

SUEZ

Gardner Water & Sewer Departments
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June 5, 2017

NPDES Permit MAG640041

US EPA, Region 1
Office of Ecosystem Protection
PWTF Coordinator (OEP06-1)
5 Post Office Square, Suite 100
Boston, MA 2109-3912

Re: NOI - Request for General Permit Authorization to Discharge Wastewater
Crystal Lake Water Treatment Facility – MAG640041
City of Gardner Massachusetts

Dear USEPA Region 1,

As required and enclosed for submission, please find the Notice of Intent (NOI) to be covered by the General Permit for Potable Water Treatment Facility Discharges, along with all required supporting documentation. The Crystal Lake Water Treatment Facility is currently discharging under Permit No. MAG640041. These requirements were completed and submitted by SUEZ for the City of Gardner.

If you have any questions or require more information, please contact me at (978) 630-8791.

Sincerely,
SUEZ

A handwritten signature in black ink, appearing to read 'Matthew LaPointe', with a long horizontal flourish extending to the right.

Matthew LaPointe
Project Manager
Gardner Water Department

Enclosures: NOI Application and Supporting Documentation

cc: MA DEP, Division of Watershed Management
Dane Arnold, Gardner, DPW Director
File, Gardner Water Department

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

Request for General Permit Authorization to Discharge Wastewater
Notice of Intent (NOI) to be covered by the General Permit

Potable Water Treatment Facility (PWTF)
NPDES General Permit No. MAG640000 and NHG640000

A. Facility Information

1. *Indicate applicable General Permit for discharge*

MAG640000

NHG640000

2. *Facility Data*

Facility Name Crystal Lake Water Treatment Facility

Street/PO Box 99 Heywood Street City Gardner

State MA Zip Code 01440

Latitude 42.34.57 Longitude -71.59.23

SIC Code(s) 4941

Type of Business Water Supply Facility

3. *Facility Mailing Address (if different from Location Address, above)*

Facility Name _____

Street/PO Box _____ City _____

State _____ Zip Code _____

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4. *Facility Owner:*

Legal Name City of Gardner

Email darnold@gardner-ma.gov

Street/PO Box City Hall, 95 Pleasant Street City Gardner

State MA Zip Code 01440

Contact Person Dane Arnold Tel # 978-632-7661

Owner is (check one): Federal ☐ State ☐ Tribal ☐ Private ☐

Other (describe)

City (Municipal)

5. *Facility Operator (if different from above):*

Legal Name SUEZ

Email Matthew.Lapointe@suez-na.com

Street/PO Box 99 Heywood Street City Gardner

State MA Zip Code 01440

Contact Person Matthew LaPointe Tel # 978-630-8791

6. *Currently (Administratively) Covered Under the Expired PWTF General Permit? (Please check yes or no):*

Yes No ☒

a) Has a prior NPDES permit (either individual or general permit coverage) been granted for the discharge that is listed on the NOI? Yes ☒ No ☐ If Yes, Permit Number MAG640041

b) Is the discharge a "new discharger" as defined by 40 CFR Section 122.22? Yes ☐ No ☒

c) Is the facility covered by an individual NPDES permit for *other* discharges? Yes ☐ No ☒

If yes, Permit Number: _____

d) Is there a pending NPDES application (either individual or general permit) on file with EPA for this discharge? Yes ☒ No ☐

If yes, date of submittal: 09/12/2008 and Permit Number, if available _____

7. *Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water.* **Map attached?** Yes

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B. Discharge Information (Attach additional sheets as needed):

1. Name of receiving water into which discharge will occur: Crystal Lake

Check Appropriate Box: Freshwater ☒ Marine Water

State Water Quality Classification Class A

Type of Receiving Water Body (e.g., stream, river, lake, reservoir, estuary, etc.) Lake

2. Indicate the frequency of the discharge:

Emergency Only Infrequent (Once/Twice a Year) Intermittent*** Continuous ☒

Other***

***If Intermittent (i.e., occurs sometimes but not regularly as in batch discharge), provide # of days per year the discharge occurs _____

***If Other, explain _____

3. Describe the discharge activities for which the owner/applicant is seeking coverage, including process discharges not specifically authorized in the PWTF GP which need to be authorized for discharge (and which attain the effluent limits and other conditions of the general permit.)

(This description should include all treatment methods used on the wastewater prior to discharge including lagoons, baffles, filter presses, etc. If lagoons are used at the facility, please include the number and size of lagoons; the size and elevation of the entry pipe; the time of travel from the entry point of the discharge into the lagoon to the entry point to the receiving waters; and the length of backwash cycle for any combination of filters.)

CRYSTAL LAKE WATER TREATMENT FACILITY UTILIZES A MICRO-FILTRATION PROCESS WITH DIRECT COAGULATION. FILTER RECYCLE & BACKWASH WASTE IS COLLECTED & RETURNED
BACK TO THE SOURCE. PRIOR TO DISCHARGE BACK TO CRYSTAL LAKE, THE WASTEWATER IS TREATED FOR PH & CHLORINE RESIDUAL IN A NEUTRALIZATION PROCESS.
CURRENT TREATMENT PROCESS USES A COAGULANT CALLED POLY ALUMINUM CHLORIDE. THIS IS THE ONLY TREATMENT PRIOR TO THE FILTER WASTE STREAM.
THE COAGULANT DOES NOT INTERFERE WITH NORMAL DAY TO DAY PH LEVELS. ELIMINATING THE NEUTRALIZATION PROCESS, ALLOWING THE
FACILITY TO DIRECTLY DISCHARGE WASTE BACK TO THE SOURCE. IF NEUTRALIZATION IS REQUIRED DUE TO CHEMICAL WASHES ON THE MICRO-FILTRATION
MEMBRANES THE PLC/SCADA SYSTEM WILL ADD CHEMICAL NEEDED TO MAINTAIN PH LEVEL WITHIN REQUIRED RANGE THIS IS DONE BY USING EITHER
SODIUM HYDROXIDE, SODA ASH, OR CITRIC ACID. CHLORINE RESIDUAL WILL BE ELIMINATED USING SODIUM BISULFITE. THE 15,000 GAL NEUTRALIZATION
TANK IS LOCATED WITHIN THE TREATMENT FACILITY. NEUTRALIZED WATER IS PUMPED BACK TO THE SOURCE AT 500 GPM. IF THE PROCESS FAILS, WATER WILL BE PUMPED TO THE
MUNICIPAL SEWER SYSTEM

4. Attach a line drawing or flow schematic showing water flow through the facility including sources of intake water, operations contributing to flow, treatment units, outfalls, and receiving water(s).

Line drawing or flow diagram attached? Yes

5. Identify the source of the water being discharged:

Surface water ☒ Groundwater Other (describe)

6. Number of Outfalls 1 Latitude and Longitude to the nearest second for each Outfall. Attach additional pages if necessary.

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Outfall #	Latitude <u>42.34.59</u>	Longitude <u>-71.59.21</u>
Outfall #	Latitude _____	Longitude _____
Outfall #	Latitude _____	Longitude _____

7. For each outfall, indicate the proposed sampling location(s) for both effluent and ambient water (when applicable) and proposed consistent times of the month for collecting samples:

Outfall #

SAMPLES TAKEN AT TREATMENT PLANT OUTFALL, AFTER FLOW MEASUREMENT, PRIOR TO ENTERING THE SOURCE. MONITORING

OCCURS MONDAYS DURING THE HOURS OF 7:00-3:00, SAMPLES ARE TAKEN DURING PLANT OPERATION AT 7:00am, 9:00am, 11:00am & 1:00pm

Outfall #

Outfall #

C. Effluent Characteristics

1. List here and attach additional information (on separate sheet) on any water additives used at the facility. This includes chemicals (including aluminum, iron, or phosphorus-containing chemicals) for pH adjustment, dechlorination, control of biological growth, and control of corrosion and scale in water pipes.

POLY ALUMINUM CHLORIDE SODIUM HYPOCHLORITE, SODA ASH, AMMONIUM SULFATE,
SODIUM FLUORIDE, CITRIC ACID, SODIUM HYDROXIDE, SODIUM BISULFITE

2. Report any known remediation activities or water quality issues in the vicinity of the discharge

3. Are aluminum compounds or polymers used as coagulants at this facility?*

Yes X No

*If answer is "Yes" and the facility was *not* covered under the PWTF GP that expired on

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10/2/14, additional monitoring data and information is required. **Please complete Item III.C.12.**

4. Does the facility use any alum-based products for algae control?*

Yes_ No **X**

*If answer is "Yes" and the facility was *not* covered under the PWTF GP that expired on 10/2/14, additional monitoring data and information is required. **Please complete Item III.C.12.**

5. Are iron-containing coagulants used at this facility? Yes_ No **X**
6. Does the facility's discharge contain residual chlorine? Yes No **X**

[If Yes, EPA will calculate a Total Residual Chlorine effluent limit for your facility]

7. Does the facility provide treatment to remove arsenic from the raw water source? Yes No **X**
8. a. Are phosphorus-containing chemicals added to the treated water at this facility? Yes No **X**
- b. If answer to 8.a. is Yes, does the facility discharge to Phosphorus-Impaired waters? Yes No
- c. If answer to 8.b. is Yes, provide name of P-Impaired waterbody: _____

9. Does the facility remove radium or other radioactive substances from raw water sources to comply with drinking water standards? Yes No **X**

10. Provide the reported or calculated seven day- ten year low flow (7Q10) of the receiving water
7Q10: _____ cfs

NOTE: For facilities that discharge in New Hampshire, the state permitting authority **must** be contacted at the address listed in Appendix VI of the PWTF GP to determine and/or confirm the 7Q10 and/or dilution factor. For facilities that discharge in Massachusetts, it is highly recommended to contact the relevant state authority (MassDEP) to determine and/or confirm the 7Q10 and/or dilution factor. Attach any calculation sheets used to support the stream flow and dilution factors. See Appendix VII for equations and additional information.

11. For *each* outfall, provide the following discharge information:

Outfall # 001

- a) *Design Flow of Facility (in million gallons per day, MGD):* 3.0

This value will determine the facility's daily maximum flow limit, up to a maximum of 1.0 MGD.

- b) *Discharge Flow (in gallons per day, GPD):*

Maximum Daily Flow 585,024 GPD Average Monthly Flow 248,550 GPD

- c) *TSS (mg/l):* Number of samples: 21 (Minimum of 10 samples)

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Maximum Daily 23.00 mg/l

Average Monthly 12.948 mg/l

d) *pH (s.u.)* : Number of samples: 23 (Minimum of 10 samples)
Minimum 6.92 s.u. Maximum 7.42 s.u.

e) *Total Residual Chlorine (ug/l)*: Number of samples: 23 (Minimum of 10 samples)
Maximum Daily 40 ug/l

NOTE: TRC is only required for discharges which have been previously chlorinated or contain residual chlorine

12. The following section must be completed for any facility that answered "Yes" to Question III.C.3 or III.C.4 (e.g. adds an aluminum-containing chemical to the water being treated and/or discharged) **AND** was not covered under the previous PWTF GP (which expired on 10/2/14).

- a) Collect, analyze and submit **12 effluent samples and 10 ambient surface water samples** from a location upstream of and not affected by the discharge. For facilities in New Hampshire and Massachusetts, each sample should be analyzed for total recoverable Al in micrograms per liter. All laboratory results shall be submitted on a separate sheet.
- a. The samples shall be composite samples consisting of four grab samples taken at approximately equal intervals on a flow weighted basis during the time at which the discharge is entering the receiving water after the start of the backwash cycle.
 - b. For each sampling event, the effluent and surface water samples shall be collected on the same day and during a representative discharge event. The samples shall be no more frequent than weekly and, if time allows in completing the NOI, at monthly intervals and at different flow conditions. If taking the ambient water quality sample from lakes/reservoirs, the 10 samples should be composited vertically.
 - c. Discharge flow at the time of effluent sampling should be recorded. Flow conditions at the time of ambient water sampling should be recorded (or estimated from nearest gaging station).
 - d. Do not include dilution when recording the results.
 - e. See Section 2.1.2.3 and Footnote 12 of Section 2.1.1 for MA facilities (or Section 3.1.2.3 and Footnote 10 of 3.1.1 for NH facilities) for key information on minimum level for analysis and sufficiently sensitive test procedures.
 - f. Sampling data that was collected within one year of the effective date of this general permit **AND** that adheres to all of the requirements above may be submitted in lieu of new samples. This must be denoted with the submitted data.
- b) Provide a description of control measures, chemical substitutions, waste handling methods, and operational changes evaluated and/or used by the facility to minimize the discharge of aluminum to surface waters. (Include additional sheet(s), if necessary)

D. Endangered Species Act Eligibility Information

U.S. Fish and Wildlife Service (USFWS) Criteria: A X B C

- Yes No

- Yes No

3. Attach documentation of ESA eligibility for USFWS as required at Part 1.4 and Appendix III of the General Permit. **Documentation attached?**

4. For facilities seeking coverage under the Potable Water Treatment Facility General Permit for the *first* time, respond to the following questions to assist in ESA eligibility for NMFS:

- a) Indicate if the facility discharges into any of the stretches of the following rivers which can support or provide habitat to either Shortnose or Atlantic Sturgeon:

Merrimack River (from Essex Dam in Lawrence, Downstream (including Haverhill) to mouth of River)	Yes	No
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	Yes	No
<i>Connecticut River</i> (from Turner's Falls, downstream through Holyoke (including Holyoke Dam region))		

<i>Taunton River</i>	Yes	No
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<i>Piscataqua River (in NH)</i>	Yes	No
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- b) Has the facility had any previous formal or informal consultation with NMFS?

Yes No

If yes, attach the results of the consultation(s). **Documentation attached?** _____

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E. National Historic Properties Act Eligibility

1. Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility site or in proximity to the discharge? Yes No ☒ X
2. Have any State or Tribal Historic Preservation Officers been consulted in this determination?
Yes No ☒ X

If yes, attach the results of the consultation(s). Documentation attached? _____

3. Which of the three National Historic Preservation Act scenarios listed in Appendix II, Section III have you met?
1 ☒ X 2 3

F. Supplemental Information

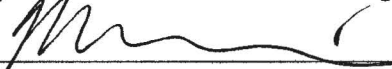
Please provide any supplemental information, including antidegradation review information applicable to new or increased discharges. Attach any analytical data used to support the application. Attach any certification(s) required by the General Permit.

G. Signature Requirements

The NOI must be signed by the operator in accordance with the signatory requirements of 40 CFR § 122.22 (see below) including the following certification:

I certify under penalty of law that (1) the discharge for which I am seeking coverage under the general permit consists solely of a surface water discharge from a potable water treatment facility; (2) any chemicals used to treat the discharge have been identified in this NOI; and (3) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature  Date 6/5/17

Printed Name and Title Matthew LaPointe - Project Manager - SUEZ

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Federal regulations require this application to be signed as follows:

1. For a corporation, by a responsible corporate party;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

Note: Permits No. MAG640000 and NHG640000 may be found at <http://www3.epa.gov/region1/npdes/pwtfgp.html>

H. “Opt-Out Request” from NetDMR Requirement

1. Check the box if you **are** applying for an “opt-out request.” ☐
2. Provide a detailed explanation of the technical or administrative factors that support your request to “opt-out” from the requirement to submit DMRs and reports electronically. (Add additional lines, if necessary.)

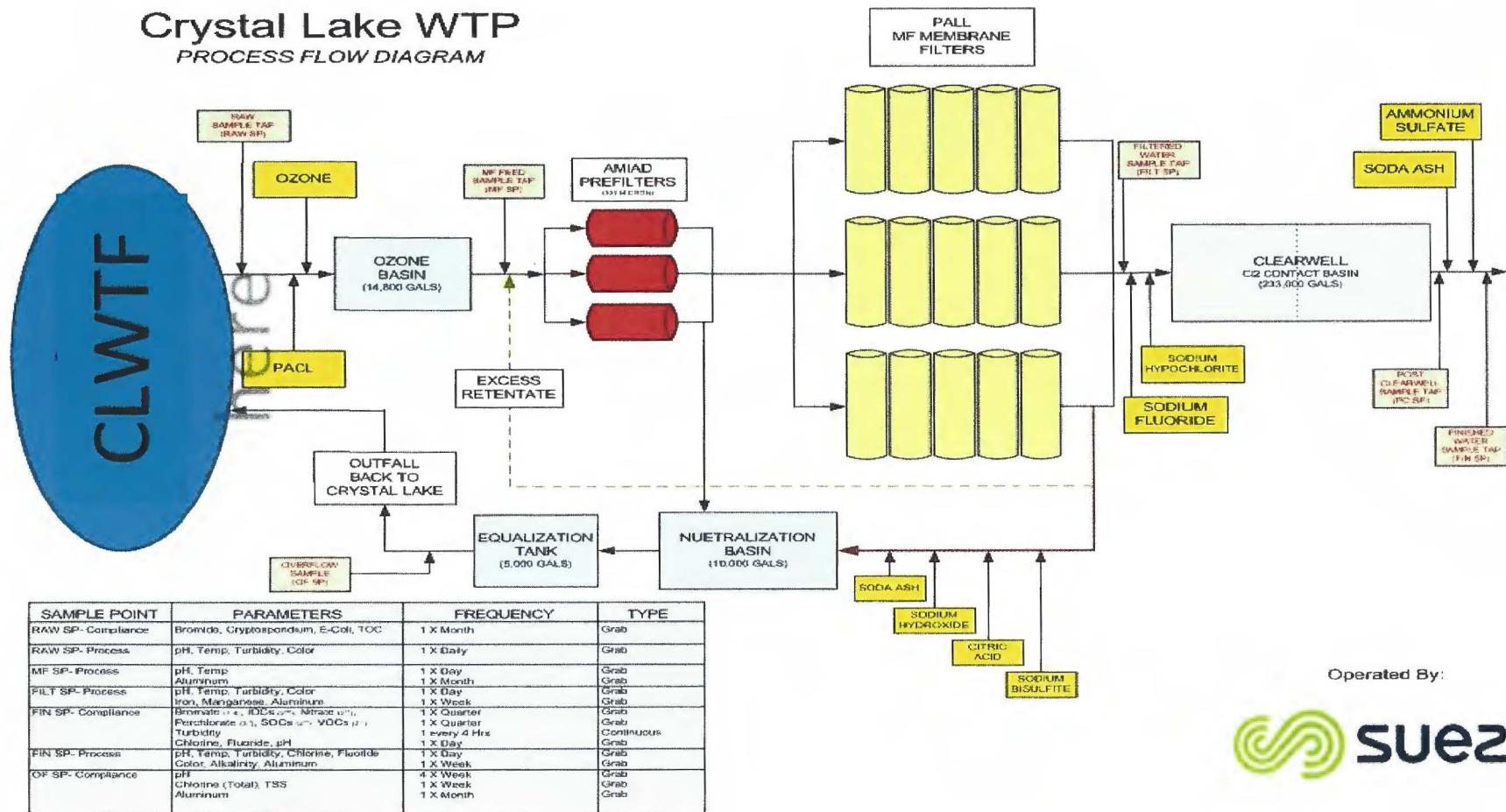
Crystal Lake WTF

Topo Map



Crystal Lake WTP

PROCESS FLOW DIAGRAM



Operated By:



