




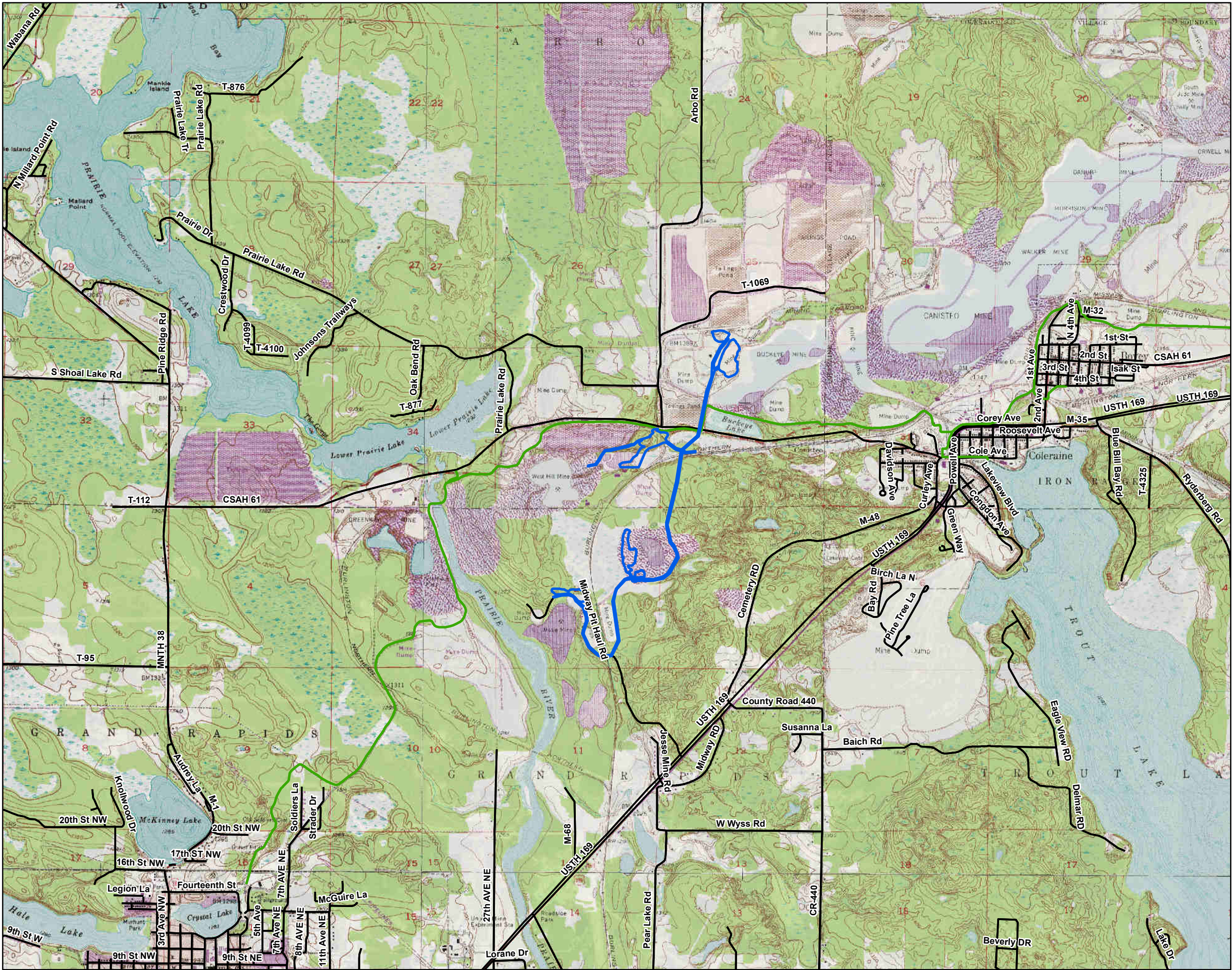
## Legend

-  Project Location
-  Demonstration Project Mining Area
-  County Boundary

**Figure 1**  
**General Site Location**

State Disposal System Permit Application  
Prairie River Minerals LLC  
Coleraine, Minnesota (Itasca County)





01,5003,0006,000

Feet

1 Inch = 3,000 Feet

Legend


Demonstration Project Mining Area

Mesabi Trail

Notes:  
- Basemap was provided by Minnesota Geospatial Commons.

Figure 2  
Site Vicinity Map

State Disposal System Permit Application  
Prairie River Minerals LLC  
Coleraine, Minnesota (Itasca County)



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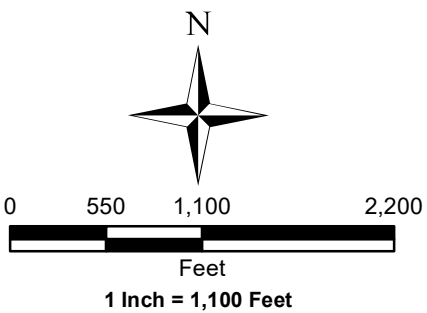
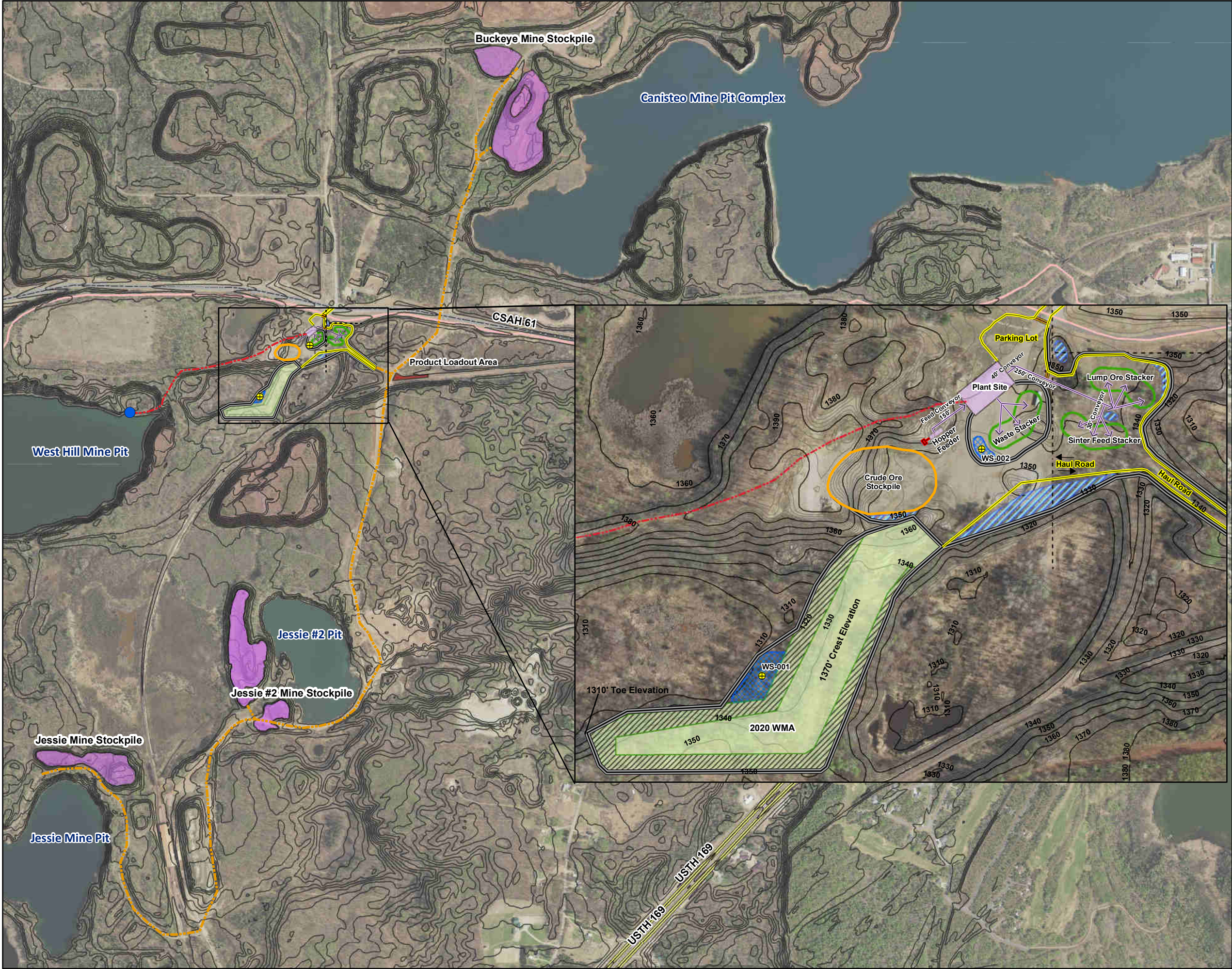
Date Drawn:  
24 August 2020

Drawn By:  
C. Hafdahl

NTS Project #:  
20759E

2





**Legend**

- Proposed Monitoring Station
- Pump Location
- Overhead Powerline
- Gate
- Conveyor
- Plant Area Road Edge
- Pipe Route
- Proposed Berm
- Stockpile Feed Haul Road
- Crude Ore Stockpile
- Stacker
- Stormwater Retention Pond
- Infiltration Basin
- 2020 Waste Management Area (WMA)
- Product Loadout Area
- Plant Area
- Stockpile
- Sloped Portion of 2020 WMA
- Contour Interval (10 FT)
- County Highway 61
- US Highway 169
- Mesabi Trail

Notes:

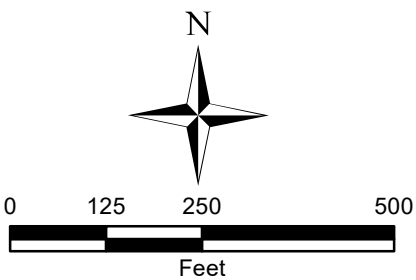
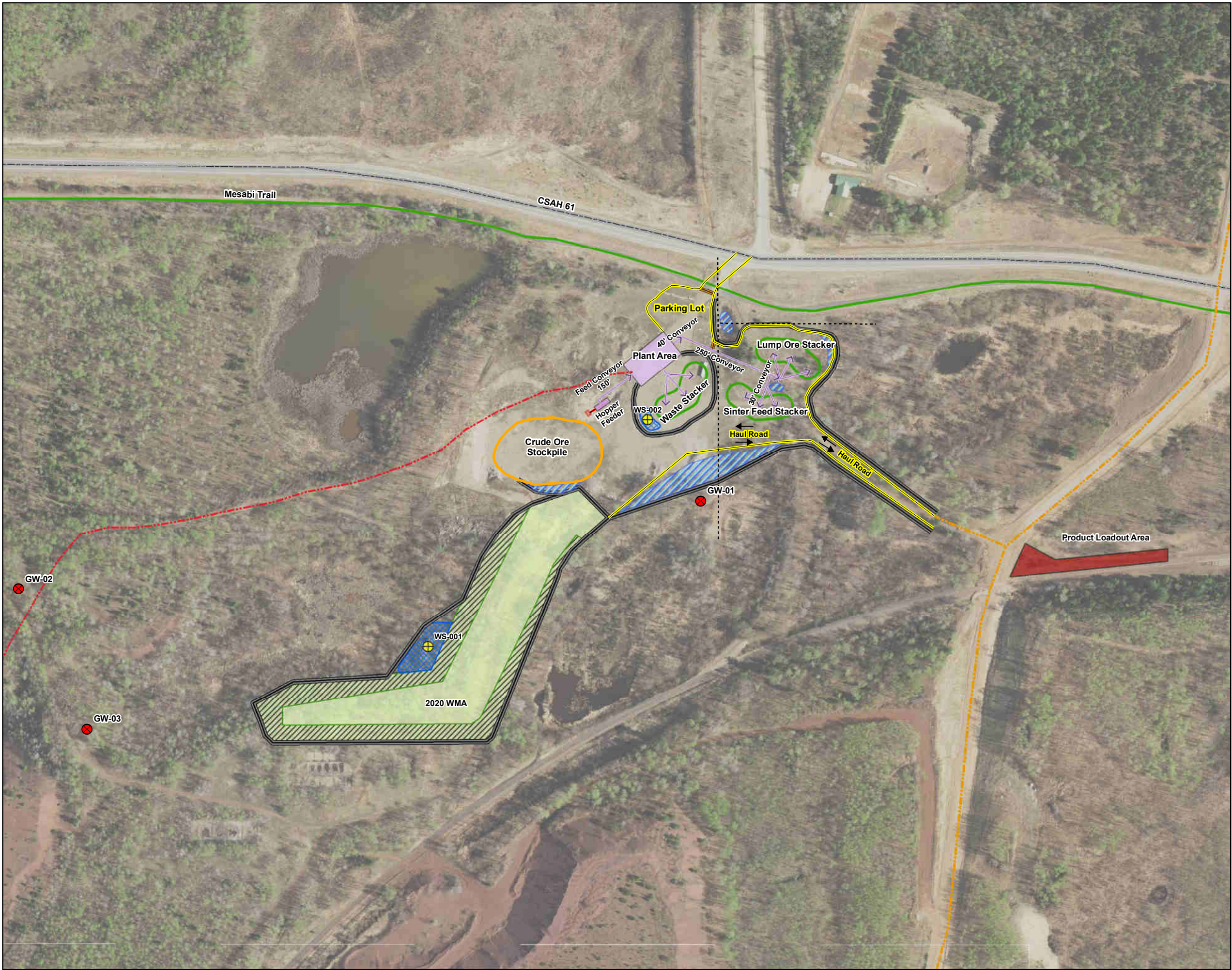
- Waste Management Area is approximately 5.1 acres.
- Basemap was provided by MN Geospatial Image Services. Itasca County, 2018.
- Stockpile locations were drawn using MN Atlas and MN Topo for reference.
- Figures depicted are approximations.

**Figure 3**  
**Demonstration Project Layout**  
State Disposal System Permit Application  
Prairie River Minerals LLC  
Coleraine, Minnesota (Itasca County)



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1 Inch = 250 Feet

**Legend**

- Proposed Monitoring Station
- Proposed Groundwater Monitoring Location
- Overhead Powerline
- Plant Area Road Edge
- Conveyor
- Gate
- Proposed Berm
- Pipe Route
- Stockpile Feed Haul Road
- Crude Ore Stockpile
- Stormwater Retention Pond
- Infiltration Basin
- 2020 Waste Management Area (WMA)
- Product Loadout Area
- Plant Area
- Stacker
- County Highway 61
- Mesabi Trail

Notes:  
- Basemap was provided by MN Geospatial Image Services. Itasca County, 2018.  
- Stockpile locations were drawn using MN Atlas and MN Topo for reference.  
- Figures depicted are approximations.

**Figure 4**  
**Proposed Groundwater Monitoring System**  
State Disposal System Permit Application  
Prairie River Minerals LLC  
Coleraine, Minnesota (Itasca County)

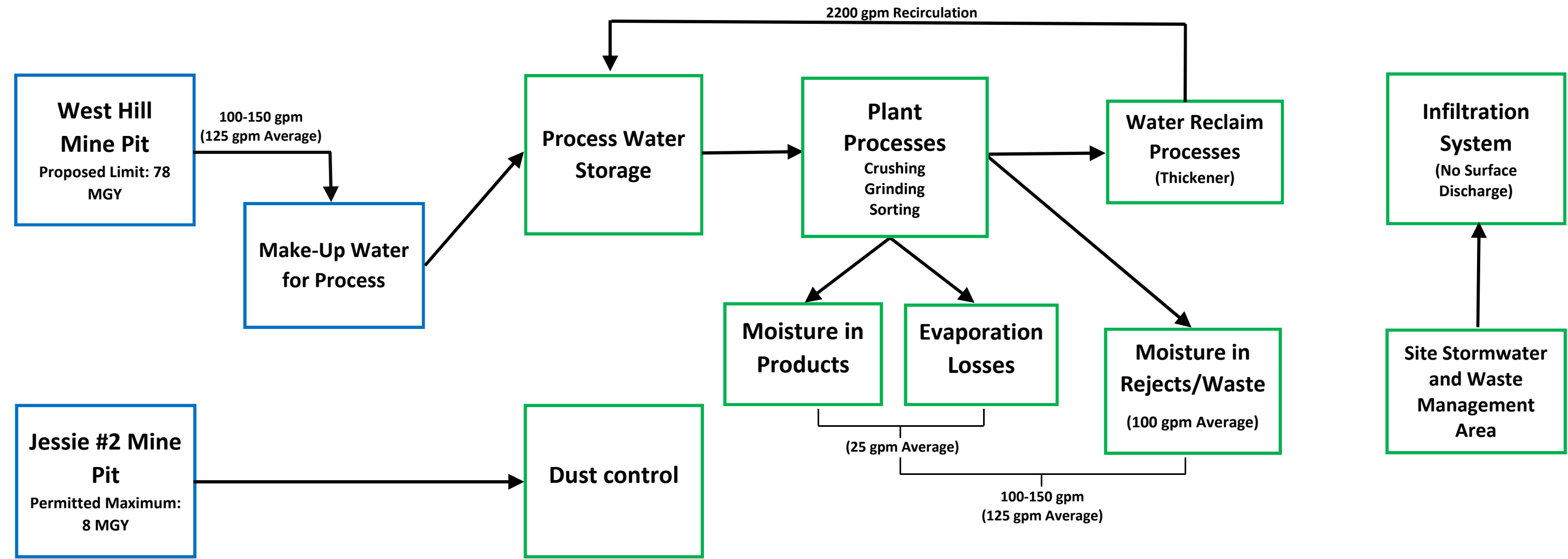


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WATER SOURCES

WATER USE AND MANAGEMENT



Notes:  
- Moisture content in products is estimated at 5% and rejects/waste moisture content is estimated at 11%.



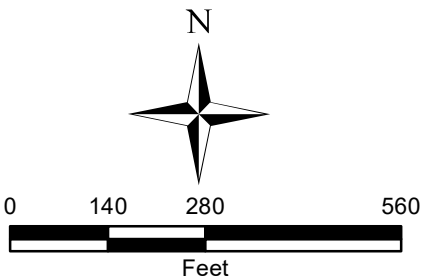
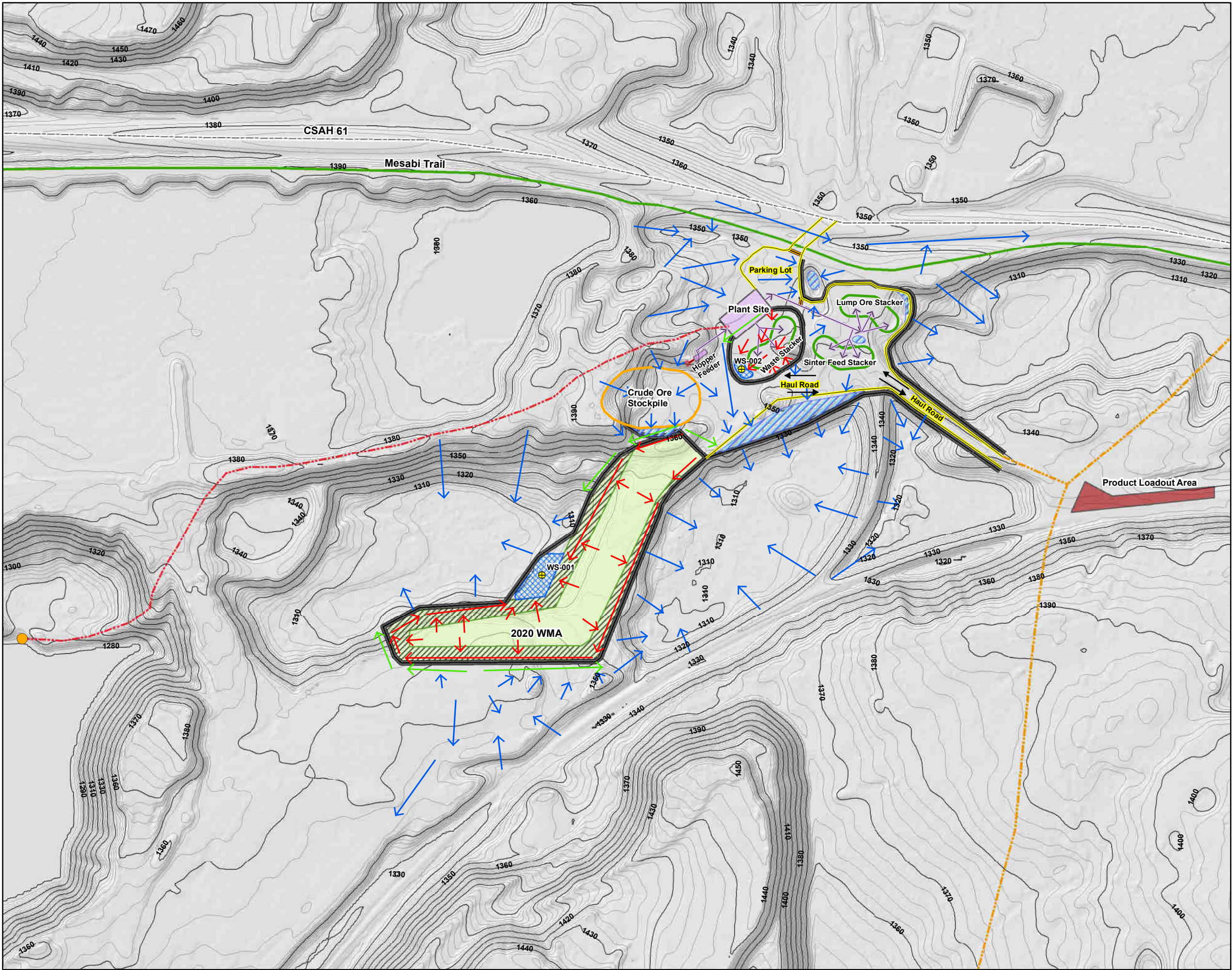
Northeast Technical Services  
www.netechnical.com  
218.741.4290  
526 Chestnut Street  
Virginia, MN 55792

**Figure 5**  
**Proposed Water Balance**  
**PRM Demonstration Project**

**State Disposal System Permit Application**  
**Prairie River Minerals LLC**  
**Coleraine, Minnesota (Itasca County)**

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1 Inch = 275 Feet

### Legend

- Pump Location
- Proposed Monitoring Station
- Approximate Surface Water Flow
- Approximate Run-on Flow
- Approximate Runoff Flow
- Plant Area Road Edge
- Conveyor
- Gate
- Pipe Route
- Stockpile Feed Haul Road
- County Highway 61
- Mesabi Trail
- Proposed Berm
- Infiltration Basin
- Product Loadout Area
- 2020 Waste Management Area (WMA)
- Plant Site
- Crude Ore Stockpile
- Stacker
- Stormwater Retention Pond
- Contour Interval (2 ft)
- Contour Interval (10 ft)

Notes:  
-Contours and Hillshade were provided by MN Geospatial Commons  
-Figures depicted are approximations.

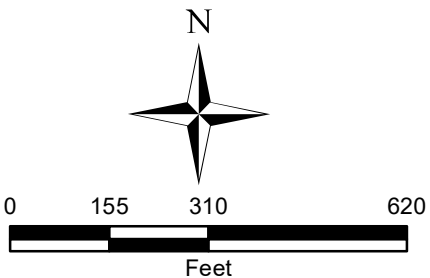
**Figure 6a**  
**Plant Site and Waste Management Area Contours**  
State Disposal System Permit Application  
Prairie River Minerals LLC  
Coleraine, Minnesota (Itasca County)



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**6a**





1 Inch = 300 Feet

**Legend**

- Proposed Monitoring Station
- Pipe Route
- Stockpile Feed Haul Road
- Overhead Powerline
- Plant Area Road Edge
- Conveyor
- Gate
- County Highway 61
- Mesabi Trail
- Proposed Berm
- Infiltration Basin
- Product Loadout Area
- 2020 Waste Management Area (WMA)
- Plant Site
- Stacker
- Crude Ore Stockpile
- Stormwater Retention Pond

Notes:  
-Background aerial imagery was provided by MNGeo  
WMS, Itasca 2018  
-Contours were provided by MN Geospatial  
Commons  
-Figures depicted are approximations.

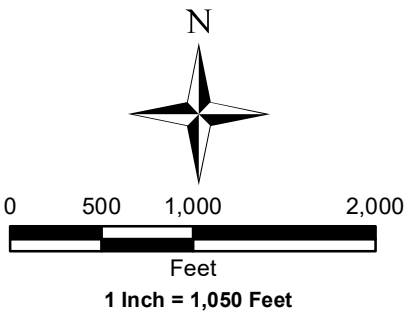
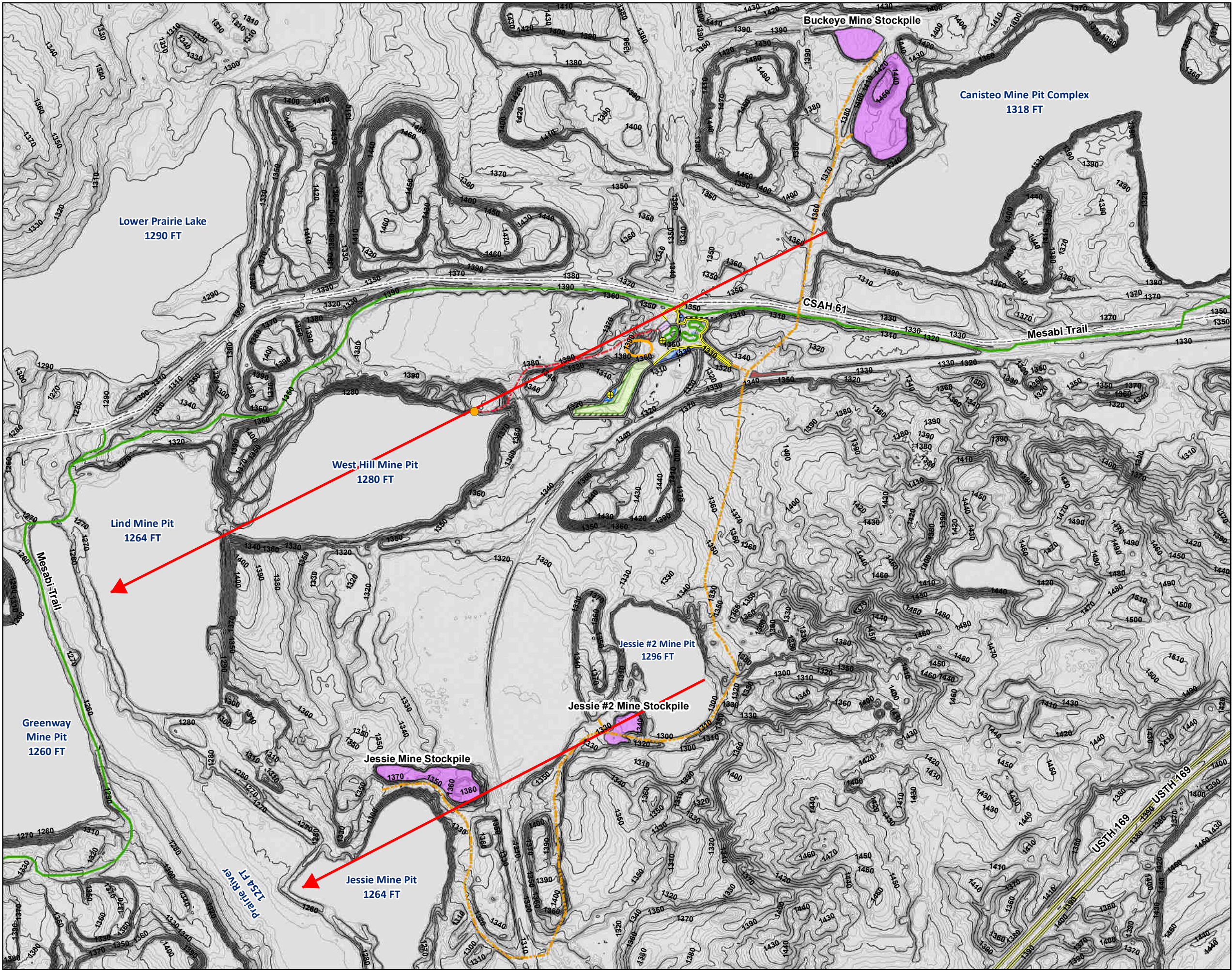
**Figure 6b**  
**Plant Site and Waste**  
**Management Area Aerial**  
State Disposal System Permit Application  
Prairie River Minerals LLC  
Coleraine, Minnesota (Itasca County)



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**6b**





**Legend**

- Pump Location
- Proposed Monitoring Station
- Estimated Groundwater Flow Direction
- Overhead Powerline
- Plant Area Road Edge
- Gate
- Pipe Route
- Stockpile Feed Haul Road
- County Highway 61
- US Highway 169
- Mesabi Trail
- Proposed Berm
- Infiltration Basin
- Product Loadout Area
- 2020 Waste Management Area (WMA)
- Plant Site
- Stockpile
- Crude Ore Stockpile
- Stormwater Retention Pond
- Stacker
- Contour Interval (2 ft)
- Contour Interval (10 ft)

Notes:  
-Contours and Hillshade were provided by MN Geospatial Commons  
-Figures depicted are approximations.

**Figure 6c**  
**Estimated Groundwater**  
**Flow Direction**  
State Disposal System Permit Application  
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**6c**