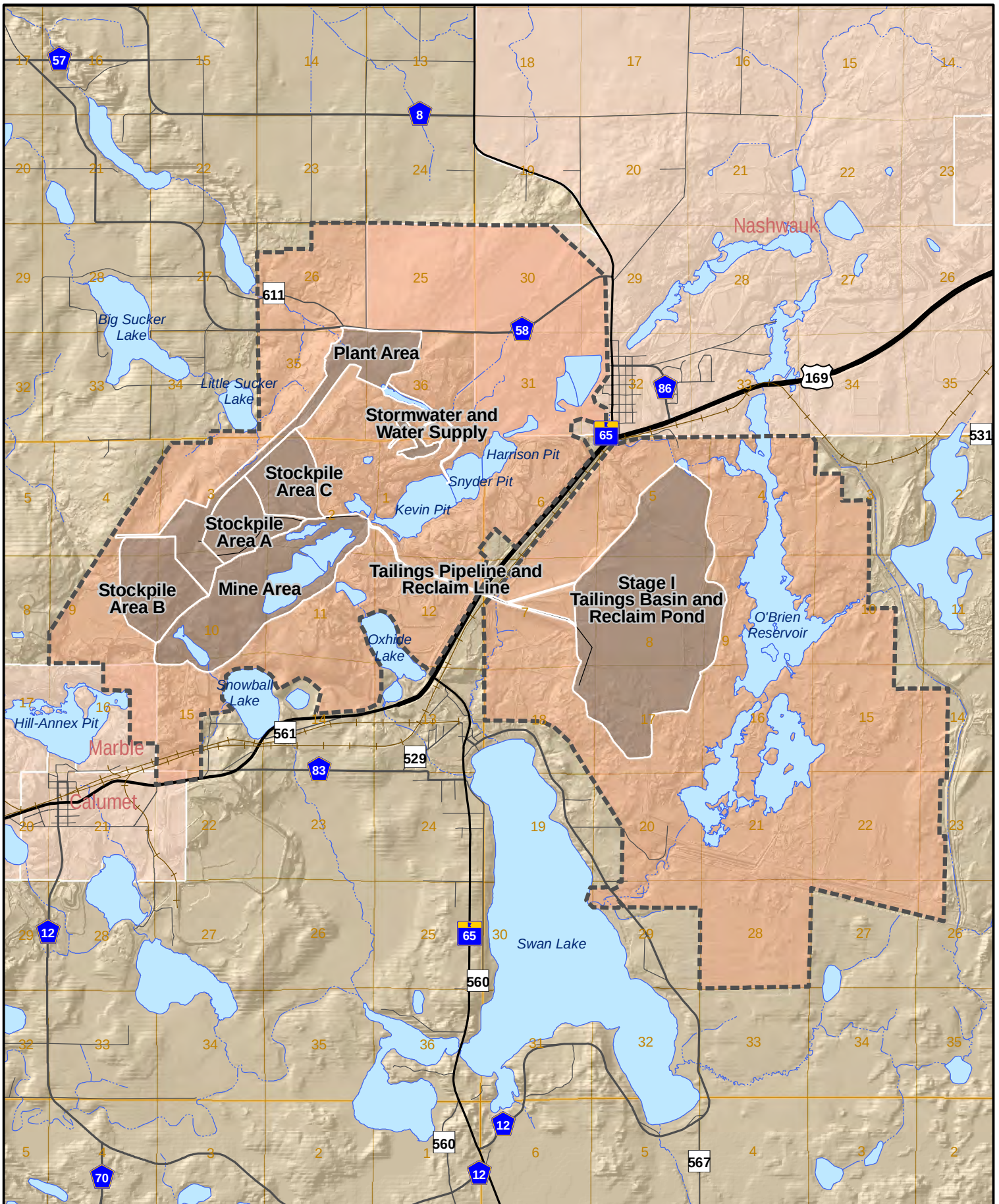
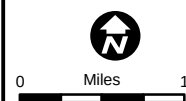


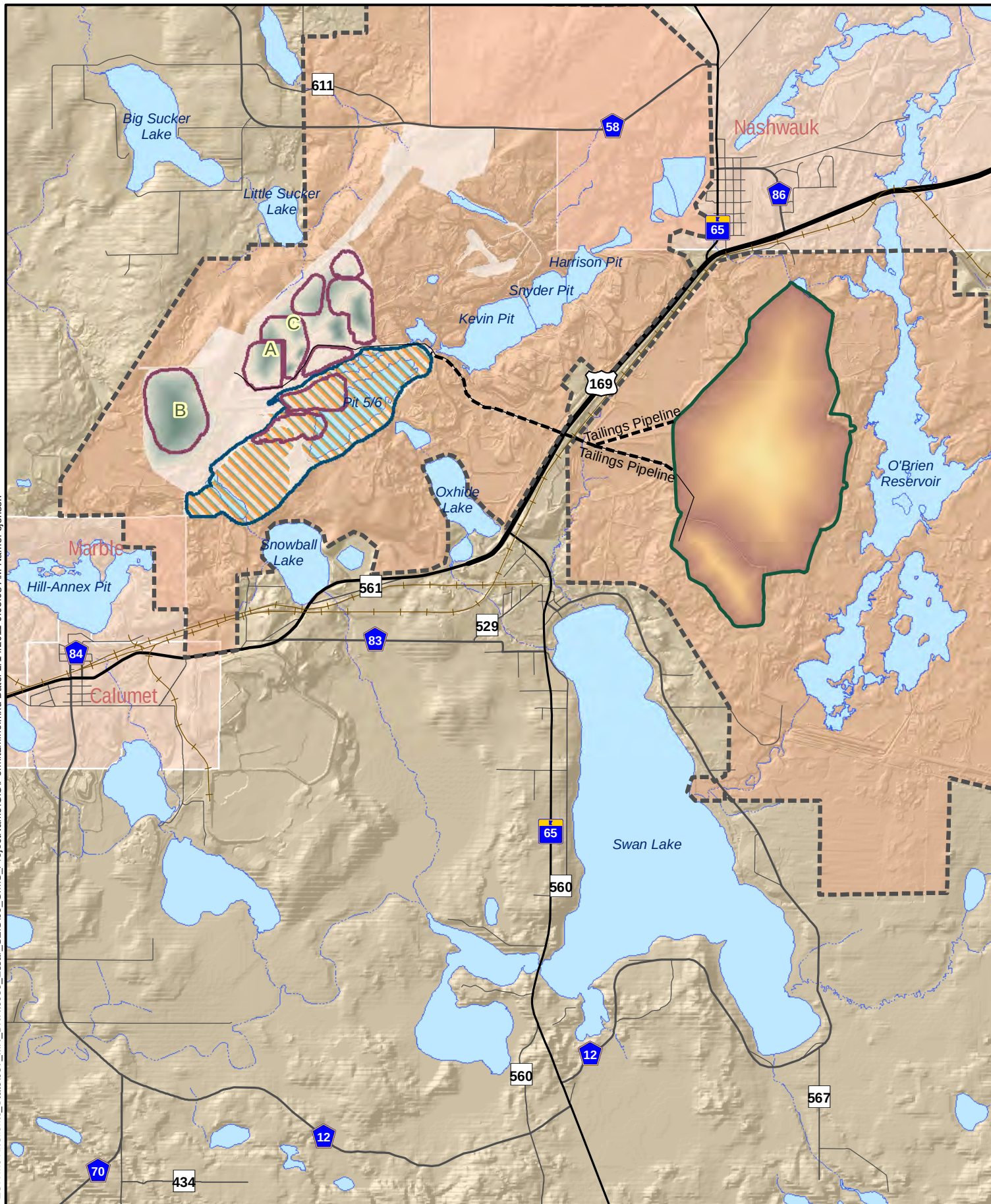


- Project Area
- Site Features



Essar Steel Site in Itasca County, Minnesota

Figure 1-1



2010 Permit to Mine
Amendment Footprint

- Mine Pit
- Stockpile
- Tailings Basin

2007 Permit to Mine Footprint

- Mine Area
- Stockpile Area
- Tailings Basin

Project Area

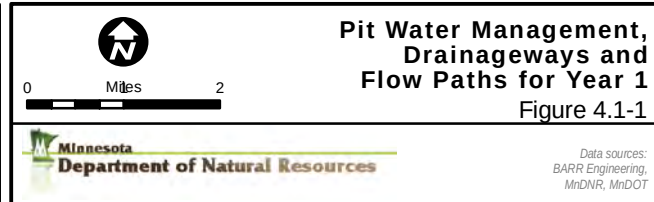
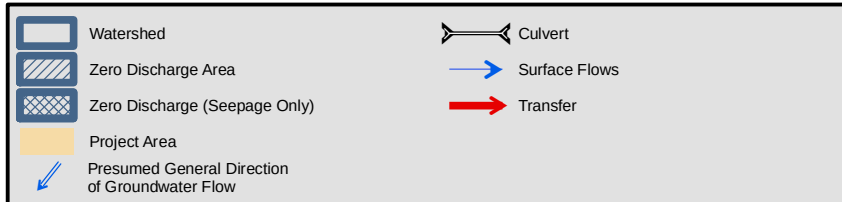
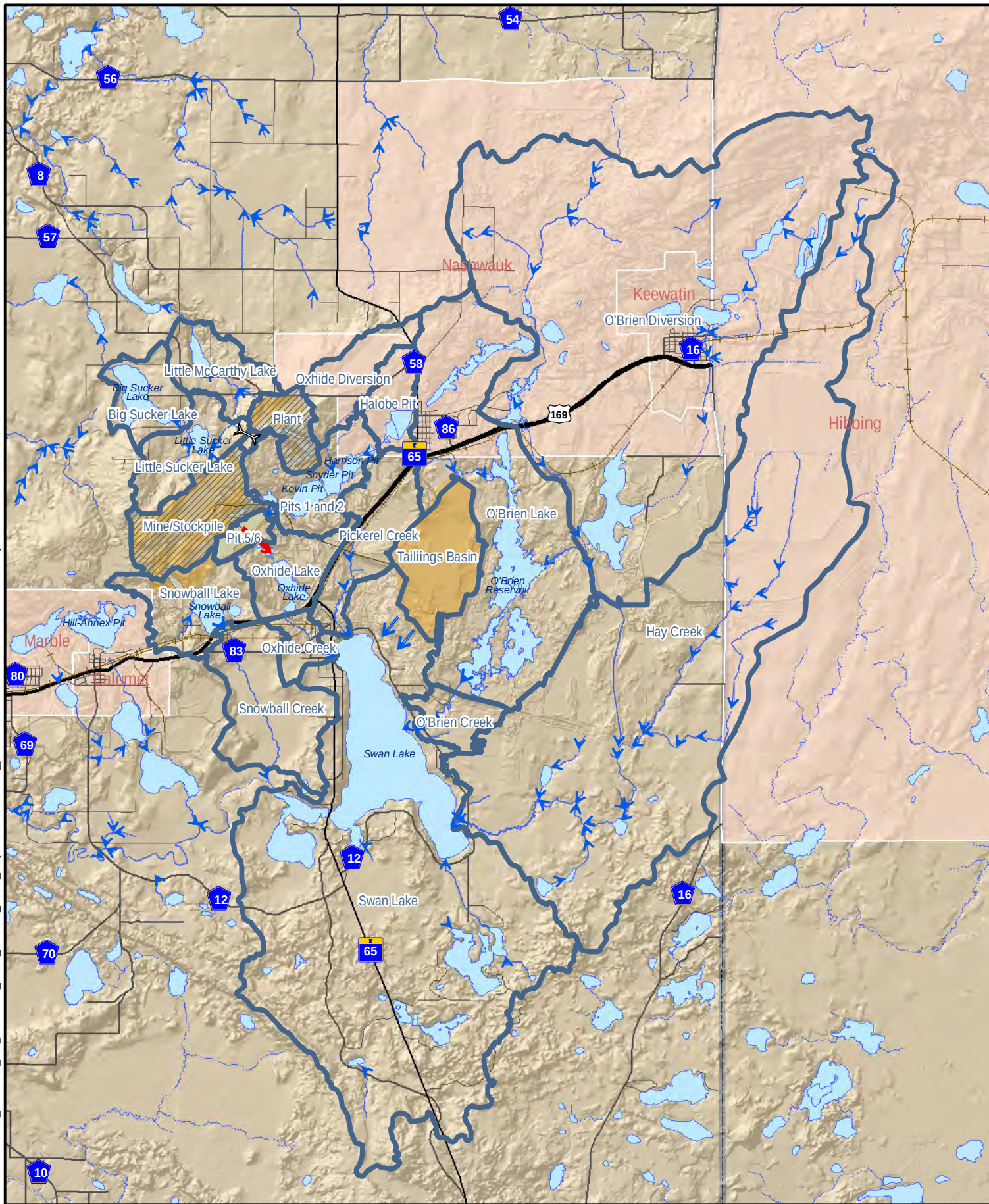


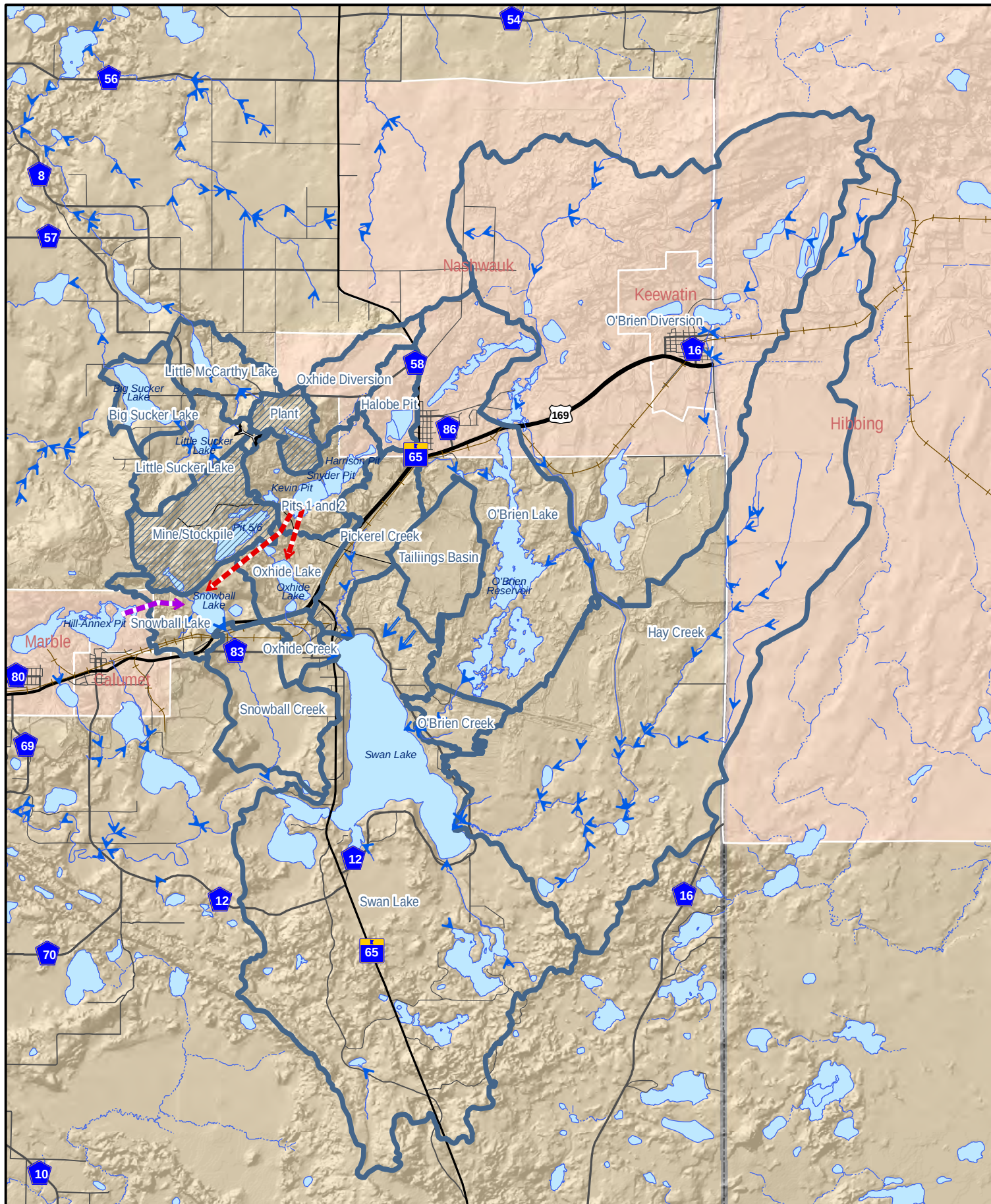
0 Miles 1

Minnesota
Department of Natural Resources

Permit to Mine Pits,
Stockpiles, and
Tailings Basin Footprint
Figure 3-1

Data sources:
BARR Engineering,
MnDNR, MnDOT



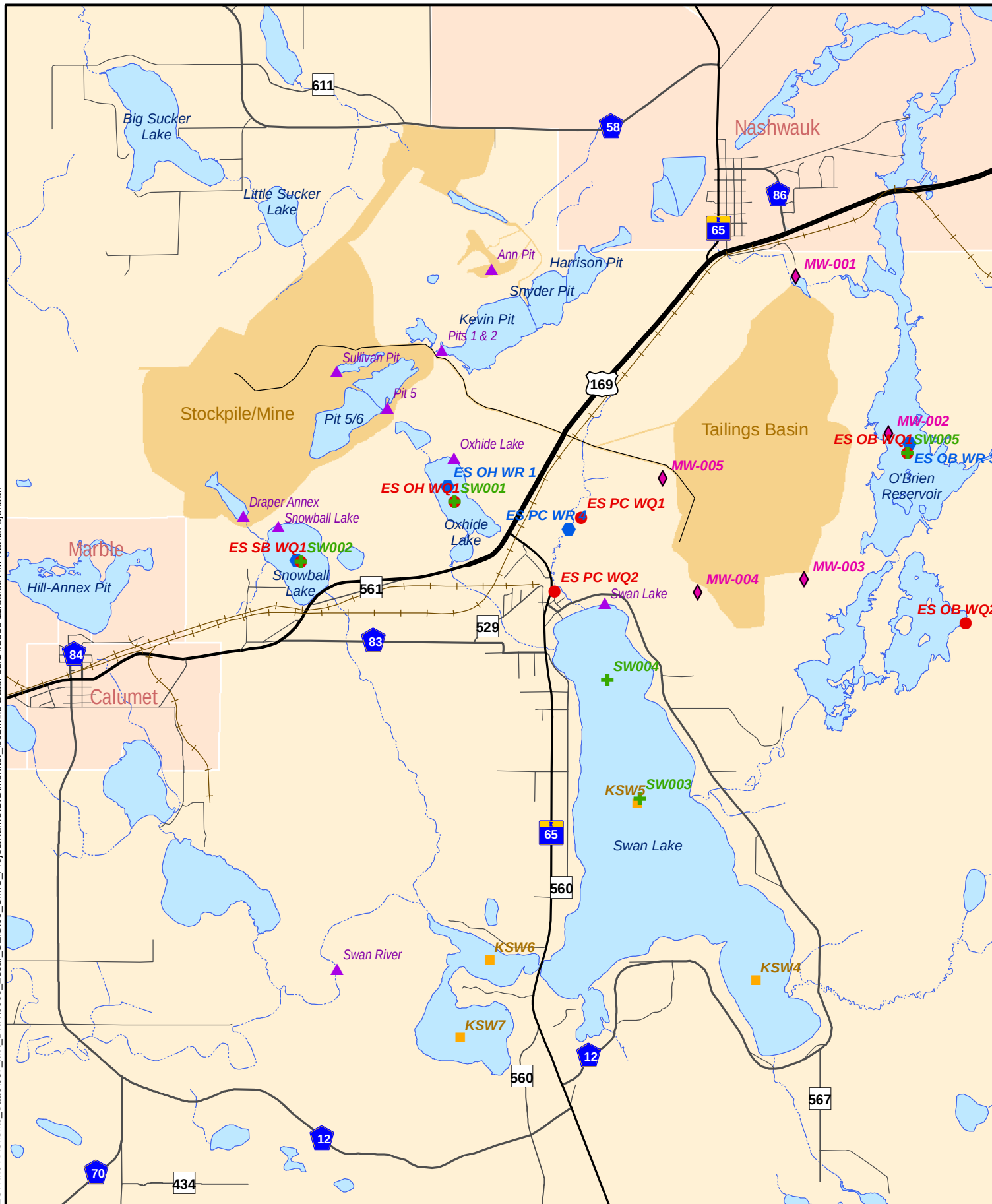


- | | |
|---|--|
|  Watershed |  Culvert |
|  Zero Discharge Area |  Surface Flows |
|  Zero Discharge (Seepage Only) |  Transfer (Stream Augmentation) |
|  Presumed General Direction of Groundwater Flow |  Possible Transfer (Water for Stream Augmentation if Necessary) |



Pit Water Management, Drainageways and Flow Paths for Year 15

Figure 4.1-2



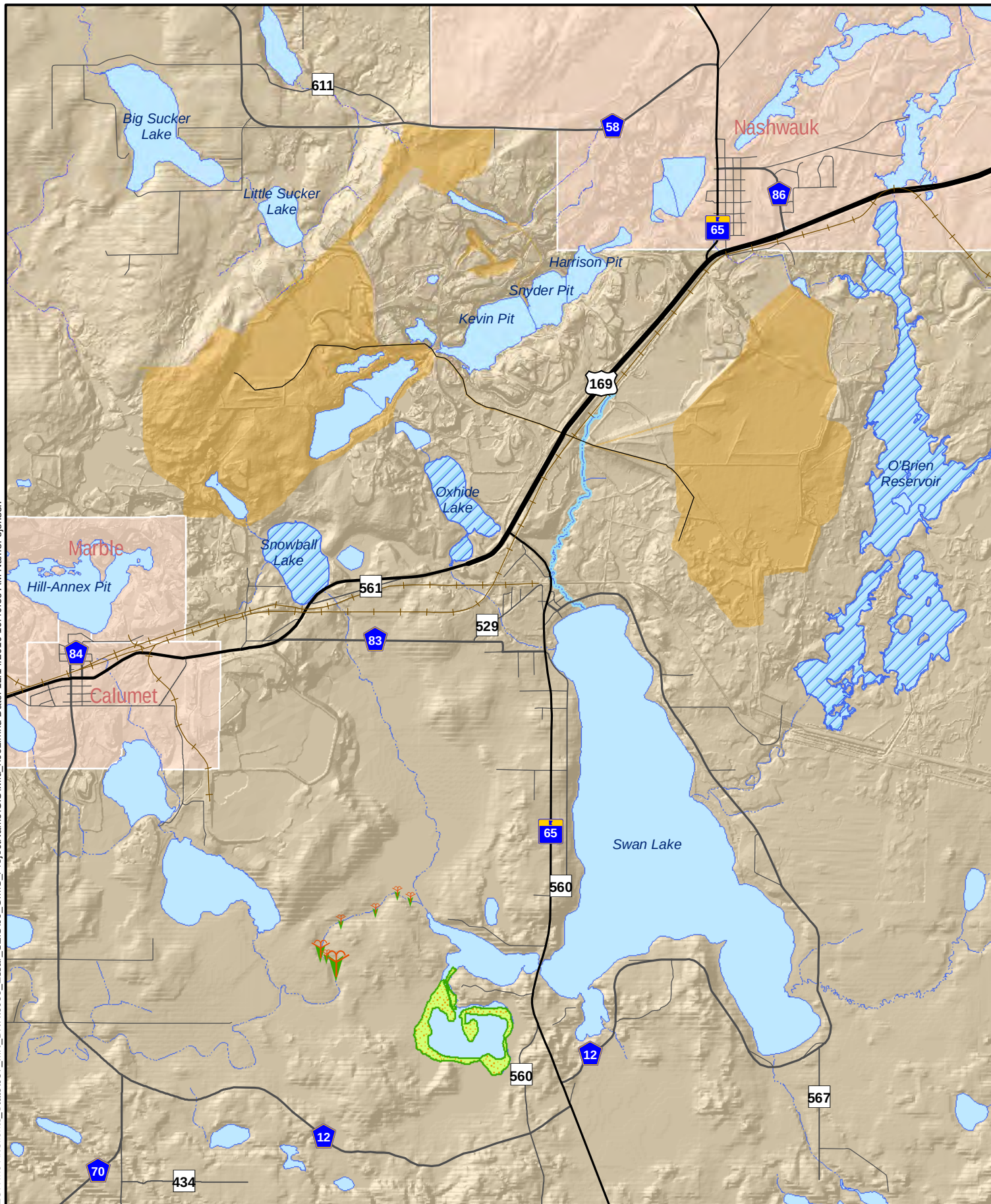
- ◆ Monitoring Well: Tailings Basin
- ◆ Water Quality Monitoring Location : Essar
- ◆ Lake Sampling: Essar
- ◆ Hydrology Monitoring Location
- ◆ Water Quality Monitoring Location: Essar and U.S. Steel (Keetac Expansion)
- ◆ Proposed Monitoring Location



Mine Site and Surrounding Area Water Monitoring Points

0 Miles 1

Figure 4.1-3



Wild Rice Coverage

-  <10%
-  10-25%



>75%



50-75%

-  Waterbody Observed for Wild Rice - None Found
-  Stream Observed for Wild Rice - None Found

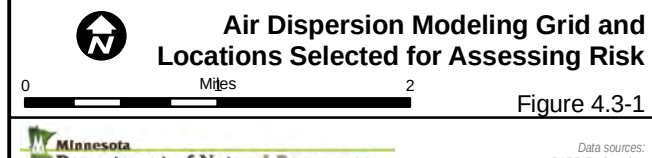
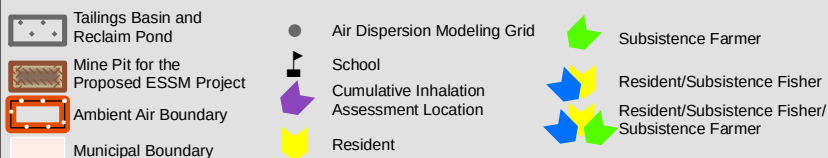
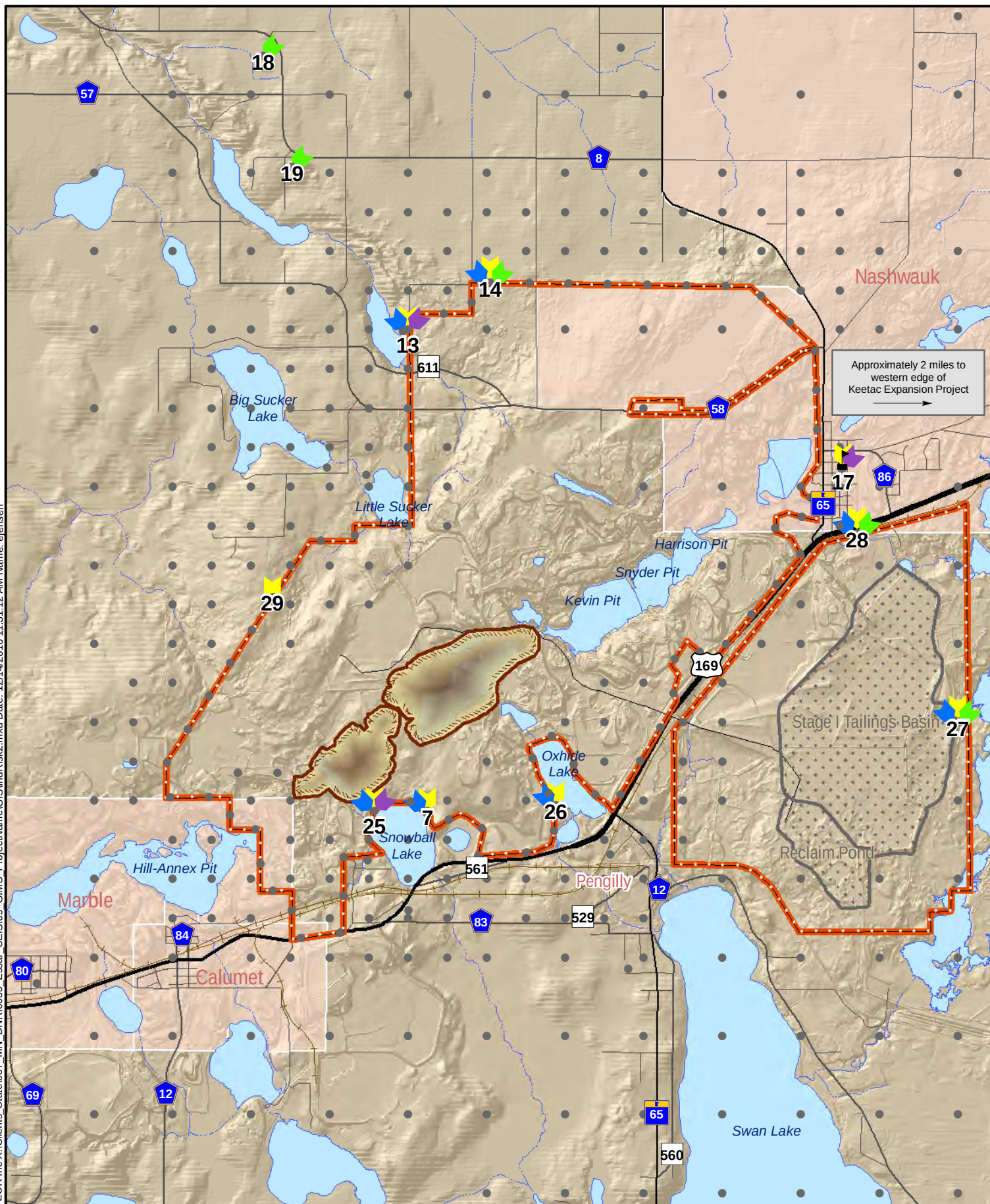
Reconnaissance done by BARR Engineering

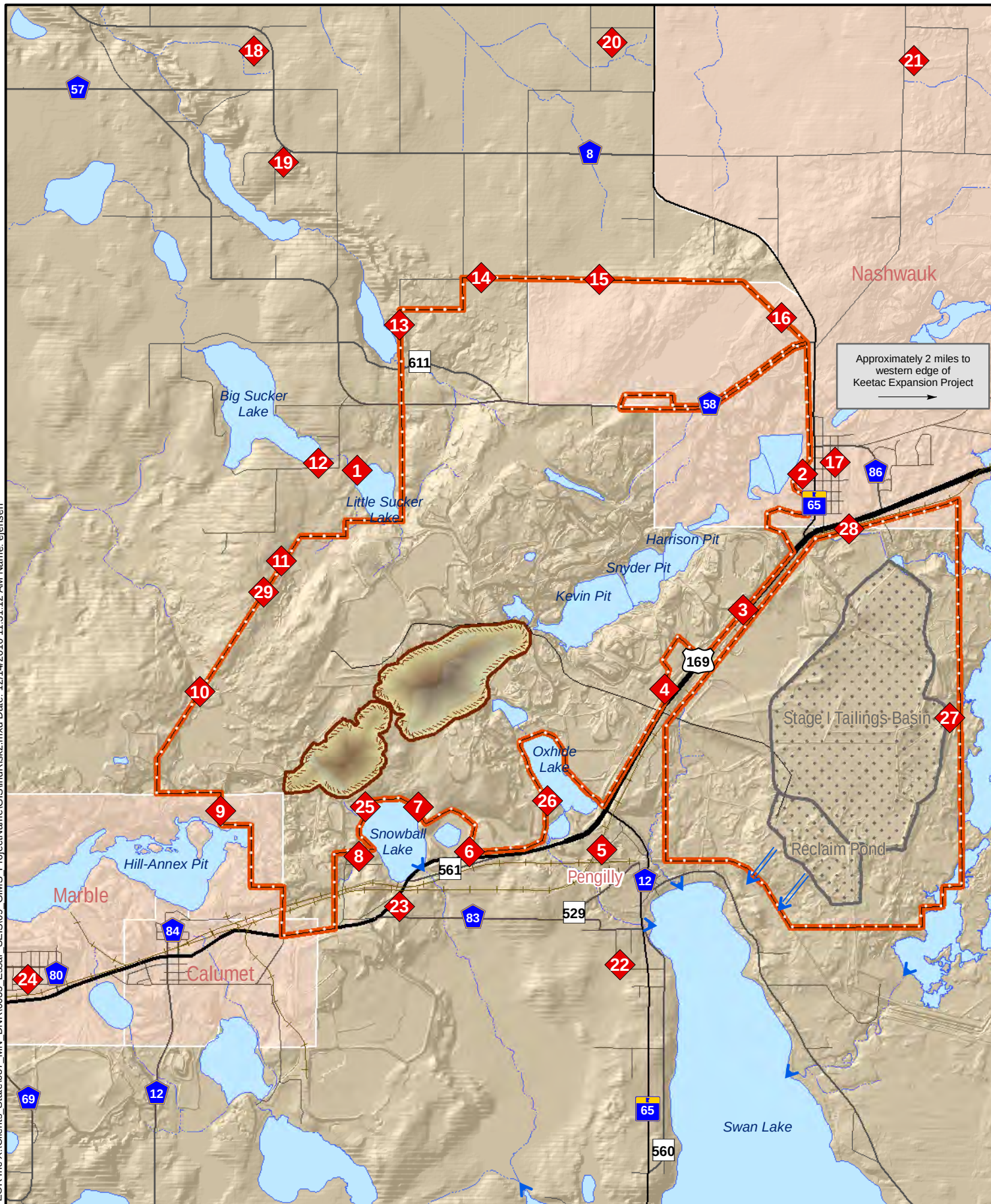


0 Miles 1

Swan Lake and River Wild Rice Sites

Figure 4.1-4





- Municipal Boundary
- Mine Pit for the Proposed ESSM Project
- Tailings Basin and Reclaim Pond
- Ambient Air Boundary

- Risk Receptor Location
- Presumed General Direction of Groundwater Flow



0 Miles 2

Locations Selected for Assessing Risk

Figure 4.4-1

