

SOUTHWEST HARBOR WATER DEPARTMENT LONG POND WATERSHED

EXECUTIVE SUMMARY

The Southwest Harbor Water Department provides drinking water from Long Pond to approximately 2,200 customers in Southwest Harbor. Long Pond is between 1,500 and 5,500 feet wide and more than three miles long. Long Pond is approximately 931 acres in size, with an average depth of approximately 33 feet and a maximum depth of over 110 feet. The outlet to the pond is located near its northern end and the water supply intake is located at the southern end of the pond. Runoff and groundwater feed the pond from a 4,305-acre watershed that lies in the towns of Southwest Harbor and Mount Desert. The watershed is forested with mixed deciduous and evergreen timber. Wetlands occupy approximately five percent of the watershed area and developed land occupies approximately one percent of the watershed.

The southern and western parts of the watershed lie within Acadia National Park, which is managed for the US Government by the National Park Service. The mandate of the National Park Service is to manage its land in its natural state with minimal human impact. Land in the northern and eastern parts of the watershed is privately owned. Zoning restricts future development to lots of two acres or more. Current land uses include moderate- to high-density seasonal homes on the northern shore of the pond and low-density seasonal homes on the eastern shore.

The Park Service maintains a boat launch at the south end of Long Pond, near the intake. The Town of Mount Desert maintains a boat launch at the north end of the pond. Water contact activities (e.g., swimming, wading, etc.) are prohibited in the southern end of the pond, within one mile of the intake. Other recreational uses, including fishing and boating, are permitted in all parts of the pond. Ice fishing is permitted in the winter, with vehicles permitted on the ice in Mount Desert, but not in Southwest Harbor.

The Water Department intake is located at the southern end of the pond approximately 10 feet below the surface. The pond is approximately 80 feet deep at the intake. The Water Department and Park Service have posted signs on the shoreline identifying the water supply and listing the swimming restriction. However, the intake is not marked on the pond. Available Long Pond water quality data classify the pond as oligotrophic, with high clarity (7 to 10 meters secchi disk) and low chlorophyll-a (1 to 3 ppb).

Based on the undeveloped nature of the watershed near the intake, the high water quality and the protective ownership and management of the watershed, the overall susceptibility of the Long Pond water supply is considered to be low.

SWAP RANKING AND RECOMMENDATIONS

The SWAP assessment factors indicate that overall susceptibility of the water quality in Long Pond is low. This conclusion is based on the general conditions observed, including the size of the pond, the strict limits on development on Park Service land and the relationship of developed areas to the water supply intake. Specific factors considered in assessing the overall risk are summarized below.

LONG POND SURFACE WATER ASSESSMENT

Zone	Measure	Findings	Risk Level
Watershed	Ambient Water Quality Existing Conditions	Class GPA, in full compliance. The half of the watershed nearest the intake is undeveloped and managed for natural conditions. Developed areas near the outfall include low to high-density residential development.	Low Low-Moderate
	Future Development	Park Service management policy prevents future development. Zoning restricts future development on private land to 2 acres or greater.	Low
	Overall		Low
Shoreland	Pond Classification Soils	Oligotrophic Erodible soils are most common along the northern shoreline near the outfall but are less common to the south.	Low Low
	Activities Posing a Threat	Activities are strictly limited near the intake in the south. There are few restrictions on shorefront activities in the north.	Low-Moderate
	Potential for Future Threats	There is general pressure to convert shorefront homes for year-round use.	Low
	Overall		Low
Intake	Raw Water Quality	Analytical data show high water quality.	Low
	Ownership/Control Activities Posing a Threat	Intake area controlled by Park Service. There are few restrictions on recreational access to the intake area via boats.	Low Low-Moderate
	Potential for Future Threats	There is a general trend in the area toward increasing recreational use.	Low-Moderate
	Overall		Low-Moderate
Overall			Low

Recommendations

The overall ranking for the pond susceptibility to threats of contamination is low. Long Pond is long and deep and the water supply intake is located at the southern end of the pond. Current land use around the intake is almost entirely undeveloped and future development is precluded by National Park Service control. Possible threats to the overall water quality of the pond are related to recreational uses and development at the north end of the pond, near the outfall. Several actions could be considered by the Water Department, the towns of Southwest Harbor and Mount Desert and the Park Service to provide added protection to the quality of the water supply.

- The most direct and least restricted access to the pond near the intake is via boat. The Water Department may want to work with the towns and the Park Service to pursue additional safeguards to limit access to the portion of the pond nearest the intake. This could take the

form of a buoyed zone around the intake or a wider area with limitations on boating activities (e.g., horsepower restrictions).

- Existing residential development at the northern end of the pond encourages recreation on both the north and south ends of the pond. The Water Department should consider educational outreach to shorefront homeowners to inform them of the water supply intake at the south end of the pond and solicit their support for water quality protection.
- Similarly, existing residential development at the north end of the pond includes a network of gravel roads and reliance on septic systems for wastewater disposal. Soil erosion along roads and poorly functioning septic systems pose threats to the water quality of Long Pond. The Water Department should consider working with Mount Desert officials and homeowner groups to monitor and improve on activities that could pose water quality threats.
- Pretty Marsh Road passes close to the shoreline of Long Pond. There are other gravel roads that also pass along the shoreline to provide access to private homes. The Water Department should consider working with the Southwest Harbor and Mount Desert public works departments and the National Park Service to develop a contingency plan to respond to vehicle accidents along the shoreline of Long Pond.
- The Water Company, Park Service and other groups (e.g., the WRI) should continue monitoring water quality in Long Pond. These data should be reviewed regularly for signs that water quality is deteriorating (e.g., trend of increasing concentrations of nutrients, etc.).

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