

3.1.3.4 Management of Oil and Hazardous Materials

Wind turbines, and their associated equipment, use lubricating and insulating oils in a closed system. A SPCC Plan would be developed as part of the SWPPP for the construction and operation of the Project as required by the SPDES permits.

3.2 Water Resources

3.2.1 Groundwater and Groundwater Quality

3.2.1.1 Affected Environment

Glaciolacustrine lake silts and clays overlie consolidated rocks of sedimentary origin in the area of the Project (Cadwell *et al.*, 1991). Small portions of the Project consist of peat muck (swamp deposits) which are poorly drained areas and include of organic silts and sands. The glacial till deposits form surficial aquifers, while bedrock consisting of carbonate rocks (primarily limestone) form deep aquifers. These consolidated rocks yield water primarily from bedding planes, fractures, joints, and faults, rather than from intergranular pores. Carbonate rocks generally yield more water than other types of consolidated rocks because carbonate rocks are subject to dissolution by slightly acidic groundwater. Dissolution along bedding planes, fractures, and joints enlarges these openings and increases the permeability of these carbonate rocks (Isachsen *et al.*, 2000).

No known sole-source aquifers occur within the Project area or its vicinity (United States Environmental Protection Agency [EPA], 2006a). In 2000, total freshwater use was 17.21 million gallons per day (Mgal/d), of which 13.25 Mgal/d (27 percent) was from surface-water sources and 3.96 Mgal/d (73 percent) was from groundwater (USGS, 2006). However, domestic users acquired 100 percent of their water supply from groundwater sources (USGS, 2006). Table 3-2 lists an excerpt from the USGS report of water usage statistics in Jefferson County, New York. Current data (October 2006) from the EPA indicates that drinking water is obtained from groundwater, surface water and purchased groundwater/surface water resources in Jefferson County (EPA, 2006b).

Table 3-2
Year 2000 Water Usage Statistics in Jefferson County ¹

Type of Usages	Water Withdrawals ²		
	Groundwater	Surface	Unit
Public supply ³	2.17	8.20	Mgal/d
Domestic, self-supplied withdrawals	0.45	0.00	Mgal/d

¹ Source: <http://water.usgs.gov/watuse/data/2000/index.html>

² 6.39 Mgal/d was industrial use

³ Population (Year 2000) in Jefferson County was approximately 111,740