR MODIFICATION

The current permit was issued on September 30, 2010, and contained a new monthly average water quality-based aluminum effluent limit of 87 ug/l. The fact sheet prepared in connection with the draft permit noted that all of the high concentrations of aluminum in the effluent occurred during the April to October phosphorus treatment season and appeared to be related to the use of aluminum compounds for the control of phosphorus discharges. See Fact Sheet, NPDES MA0101796, page 11 and Table 2. The facility has a 0.2 mg/l total phosphorus limit from April through October and a 1.0 mg/l total phosphorus limit from November through March.

On March 18, 2011, the permittee notified EPA and MassDEP that it had performed a preliminary review of its operations with respect to meeting the aluminum limit and determined that it would not be able to meet the limit during the April to October phosphorus control season with operational changes that could be implemented in the short term. The permittee indicated that its current use of Sodium Aluminate (SA) and Poly Aluminum Chloride (PAC) to control phosphorus discharges had been highly effective, and that alternative phosphorus removal compounds would require study to determine if they would be equally effective. The permittee therefore requested additional time to evaluate treatment alternatives (including use of alternative phosphorus removal compounds and construction of biological phosphorus removal facilities) and to design and construct facility improvements to meet the new limit.

EPA's regulations allow a permit to specify a schedule of compliance leading to compliance with the Clean Water Act and regulations when appropriate. 40 CFR § 122.47(a). In this case a schedule of compliance is appropriate in order that the permittee may continue meeting its stringent phosphorus limit while determining the most effective alternative treatment design that will also meet the aluminum limit. The regulations also provide that a compliance schedule of more than one year contain interim requirements no further than one year apart, 40 CFR § 122.47(a)(3), and report on its compliance or noncompliance within 14 days of each interim or final date of compliance.

The Massachusetts Surface Water Quality Standards allow for schedules of compliance in permits where appropriate. 314 CMR 4.03(1)(b). The purpose of a compliance schedule generally is to afford a permittee adequate time to comply with one or more permit requirements or limitations that are based on new, or newly interpreted or revised water quality standards.

For these reasons, EPA and MassDEP have prepared a draft permit modification that adds a new Part 1.G., Compliance Schedule, that includes a compliance schedule for attaining the aluminum limit. The schedule includes milestones for evaluating alternatives, completing design, and completing construction of necessary facilities. Specifically, the schedule requires the permittee to report on its evaluation of treatment alternatives by March 31, 2012, notify EPA and MassDEP of its election of chemical or

biological methods for phosphorus removal by June 30, 2012, and to complete design of facility improvements to achieve the aluminum limit by March 31, 2013.

The schedule for construction of the required facility improvements depends on whether the selected facility improvements are limited to a modification of the existing chemical phosphorus removal process, or include a new biological phosphorus removal process. If a biological approach is included in the selected improvements, the schedule requires construction to be completed no later than September 30, 2014. A chemical removal approach will require less construction, so the construction schedule for these facilities (if selected) is shorter, and is required to be completed by September 30, 2013. Until construction of facility improvements is completed the facility is required to minimize the use of aluminum compounds to the extent practicable while still meeting its total phosphorus limit.

IV. STATE CERTIFICATION REQUIREMENTS

Pursuant to CWA Section 401(a)(1), and 40 CFR 122.53 (a), EPA may not issue a permit unless certification is granted or waived by the State in which the discharge originates. The Massachusetts Department of Environmental Protection has reviewed the draft permit modification and advised EPA that its conditions are adequate to assure compliance with the applicable provisions of the CWA and State law. EPA has requested certification by the State pursuant to 40 CFR §124.53 and expects the draft permit modification will be certified.

V. COMMENT PERIOD AND PROCEDURES FOR FINAL DECISION

All persons, including applicants, who believe any condition of the permit modification is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period to Susan Murphy, Permit Writer, at the U.S. Environmental Protection Agency, 5 Post Office Square, Suite 100 (OEP6-1), Boston, MA 02109. EPA and MassDEP are only taking public comment on the parts of the Permit proposed to be modified. Since the rest of the Permit is not being reopened at this time, we are not taking public comment on any other parts of the Permit.

Any person prior to such date may submit a request in writing for a public hearing to consider the draft permit modification to EPA and the State Agency. Such requests shall state the nature of the issues to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit modification the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after the public hearing, if held, the Regional Administrator will issue a final permit modification decision and forward a

copy of the final decision to the applicant and to each person who has submitted written comments or requested notice.

VI. CONTACTS

Requests for additional information or questions concerning the draft permit modification may be addressed Monday through Friday, between the hours of 9:00 a.m. and 5:00 p.m., to :

Susan Murphy
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100 (OEP6-1)
Boston, MA 02109
TEL: (617) 918-1534
FAX: (617) 918-0534
EMAIL: Murphy.Susan@epa.gov

Kathleen Keohane
Massachusetts Department of Environmental Protection
627 Main Street, 2nd Floor
Worcester, MA 01608
Telephone: (508)-767-2856 FAX: (508) 791-4131
Kathleen.Keohane@state.ma.us

Stephen Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
OFFICE OF ECOSYSTEM PROTECTION
REGION I
BOSTON, MASSACHUSETTS 02109

JOINT PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM (NPDES) PERMIT MODIFICATION TO DISCHARGE INTO THE
WATERS OF THE UNITED STATES UNDER SECTION 301 AND 402 OF THE CLEAN
WATER ACT, AS AMENDED, AND UNDER SECTIONS 27 AND 43 OF THE
MASSACHUSETTS CLEAN WATERS ACT, AS AMENDED, AND REQUEST FOR STATE
CERTIFICATION UNDER SECTION 401 OF THE CLEAN WATER ACT.

DATE OF NOTICE: June 10, 2011

PERMIT NUMBER: **MA0101796**

PUBLIC NOTICE NUMBER: MA-022-11

NAME AND MAILING ADDRESS OF APPLICANT:

Leicester Water Supply District
124 Pine Street
Leicester, MA 01524

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Leicester Water Supply District Treatment Facility
124 Pine Street
Leicester, MA 01524

RECEIVING WATER(S): French River (Town Meadow Brook)

RECEIVING WATER CLASSIFICATION(S): Class B

PREPARATION OF THE DRAFT PERMIT MODIFICATION:

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a permit modification for the above identified facility. The effluent limits and permit modification conditions imposed have been drafted to assure compliance with the Clean Water Act, 33 U.S.C. sections 1251 et seq., the Massachusetts Clean Waters Act, G.L. c. 21, §§ 26-53, 314 CMR 3.00 and State Surface Water Quality Standards at 314 CMR 4.00. EPA has formally requested that the State certify this draft permit modification pursuant to Section 401 of the Clean Water Act and expects that the draft permit modification will be certified.

INFORMATION ABOUT THE DRAFT PERMIT MODIFICATION:

A fact sheet (describing the type of facility; type and quantities of wastes; a brief summary of the basis for the draft permit modification conditions; and significant factual, legal and policy questions considered in preparing this draft permit modification) and the draft permit modification may be obtained at no cost at

http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by writing or calling EPA's contact person named below. The administrative record containing all documents relating to this draft permit modification is on file and may be inspected at the EPA Boston office mentioned above between 9:00 a.m. and 5:00 p.m., Monday through Friday, except holidays.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft permit modification is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **July 11, 2011**, to:

Susan Murphy
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (OEP06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1534

Any person, prior to such date, may submit a request in writing to EPA and the State Agency for a public hearing to consider this draft permit modification. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this draft permit modification, the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT DECISION:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

DAVID FERRIS, DIRECTOR
MASSACHUSETTS WASTEWATER
MANAGEMENT PROGRAM
MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION

STEPHEN S. PERKINS, DIRECTOR
OFFICE OF ECOSYSTEM PROTECTION
ENVIRONMENTAL PROTECTION
AGENCY – REGION 1