Taconite Harbor Advisory Committee Environmental Context

Stantec

December 17, 2025

Agenda

- Welcome
- Agenda
- Introduction
- Environmental Context
- Expected Mandatory Reviews, Permits and Approvals
- Environmental Site Assessment
- Minnesota Power & Decommissioning
- Comments / Questions

Introduction

Stantec Project Team – Environmental Planning Lead

- 25+ years as an environmental review professional supporting
  - State and federal environmental review requirements
  - Scenario development
  - Supporting review and planning for brownfield redevelopment
- 10 years working for mineral owners and working with northern Minnesota mine operators including Cleveland Cliffs

**Born and raised in Hibbing, MN*

Environmental Context

Natural Characteristics Overview

- Land Cover
- Threatened and Endangered Species
- Water Resources
- Geology
- Soils
- Northshore Management Zone & Bluff Requirements

**Not current conditions.*

Land Cover – Native Vegetation

Pre-Settlement Vegetation:

- Boreal Hardwood Conifer Forest
- Aspen-Birch (trending to Conifers)
- Fire played a major role in shaping these forests, creating a mosaic of young aspen-birch stands.

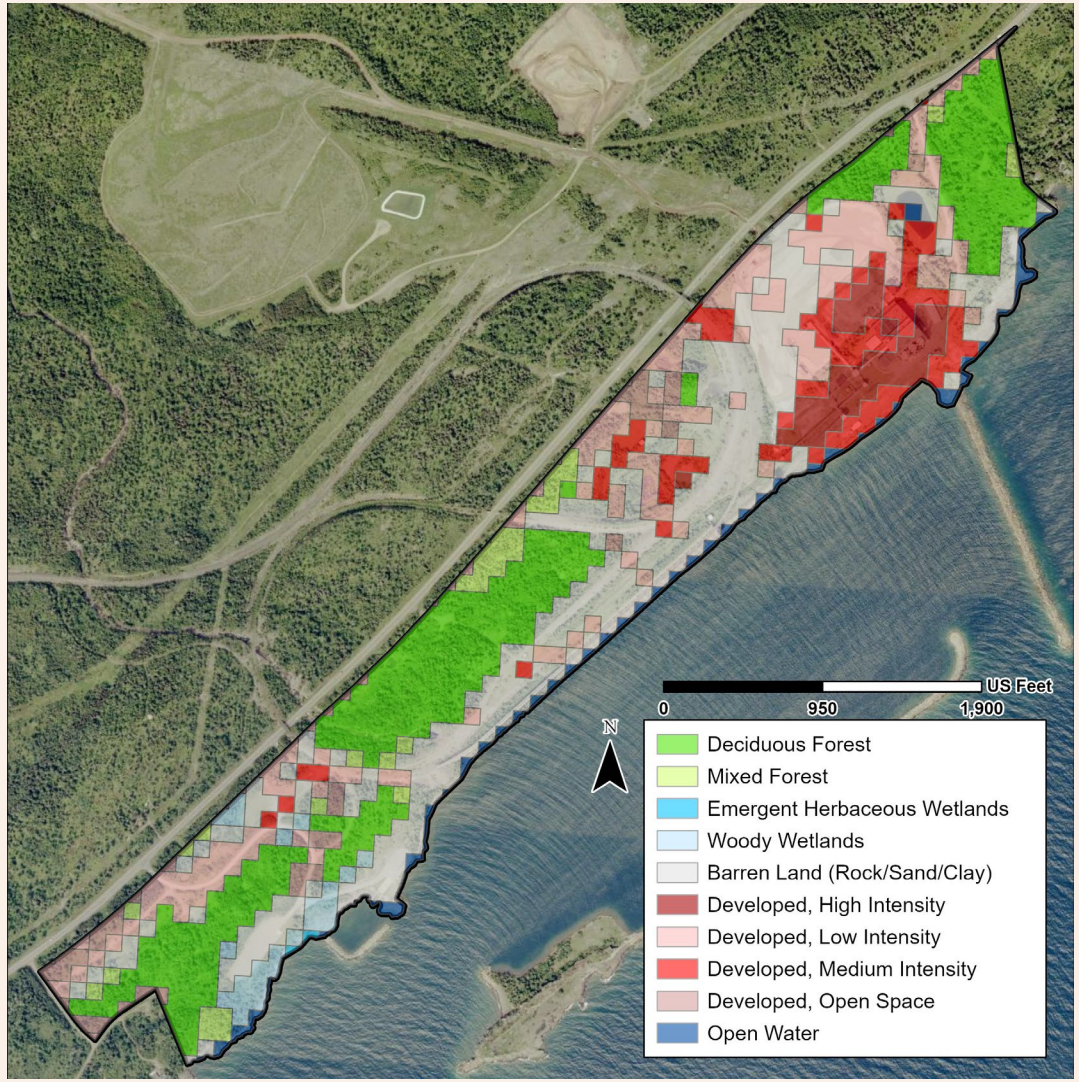
Existing Conditions:

- Some natural forest regrowth
- Some areas with scarce to no vegetation

Native Plant Communities:

- Wet Rocky Shore
- Gravel/Cobble Beach

Land Cover – Existing Conditions



Current landcover consists of:

- Deciduous forest
- Mixed forest (conifers and deciduous)
- Emergent and woody wetlands
- Barren land (rock/soils)
- Developed area (roads, buildings, infrastructure)
- Open water

Threatened and Endangered Species – Potentially within Site

Neat Spikerush
Status: Special Concern
Habitat: Cliff

Hudson Bay Eyebright
Status: Special Concern
Habitat: Wet Meadow

Yellow Sedge
Status: Special Concern
Habitat: Wet Meadow/Marsh

Butterwort
Status: Special Concern
Habitat: Lakeshore/Cliff

Intermediate Sedge
Status: Special Concern
Habitat: Lakeshore/Cliff

Tall Extinguisher Moss
Status: Special Concern
Habitat: Cliff

Hoary Whitlow Grass
Status: Endangered
Habitat: Cliff

Threatened and Endangered Species – Potentially within One Mile

Animals

- Peregrine Falcon (special concern)
- Lake Chub (special concern)

Plants

- Michaux's Sedge (special concern)
- Narrow Reedgrass (special concern)
- Black Hawthorn (special concern)
- Encrusted Saxifrage (special concern)
- Alpine Woodsia (threatened)
- Smooth Woodsia (threatened)
- Spike Trisetum (special concern)

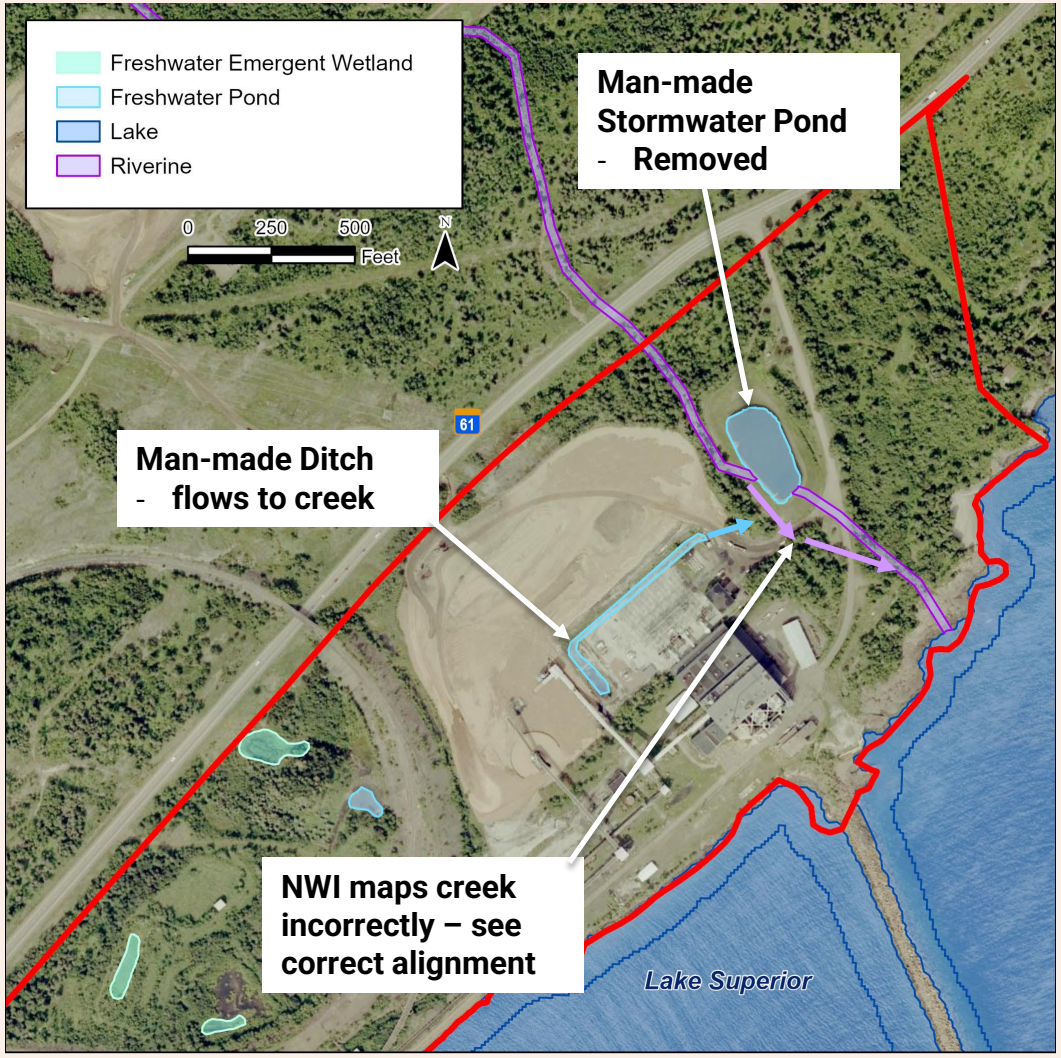
Peregrine Falcon

Lake Chub

Alpine Woodsia

Encrusted Saxifrage

Water Resources - Wetlands and Floodplain



Floodplain:

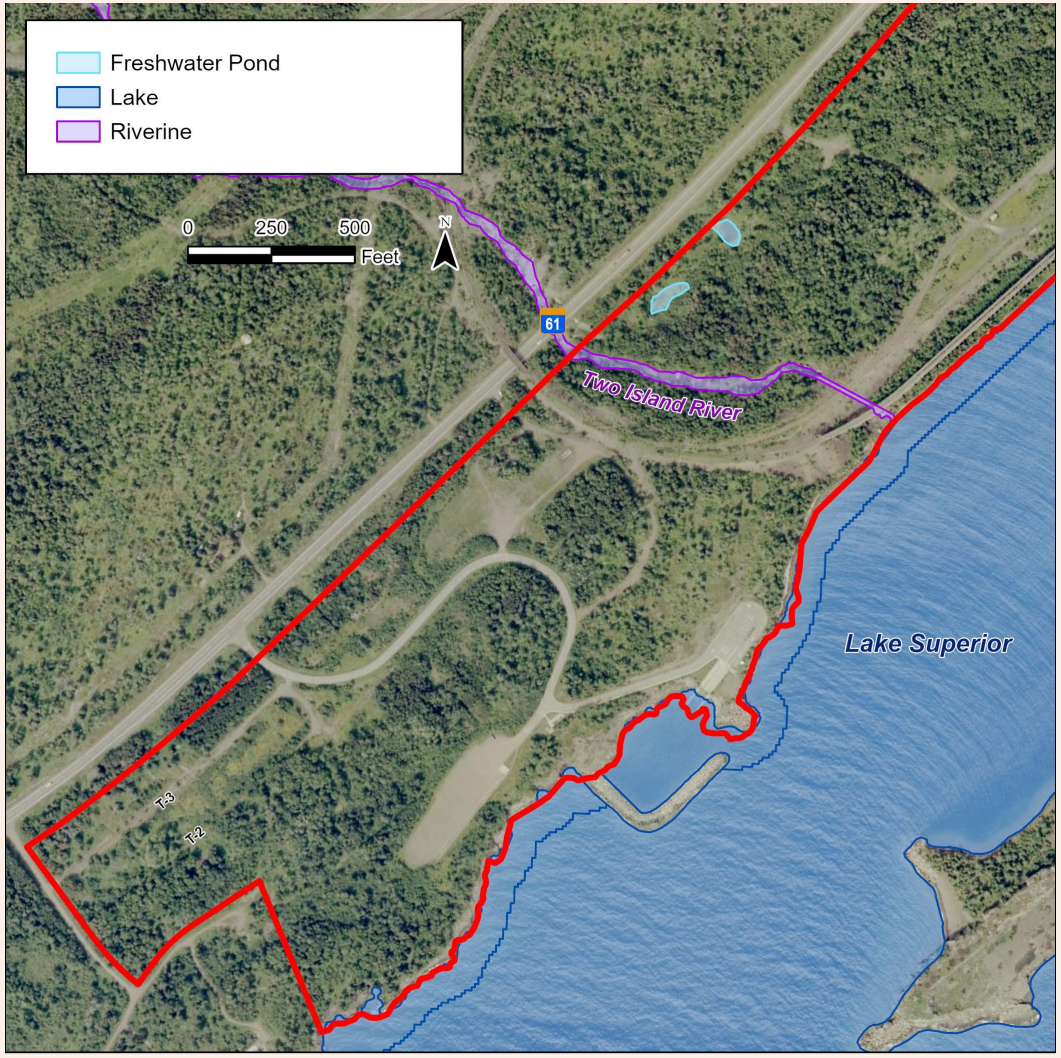
The site has not been mapped by the Federal Emergency Management Agency (FEMA), but it is likely that Lake Superior's coastal floodplain extends into the site slightly.

Wetlands:

The National Wetland Inventory maps 13 wetland areas within the site:

- 5 freshwater ponds, some of which are man-made ponds/ditches
  - One of these is a former stormwater pond which has since been removed. Another is a man-made ditch which flows to the creek
- 3 freshwater emergent wetlands, which are shallow wetlands with plants that emerge out of the surface
- 3 riverine wetlands associated with the Two Island River and a creek which drains into the lake
- 2 wetland areas associated with Lake Superior

Water Resources - Wetlands and Floodplain



Wetlands, continued

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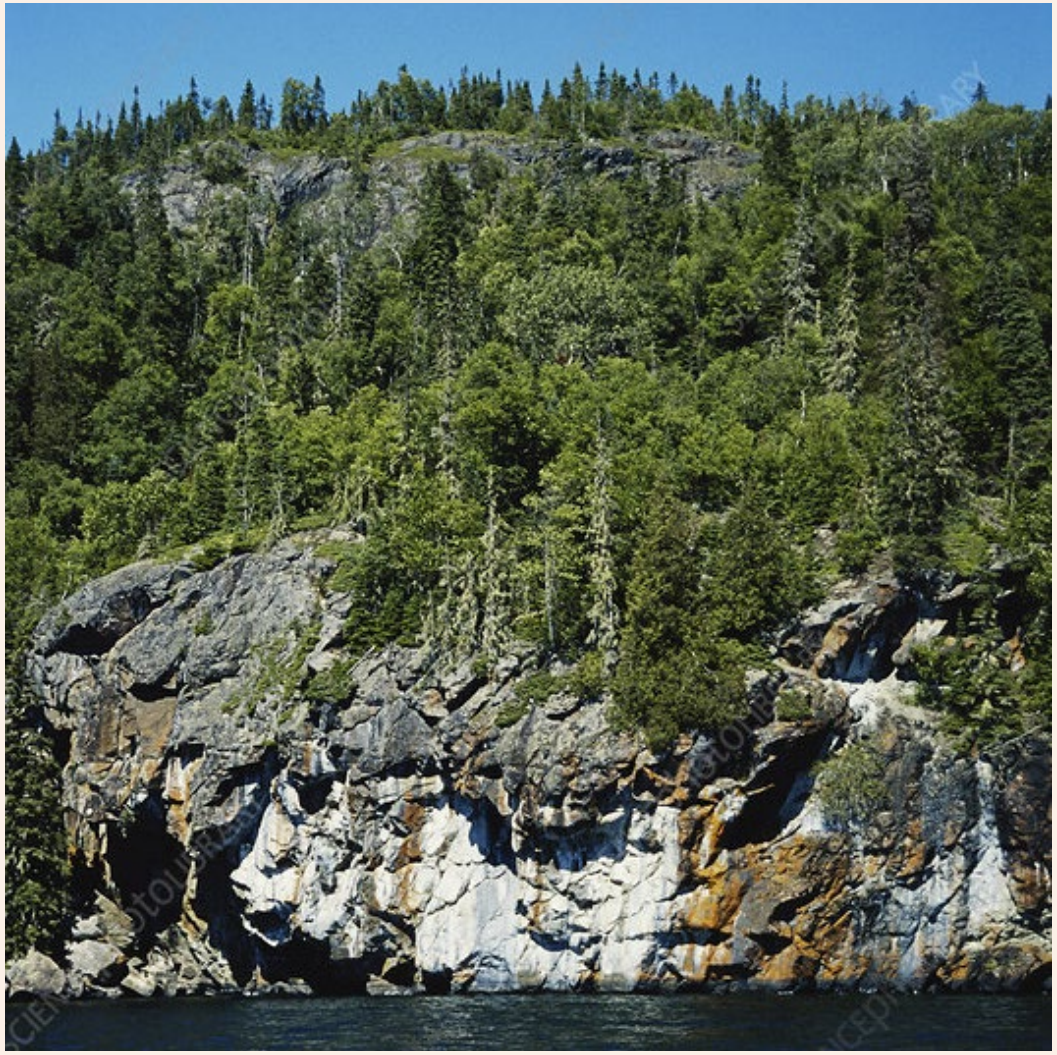
Geology



Bedrock Geology:

The geology below the surface is 1.1-billion-year-old volcanic rock called basalt. These specific basalts are called the ***Schroeder basalts*** and they makeup much of Lake Superiors rocky shoreline.

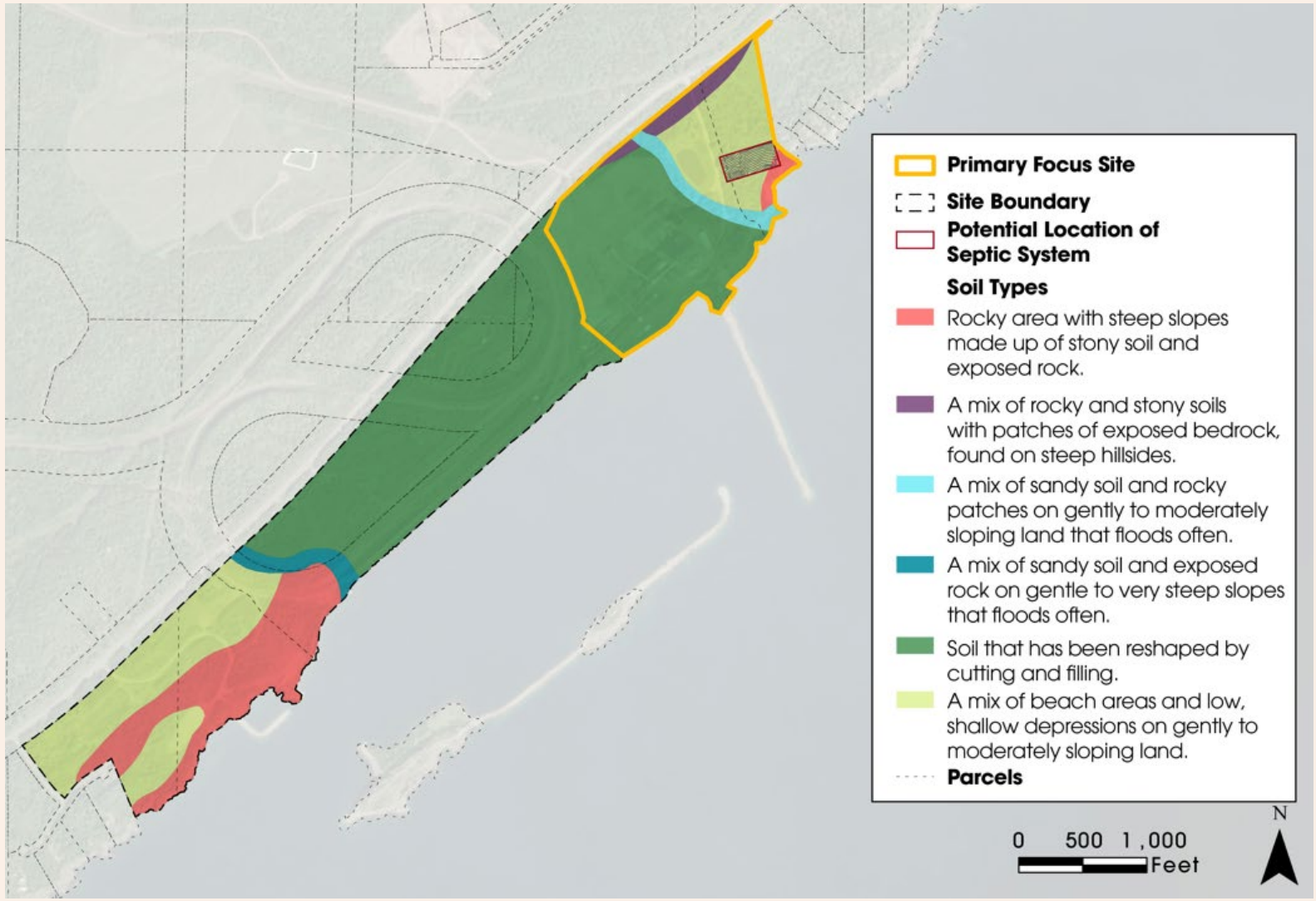
Surficial Geology:

The native geology at the surface was primarily deposited during the latest glaciation (35,000 years ago) but also includes deposits from the rise and fall of Lake Superior and from streams.

Surficial geology onsite consists of:

- Glacial Till
- Glacial Silt and Clay
- Beach and Nearshore Sand
- Floodplain and Fluvial Sand and Silt
- Non-Native Constructed Land (deposited by industrial activities)

Soils



The native soils onsite consist primarily of:

- Loam
- Silt
- Sand
- Gravel

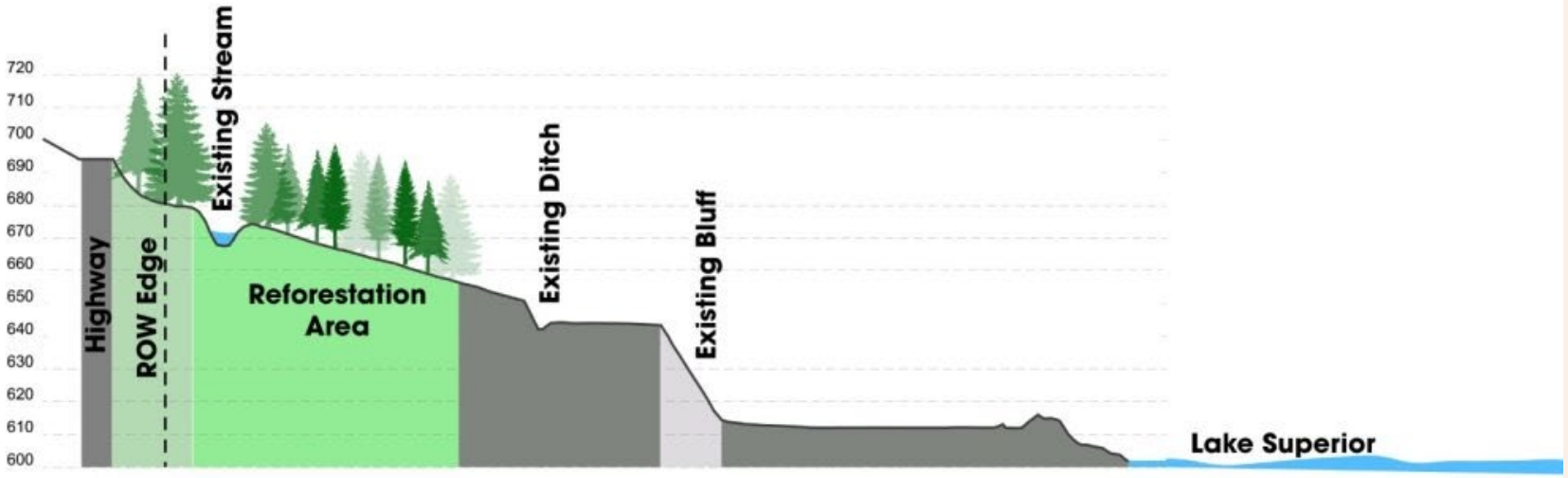
The native soils are described as:

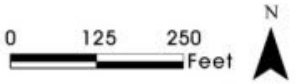
- Non-hydric (dry with plenty of oxygen)
- Well drained
- Not Prime for Farmland

Existing conditions may vary from the native conditions due to former land use and disturbance.

Study Area Cross Section

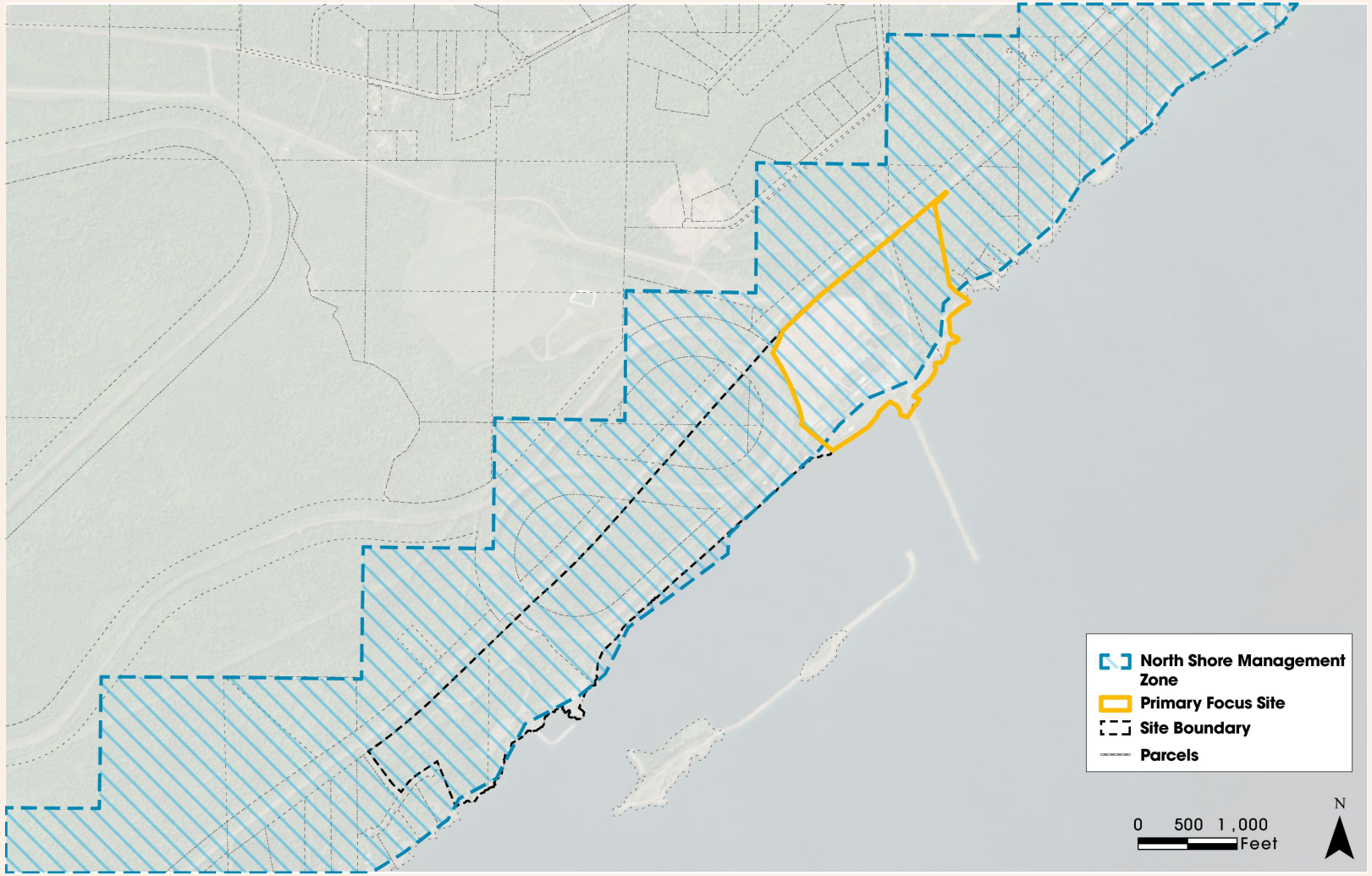
Key Map





**Not current conditions. Final layout and conditions subject to completion of decommissioning process.*

North Shore Management Plan



All property along Lake Superior is within the North Shore Management Zone

- Minnesota Dept. of Natural Resources (DNR) is responsible for monitoring compliance with the Statewide Standards for Management of Shoreland Areas on all lakes in Minnesota except Lake Superior.
- The North Shore Management Board (NSMB) is responsible for monitoring compliance with the North Shore Management Plan per a Memo. of Understanding (MOU) with the DNR.
- The Board is established by a Joint Powers Agreement between the local jurisdictions that exercise zoning authority along Lake Superior.

North Shore Management Plan - Development Process*

1. **Application to Cook County**

2. **Notification:** Cook County Planning staff forward applications for the following land use activities to NSMB staff: Conditional Uses, Variances, Planned Unit Developments, Rezoning or Zoning Map Amendment, Ordinance Amendments that have significance to the North Shore, Plats.

3. **Review & Comment:** NSMB staff review and provide comments on applications re: conformance with the North Shore Management Plan.

4. **Cook County Planning Commission – Public Hearing & Recommendation**

5. **Cook County Board Decision**

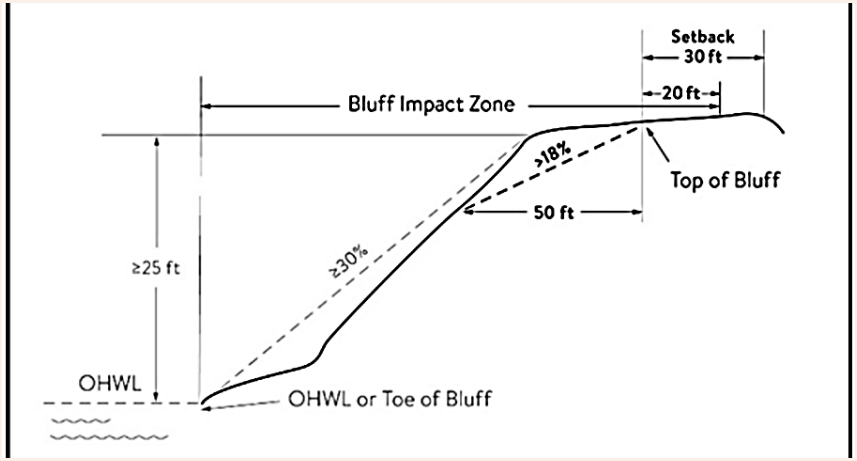
*Note: An update to the North Shore Management Plan is currently underway, which may influence this process.

Bluff Setback

A bluff is a topographical feature having all of the following characteristics:

1. Located in a shoreland area
2. The slope rises at least 25 feet above the ordinary high-water level of the water body
3. The grade of the slope averages 30% or greater
4. The slope must drain towards the water body.

Structure setback from the top of the bluff is 30 feet



Cultural Resources

- Include archaeology, historic structures, historic roads and bridges, cultural important gathering areas, burials, etc.

- Minnesota has a number of laws protecting cultural resources.

- Environmental review and permits would involve tribal coordination to gain information about the area, which would likely be completed in parallel with desktop study and reconnaissance of individual projects areas within the study area.

- If there is federal funding or a federal action (e.g., a federal wetland permit) for development of the site, there would be a form of review expanded (Section 106 of the National Historic Preservation Act) from the state review.

Expected Mandatory Reviews, Permit and Approvals

Summary of Expected Mandatory Reviews, Permits and Approvals

- "Scenarios" will be the outcome of the process you are engaged in.
- To understand how those scenarios would be advanced as projects, we consider the expected mandatory review, permits and approvals.
- The following tables use the examples of contrasting uses – residential vs industrial vs open space.
- The examples are not intended to foreshadow the outcome of this scenario development process. They are only used for informational purposes to demonstrate the paths to use.
- Once property uses are advanced, the exact reviews, permits and approvals would need to be confirmed.

Summary of Expected Mandatory Reviews, Permits and Approvals - Federal

	Residential/ Commercial	Industrial	Open Space
US Army Corps of Engineers Section 404 Permit for Impacts to Jurisdictional Wetlands. Includes: Section 7 Threatened and Endangered Species review Section 106 Cultural Resource Review	Likely	Likely	Unlikely
Federal Environmental Review, triggered by a federal action (e.g., Corps permit) or use of federal funds under the National Environmental Policy Act, NEPA. Ex. EIS, Catex or EA	Possible	Possible	Unlikely

Summary of Potential Reviews, Permits and Approvals - State

	Residential/ Commercial	Industrial	Open Space
Minnesota Environmental Review (Minnesota Environmental Policy Act, MEPA). Ex, EAW, EIS or AUAR	Likely	Likely	Unlikely
Minnesota Pollution Control Agency (MPCA) National Pollutant Discharge Elimination System (NPDES)	Likely	Likely	Unlikely
MPCA State Disposal System (SDS)	Possible	Likely	Unlikely
MN Department of Natural Resources (DNR) Floodplain	Likely	Likely	Unlikely
DNR Threatened and Endangered Species	Likely	Likely	Unlikely
MN Board of Water and Soil Resources (BWSR)*	Likely	Likely	Unlikely
State Historic Preservation Office (SHPO), Minnesota Indian Affairs Council (MIAC) and the Office of the State Archaeologist (OSA)	Likely	Likely	Unlikely

**With local governmental unit (LGU)*

Summary of Potential Reviews, Permits and Approvals - State, continued

	Residential/ Commercial	Industrial	Open Space
MPCA Air Permitting (Title V)	Unlikely	Likely	Unlikely
MPCA Air Permitting (Individual Total Facility, Registration, Capped Emission, General)	Unlikely	Likely	Unlikely
Minnesota Department of Transportation, Access onto Highway 61	Likely	Likely	Unlikely

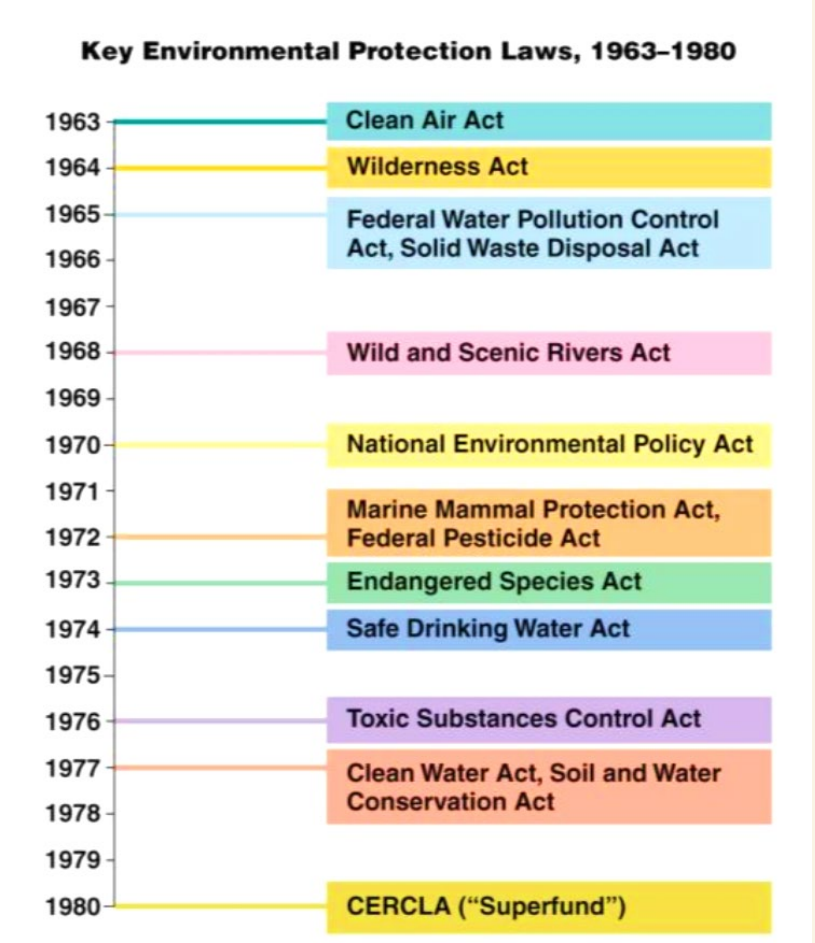
Summary of Potential Reviews, Permits and Approvals - Local

	Residential/ Commercial	Industrial	Open Space
County Application (NSMB review) as it pertains to North Shore Management Plan and Shoreland Areas	Likely	Likely	Unlikely
Administering DNR, Floodplain regulations	Likely	Likely	Unlikely
Non-jurisdictional wetlands/surface waters	Likely	Likely	Unlikely
Other Setbacks Requirements	Likely	Likely	Unlikely
Building Heights	Likely	Likely	Unlikely
Percent Impervious Requirements (aka lot coverage)	Likely	Likely	Unlikely

Environmental Site Assessment

Environmental Assessment

- **Recognized that the Taconite Harbor site's former uses include:**
  - Mining
  - Rail/rail loading
  - Fueling
  - Coal-fired power plant
  - Fly ash disposal
  - Housing supporting the coal plant
- Former site uses predate today's state and federal environmental regulations that came about beginning in the 1960/70s.
- Practices once deemed routine, may now be recognized as having the potential for environmental effects.



Environmental Assessment

- Initial desktop-only review was completed – a Phase I Environmental Site Assessment (ESA)

- What is a Phase I?
  - Completed to research current and historical uses of property
  - Assess if current or historical property uses have impacted the soil or groundwater beneath the property and could pose a threat to the environment and/or human health
  - Typically completed as a part of a land transaction
    - In this case, serving as a “planning tool” for the process of examining two scenarios for the site.
    - A working draft that will be shared in the future (as a due diligence deliverable).
  - Typically, shelf life or validity is 180 days.

- **It is likely once portions of the site are planned for development, a new Phase I ESA(s) would be completed.**

Environmental Assessment – Phase I results

The following provides a high-level summary of the Phase I ESA report:

- The type of historical uses on the site have the potential to lead to contamination from heavy metals, fuel, and by-products such as fly ash.

- There are numerous documented spills and fires for the property.

- There is the potential for PFAS
  - *PFAS stands for per- and polyfluoroalkyl substances, a group of human-made chemicals knows for their ability to repel water, dirt and oil and often referred to as "forever chemicals". They do not easily degrade in the environment or human body and can raise concern for potential health risks.*
  - The PFAS topic is not necessarily associated with or limited to on-site use but more so is a consideration as it pertains to fire department response and use of foam to extinguish fire.

Environmental Assessment – Phase I results, continued

- There are 22 documented diesel, gasoline, anti-freeze, and fuel oil above ground storage tanks (ASTs) and/or underground storage tanks (USTs).
  - 8 of the 22 are documented by MPCA as active but ALLETE/MN Power states these have been removed from property.
  - Notification of removal has recently been provided by ALLETE/MN Power to the Minnesota Pollution Control Agency (PCA).

- Two (2) active leak site and four (4) closed leak sites
  - According to ALLETE/MN Power, clean up efforts have been coordinated with decommissioning. They are awaiting analytical to demonstrate clean excavations complete and then leak site file closer can be requested.

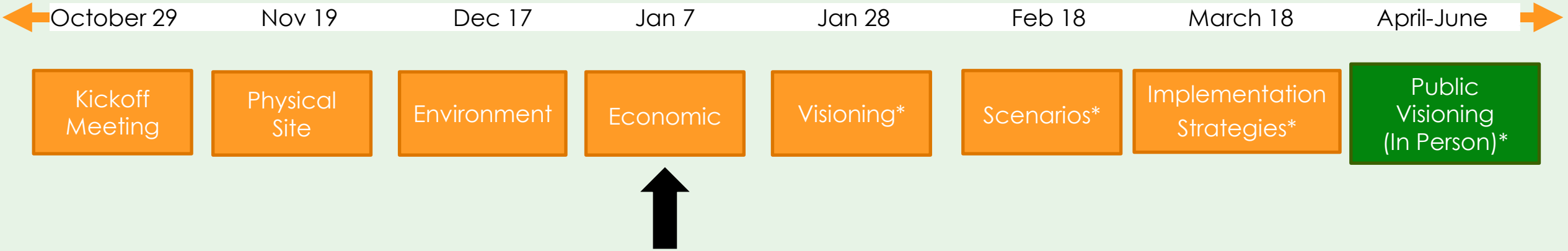
- The prior existence of housing on the property presents opportunity for the following to be buried: building material, foundations, relict septic systems and other buried infrastructure.

- Imported fill to the site also represents potential for contamination or debris.

Environmental Assessment – Future Uses

- Amount of cleanup depends on how the site will be reused (e.g. , residential vs industrial).
- Risk of exposure varies for residential occupants vs industrial facility workers, due to the amount of time different type of users would spend in the area.
- Consideration is given to the use - children, elderly, pregnant women and other sensitive occupants.

Comments/Questions?



THANK YOU!!!

*Tentative Schedule