

FACT SHEET

PERMITTEE/FACILITY NAME: City of Saline / Saline Water Treatment Plant

COUNTY: WASHTENAW

DESCRIPTION OF EXISTING WASTEWATER TREATMENT FACILITIES

Potassium permanganate is added to the raw well water to oxidize the iron and regenerate the manganese greensand filter beds. Sodium hypochlorite can also be added but is not currently being used. The water is pumped to three greensand filters to remove iron and other particulate matter to prevent fouling of the reverse osmosis (RO) membranes. The effluent from the greensand filters is treated with sodium bisulfite and an antiscalant to protect the RO membranes from oxidants. Two low pressure RO membrane treatment units remove dissolved solids from the water.

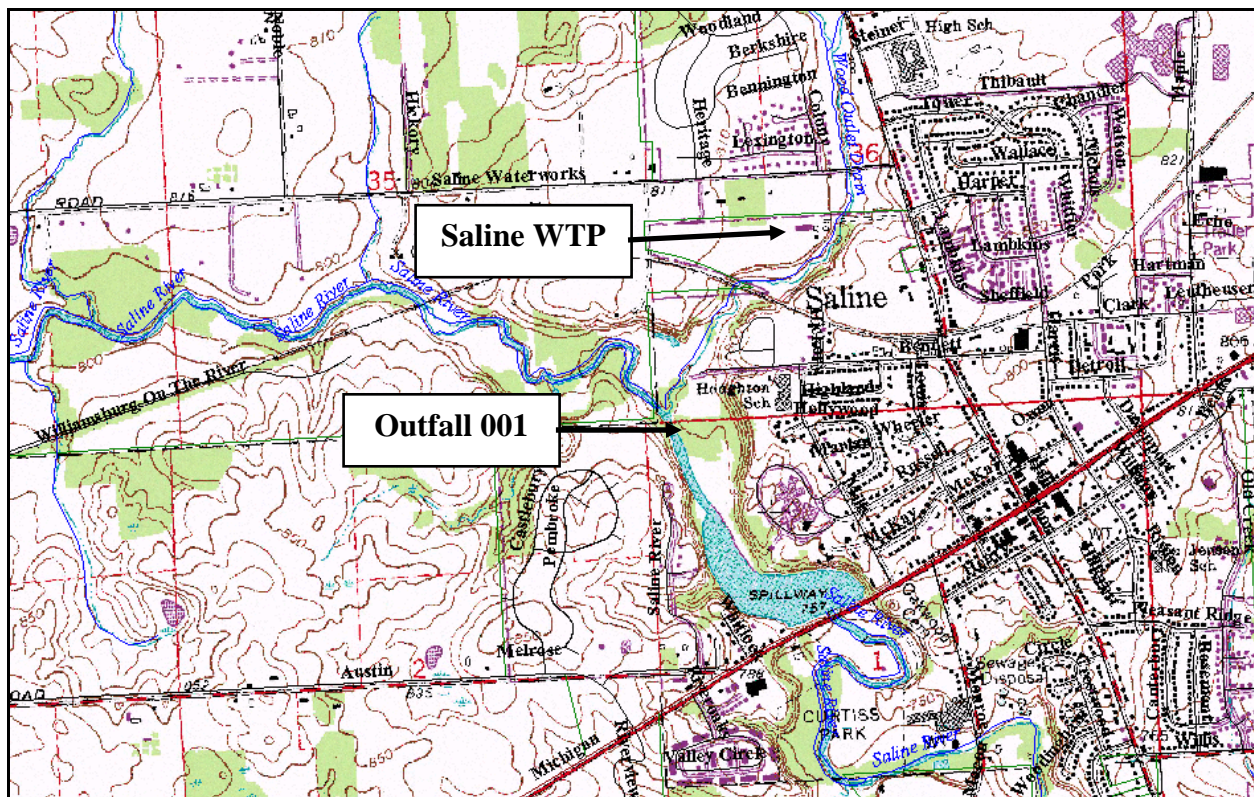
The backwash water from the greensand filters is applied to a sand infiltration bed equipped with underdrains. The treated filter backwash water and RO concentrate (reject water) are combined and discharged to the Saline River. The system is set up to allow just one or all three filters to be backwashed each day.

MAP OF DISCHARGE LOCATION

Facility Public Land Survey System Coordinates:

SE1/4, NW1/4, Section 36, T3S, R5E

Lodi Township, **WASHTENAW COUNTY**



RECEIVING WATER

The Saline River is protected for agricultural uses, navigation, industrial water supply, public water supply in areas with designated public water supply intakes, warm-water fish, other indigenous aquatic life and wildlife, partial body contact recreation, total body contact recreation (May through October), and fish consumption. The receiving stream flows used to develop effluent limitations are a 95 percent exceedance flow of 5.0 cfs, a harmonic mean flow of 19 cfs, and a 90-day, 10-year low flow of 7.7 cfs.

MIXING ZONE

For toxic pollutants, the volume of the Saline River used in assuring that effluent limitations are sufficiently stringent to meet Water Quality Standards is 25 percent of the applicable design flow of the receiving stream.

For other pollutants, the volume of the Saline River used in assuring that effluent limitations are sufficiently stringent to meet Water Quality Standards is the applicable design flow of the receiving stream.

EXISTING EFFLUENT QUALITY: (from DMR data from December 1, 2008 to November 30, 2009)

| <u>Parameter</u> | <u>Minimum</u> <u>Daily</u> | <u>Maximum</u> <u>Monthly</u> | <u>Maximum</u> <u>Daily</u> | <u>Units</u> |
|--|--------------------------------|----------------------------------|--------------------------------|-----------------|
| Flow | --- | 0.4071 | 0.6003 | MGD |
| Total Dissolved Solids | --- | 1462 | 2615 | mg/l |
| Total Suspended Solids | --- | 6 | 21 | mg/l |
| Total Residual Chlorine | --- | --- | 0 | mg/l |
| Chloride | --- | --- | 121 | mg/l |
| Sulfate | --- | --- | 253 | mg/l |
| Whole Effluent Toxicity | | | | |
| Acute Toxicity (<i>Ceriodaphnia dubia</i> and fathead minnow) | --- | | 0.0 | TU _A |
| Chronic Toxicity (<i>Ceriodaphnia dubia</i>) | --- | 2.8 | --- | TU _C |
| Chronic Toxicity (fathead minnow) | --- | 1.4 | --- | TU _C |
| Total Selenium | --- | --- | 3.1 | µg/l |
| Dissolved Oxygen | 4.4 | --- | --- | mg/l |
| pH | 6.2 | --- | 8.1 | SU |

PROPOSED EFFLUENT LIMITATIONS: (see draft permit)

BASIS FOR PROPOSED EFFLUENT LIMITATIONS

Based on this facility's application for an NPDES discharge permit, the Michigan Department of Natural Resources and Environment (Department) proposes to issue the applicant a permit to discharge, subject to effluent limitations and certain other conditions within the permit. Effluent limitations and/or monitoring requirements for total dissolved solids and flow are based on permit writer's judgment. Effluent limitations for total suspended solids are based on best professional judgment in the absence of applicable federal guidelines. Effluent limitations and/or monitoring requirements for total residual chlorine, whole effluent toxicity, pH, dissolved oxygen, chloride, sulfate and outfall observation are based on water quality.

REGISTER OF INTERESTED PERSONS

Any person interested in a particular application, or group of applications, may leave his/her name, address, and telephone number as part of the file for an application. The list of names will be maintained as a means for persons with an interest in an application to contact others with similar interests.

PUBLIC COMMENT

Comments or objections to the draft permit received between February 26, 2010, and March 29, 2010, will be considered in the final decision to issue the permit.

If submitted comments indicate significant public interest in the application or if useful information may be produced, the Department, at its discretion, may hold a public hearing on the application. Any person may request the Department to hold a public hearing on the application. The request should include specific reasons for the request, indicating which portions of the application or draft permit constitute the need for a hearing.

Public notice of a hearing will be provided at least thirty (30) days in advance. The hearing will normally be held in the vicinity of the discharge. The Department will consider comments made at the hearing when making its final determinations on the permit. Further information regarding the draft permit, and procedures for commenting or requesting a public hearing may be obtained by contacting Judith J. Woodcock, Permits Section, Water Bureau, Department of Natural Resources and Environment, P.O. Box 30273, Lansing, Michigan 48909, telephone: 517-373-1329, e-mail: woodcockj@michigan.gov.