

LIVERMORE FALLS WATER DISTRICT MOOSE HILL POND AND PARKHURST POND WATERSHEDS

EXECUTIVE SUMMARY

The Livermore Falls Water District serves approximately 3,000 people from its Moose Hill Pond and Parkhurst Pond water supply. Moose Hill Pond is the principal water source. Parkhurst Pond is a secondary, backup source that is generally used during two months of the year in the fall. The combined watersheds of both ponds (approximately 6,500 acres) are located primarily in Livermore Falls and Jay. A majority (93 percent) of the watershed is associated with Parkhurst Pond. Approximately 77 percent of the combined watershed is covered with forest growth. The Water District owns shoreland on both ponds although other non-zoned, privately owned land is located nearby. Both ponds have Shoreland Zoning, which prohibits building construction and other land uses. Moose Hill Pond has a Water Quality Protection Ordinance to control recreational access and use of the pond.

Land use threats identified during the reconnaissance of the watersheds include non-point source runoff from agricultural activities and point-source runoff from Route 17 culverts that drain directly into Moose Hill Pond. Parkhurst Pond is located in a remote, undeveloped area, however, its attraction for outdoor recreation and lack of restrictions on public use increase the source sensitivity to human activity.

The ponds are used as a filtered source with chlorination and corrosion control treatment prior to entering the distribution system. The Water District monitors the ponds and the results show good water quality from the source.

Based on the Water District ownership, signage and fencing, monitoring of public activities on the ponds, Shoreland Zoning protection and recreational controls at Moose Hill Pond, the overall susceptibility of the ponds is considered to be low. The source sensitivity is raised to a moderate ranking with respect to potential runoff threats at Moose Hill Pond and public use at Parkhurst Pond.

SWAP RANKING AND RECOMMENDATIONS

The SWAP assessment factors indicate that overall susceptibility of the water quality in Moose Hill Pond and Parkhurst Pond is low to moderate for both sources. Specific factors considered in assessing the overall risk are summarized below.

For Moose Hill Pond, the low ranking is based on the protective ownership provided by the Water District, lack of development in the watersheds, shoreland zoning protections and recreational use ordinance. The ranking is raised to moderate with respect to the direct threat posed by runoff and vehicular traffic associated with Route 17. In addition, there is a lack of land use controls on privately owned land located in the northern and western portions of the watershed where future development is possible.

For Parkhurst Pond, the low ranking is based on Water District ownership, the remote rural setting and shoreland zoning protections. The pond is more susceptible with respect to the lack of recreational controls, unrestricted access to the intake area and future development potential on privately owned and non-zoned land located to the west of the pond.

MOOSE HILL POND AND PARKHURST POND SURFACE WATER ASSESSMENT

Zone	Measure	Findings	Risk Level
Watershed	Ambient Water Quality	Class GPA, in full compliance.	Low
	Existing Conditions	Rural and forested land use present an overall low threat to water quality.	Low
	Future Development	Farming near MHP poses increased sensitivity from runoff. Wetland and swamp drainage into PkP affect color. Water District ownership provides partial protection; pressure for future development seems low but lack of zoning could lead to improper land use.	Low
	Overall		Low
Shoreland	Pond Classification	Mesotrophic - slight algae blooms may occur at MHP; color at PkP.	Low-Moderate
	Soils	Erodible soils potential is moderate to high; steep erodible banks along Route 17.	Low-Moderate
	Activities Posing a Threat	Route 17 drainage and traffic flow.	Low-Moderate
	Potential for Future Threats	Development prohibited by Water District ownership and shoreland zoning.	Low
	Overall		Low-Moderate
Intakes	Raw Water Quality	Testing generally shows good quality.	Low
	Ownership/Control	Strong protection for MHP intake area with ownership, signage and fencing.	Low
	Activities Posing a Threat	Unrestricted access at PkP intake area. Recreational activities at PkP although the level of activity is low.	Low-Moderate
	Potential for Future Threats	Increased recreational pressure without established controls and frequent monitoring.	Low
	Overall		Low
Overall			Low-Moderate

Recommendations

The overall ranking for the pond susceptibility to threats of contamination is low to moderate. Several additional actions could be considered by the Water District to provide added protection to the quality of the water supply.

- Continue to work with the Maine DOT to develop strategies and improvements for minimizing the potential threats posed by the presence of Route 17 adjacent to the source at Moose Hill Pond.
- Continue to monitor water quality in the ponds and work with the Ecology Clubs to enhance their efforts on data gathering and developing a long-term baseline of water quality information.
- Implement a public awareness program for Parkhurst Pond in order to gain local support for adopting water resource protections, particularly near the intake and during periods of water transfer to Moose Hill Pond. Consider placing additional signs and information pamphlets at the pond for public education.
- Develop additional protection for water resources through zoning ordinances that extend beyond the Shoreland Zone at both sources.
- Establish a long-range plan to protect land in the watersheds through land purchases, conservation easements, etc., and by establishing protective agreements with local landowners.

MARCH 2003

prepared for

Source Water Assessment Program
Drinking Water Program
Maine Department of Human Services
11 State House Station
Augusta, Maine 04333



prepared by

Drumlin Environmental, LLC
15 Franklin Street, P. O. Box 392
Portland, Maine 04112-0392
(207) 771-5546