

Potential Impact of Proposed Brine Storage Area on Breeding and Migratory Bird Populations

The goal of this memorandum is to respond to comments related to the potential impacts of the proposed brine storage pond on populations of breeding and migratory birds. A specific example of this type of comment is found on page 1 of Richard Nowogrodzki's comment letter dated November 10, 2011.

The impact of the proposed brine pond on migratory and breeding populations of birds will not be significant. While research indicates that prolonged exposure to hypersaline water can have negative effects on birds (USGS 2004, Gordus *et al.* 2002, Windingstad *et al.* 1987, Meteyer *et al.* 1997, Bollinger *et al.* 2005), the majority of the cases of salt toxicosis in wild bird populations have occurred at large saline lakes (225 acres to 44,000 acres) with few available fresh water alternatives (Riggert 1977, Windingstad *et al.* 1987, USGS 2004, Jehl 1988, Hampton *et al.* 2002, Gordus *et al.* 2002).

These investigations indicate that the 13-acre brine pond associated with this project is not likely to cause significant issues for migratory and breeding populations of birds. Birds are more likely to notice and use large saline lakes when there are no fresh water alternatives available. The literature on salt toxicosis indicates that birds will avoid hypersaline water if fresh water is available (Jehl 1988, Rubega and Robinson 1996, and Mahoney and Jehl 1985). The proposed Finger Lakes brine pond will have a surface area of 13 acres and will be located approximately 2,400 feet from a significant source of fresh water (42,800 acre Seneca Lake). As ice cover on Seneca Lake is an extremely rare occurrence (Halfman 1999), the fresh water of Seneca Lake will be available to avifauna year-round for most years. Moreover, the brine level in the proposed pond will be lowest during the LPG peak demand period (winter) as much of the brine will be pumped underground to displace the LPG for withdraw.

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