

**MAINE PUBLIC DRINKING WATER
SOURCE WATER ASSESSMENT PROGRAM
TOWN OF FRYE ISLAND
FRYE ISLAND, MAINE**

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PREPARED BY

**SOURCE WATER ASSESSMENT PROGRAM
DRINKING WATER PROGRAM
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Introduction

The Maine Drinking Water Program, a state agency within the Department of Human Services, Bureau of Health, has completed an assessment of the susceptibility to contamination of the water supply serving Frye Island, a transient surface water supply located on Frye Island, Maine. The assessment is a requirement of the Federal Safe Drinking Water Act, a law originally passed in 1974 in an effort to ensure the safety of public water supplies. The Transient Water Supplier (TWS) has voluntarily cooperated with the Drinking Water Program in completing this assessment. In the following sections, maps of the source location are provided which show the watershed and intake area. The water system and source are described and photos of the source are included. The risk of contamination of the source is evaluated, and recommendations for action on the part of the water supplier are provided.

Maps of the Source

See Figures 1 and 2 in the back of the report.

Water System Description

PWSID #: 98219

Water System Name: Frye Island

Water System Location: Frye Island, Maine

Source Name: Sebago Lake

Source size: 30,431.84 acres

Source perimeter: 141.48 miles

Watershed Size: 142,264.49 acres

Watershed Perimeter: 163.89 miles

Water System Type: Transient non-community

Operating Season: May 1-October 31

Population served: ~750

Number of Intakes: 2

Location of intakes in relation to any adjacent property: east shore of the island.

Approximate distance of primary intake from the shoreline: 625 feet offshore

Approximate depth of the primary intake: 40 feet

Approximate distance of the primary intake from the bottom: 2 feet

Approximate distance of secondary intake from the shoreline: 125 feet offshore

Approximate depth of the secondary intake: 15-20 feet

Approximate distance of the secondary intake from the bottom: 2 feet

The intakes are propped up on angle iron sawhorses and are marked with buoys in the water, there are signs on the shoreline identifying the drinking water supply and that swimming is not allowed in the area.

Number of Individuals served daily: ~750

Number of Ground Water Sources: 0

Number of Surface Water Sources: 1 source with two intakes.

The water from the surface source is not combined with any other sources.

Treatment:

Disinfection: Post hypo chlorination

Filtration: Yes

Estimated Daily Water Use: 75,000 gallons

Potential Risk of Contamination to the Source

Transient water systems are regulated by the Drinking Water Program for pathogens and nitrate/nitrite since the individuals consuming the water are not the same ones from one day to the next. In general, no individual consumes the water for an extended period of time and therefore contaminants, which pose a long-term health risk, are not significant. For this reason, evaluation only of the intake zone was completed. However the report does include a map of the source watershed and a map of the shoreline adjacent to the intake.

Assessment Zones

Watershed: The Sebago Lake watershed has a 163.89 mile perimeter and is 142,264.49 acres. The watershed covers 16 towns, which include Albany Twp, Baldwin, Bethel, Casco, Frye Island, Greenwood, Harrison, Naples, Norway, Otisfield, Raymond, Sebago, Standish, Stoneham, Waterford and Windham. Upon review of the Maine Department of Environmental Protection (MDEP) "Threats to Groundwater" database, there are 113 potential threats within the Sebago Lake watershed. However, based on the large size of the watershed, the large volume of water stored in the lake and the remoteness of the threats from the intake, the potential threats identified by the MDEP are not a great concern to the Frye Island water source.

Immediate Shore land: The shoreline follows a North-South orientation. There are a series of very small coves and short stretches of sandy beach along the shoreline. A low sloping bank meets a rocky shoreline. Much of the property immediate to the intake is a forested area although there is a dirt road, which vehicles travel on. The shoreline between the intake and the dirt road does have a ~300 ft. tree buffer that follows the shoreline. There appears to be very low potential for erosion problems.

Intake (1,000 ft. radius): The primary intake is ~625 feet from the shoreline in ~40 feet of water. The primary intake is ~38 feet below the surface and ~2 feet off the bottom of the lake. The secondary (backup) intake is ~125 feet from the shoreline in ~20 feet of water. The secondary intake is ~18 feet below the surface and ~2 feet off the bottom of the lake. Both of the intakes are protected by screens/strainers and are propped up on angle iron sawhorses. The system has two pumps that automatically switch between themselves according to demand schedule. The pumps alternate at least once a day and during periods of high use will run together. This eliminates the concern for water becoming stagnant in the line or the pump. The operator is also able to run the pumps manually if need be. Buoys mark the intakes and there are signs identifying the lake as a drinking water source and state that swimming is not allowed in the area. There are no conditions that are currently affecting the water quality and there are no signs of viral, bacteriological or Nitrate/Nitrite contamination. There are occasional problems with alga around the intake but not on a regular basis. To the South of the intake is a private camp that has an area where boats are docked. The camp has a private septic system that is away from the lake and across the dirt road, which the camp owners pump their wastewater to.

SWAP Ranking:

The SWAP assessment factors indicate that the overall susceptibility of the water quality in Sebago Lake is **low**. This conclusion is based on the general conditions observed around the intake and shore land zone, the remoteness of any of the DEP threats in relation to the Frye Island intake and the large volume of water stored in the lake.

Discussion and Recommendations

The susceptibility of the Frye Island water source on Sebago Lake to be impaired by any of the threats identified by the MDEP is low. There are no threats identified on Frye Island and due to the large size of the lake the potential is quite low. The intake area is clearly marked with signs and buoys so responsible boaters and camp owners will act accordingly.