

Van Norden Meadow Restoration

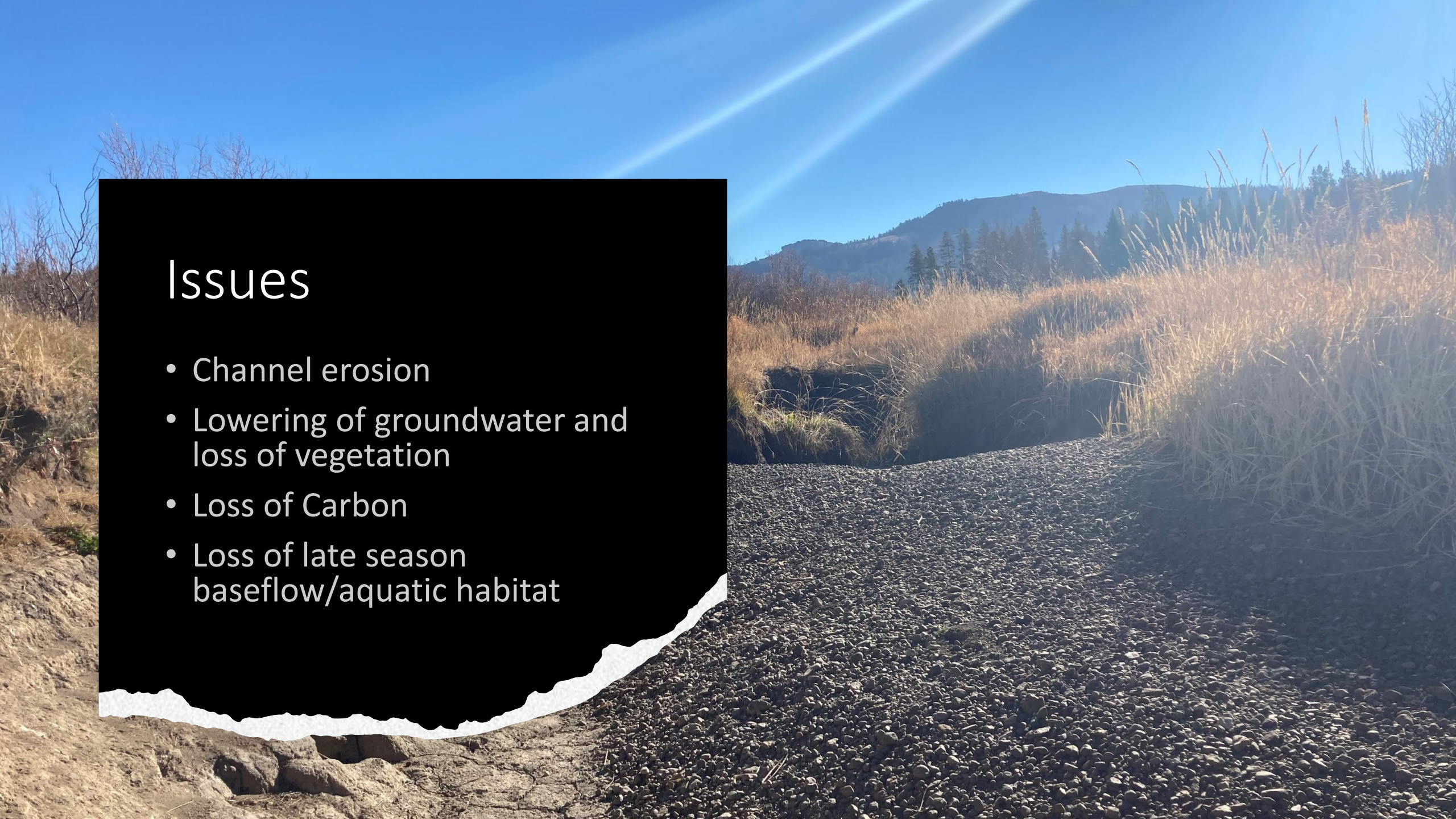
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Issues

- Channel erosion
- Lowering of groundwater and loss of vegetation
- Loss of Carbon
- Loss of late season baseflow/aquatic habitat



Translating Meadow Restoration Benefits

Restoration Benefit	What this means...
Increase spring and summer surface inundation	Saturated soils, potential for shallow (inches) ponding in low spots
Increase groundwater recharge	Groundwater level will be shallower: moving from 3-6 feet (current) to less than 3 feet below ground.
Decrease peak storm flows	Flows leaving the meadow may not be as high.
Increase summer baseflows	Streams within the meadow may have more flow into the summer months.
Decrease conifer encroachment	A higher water table should result in less conifer encroachment
Increase wet meadow vegetation/willows	Wetter soils will favor wetter loving plant species
Increase habitat for willow flycatcher	Wetter soils mean more willow growth and habitat of the willow flycatcher. We will also plant willows.
Improve Water Quality	Meadows serve to increase water quality through filtration of surface water, reduction of erosion, and late season "cooling"
Reduce Reed Canary Grass (Phalaris arundinacea)	Management of a species that is outcompeting native plants in the meadow.
Increase Carbon Storage	Wetter soils may result in increased carbon sequestration and less carbon dioxide release

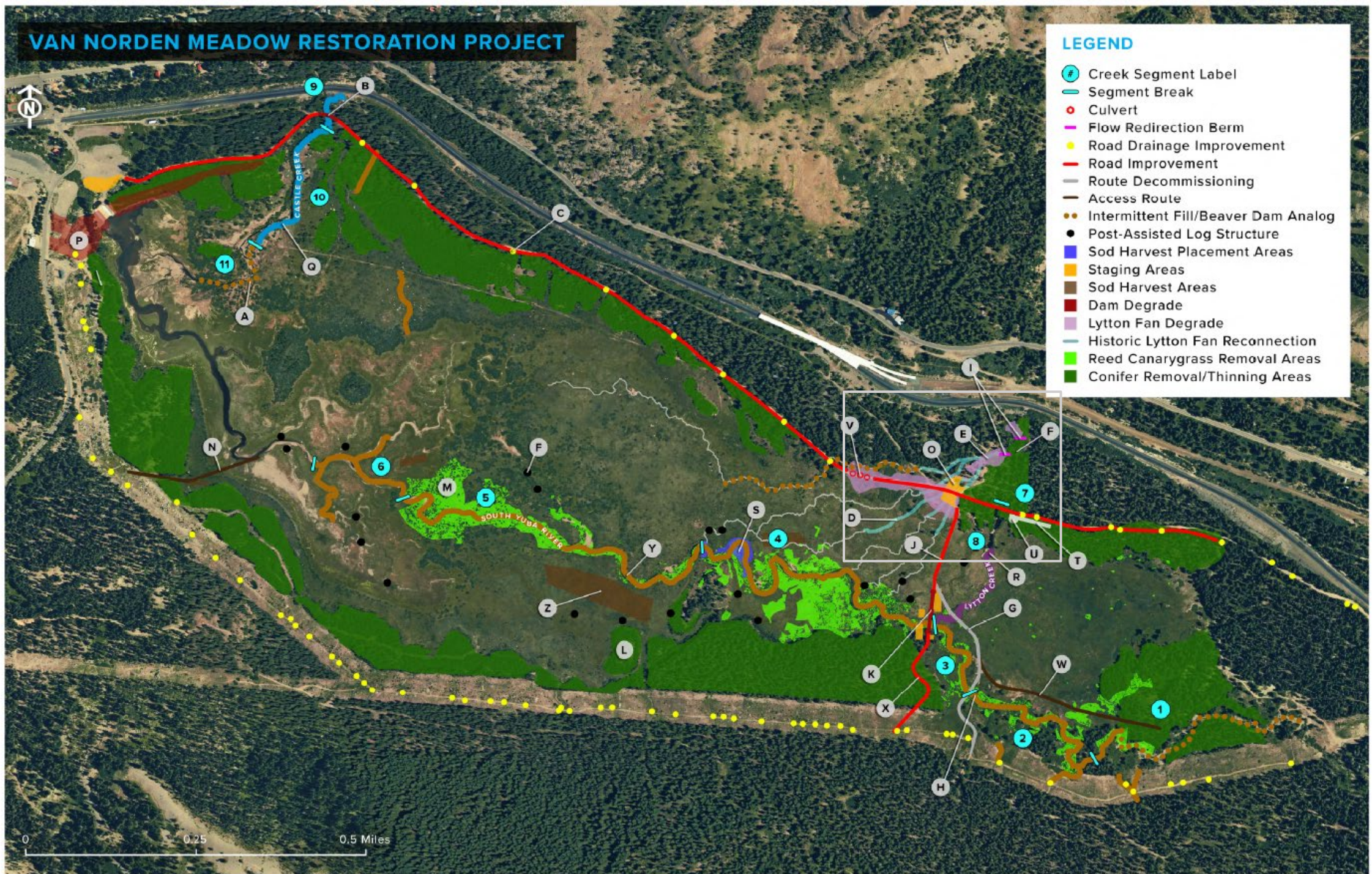


Action	2020	2021	2022	2023	2024	2025	2026
<i>Develop Proposed Action</i>	X	X					
<i>Follow-up Arch Survey</i>		X					
<i>Complete NEPA/CEQA</i>		X	X				
<i>Permits</i>			X				
PHAR Treatment			X	X	X	X	X
Conifer Removal		X	X	X	X		
Road work		X	X	X	X		
Berm Removal			X				
Stream Channel Work			X	X			
Sheep Pen Parking Lot				X	X		
Trail Building			X	X	X		
Monitoring	X	X	X	X	X	X	X

VAN NORDEN MEADOW RESTORATION PROJECT

LEGEND

- ① Creek Segment Label
- Segment Break
- Culvert
- Flow Redirection Berm
- Road Drainage Improvement
- Road Improvement
- Route Decommissioning
- Access Route
- Intermittent Fill/Beaver Dam Analog
- Post-Assisted Log Structure
- Sod Harvest Placement Areas
- Staging Areas
- Sod Harvest Areas
- Dam Degrade
- Lytton Fan Degrade
- Historic Lytton Fan Reconnection
- Reed Canarygrass Removal Areas
- Conifer Removal/Thinning Areas



A person wearing a wide-brimmed hat and light-colored clothing is kneeling in a grassy field, looking down at something in their hands. The field is green with some patches of dry grass. In the background, there are large, rounded rocks and a dense forest of evergreen trees. Beyond the forest, there are mountains with patches of snow under a blue sky with scattered clouds.

Long Term Monitoring














- Hydrology: Continuous surface and groundwater measurements
- Vegetation: 2014, 2020, 2023
- Birds: annual, moving to less frequent
- Aquatics: fish, amphibians, BMIs
- Carbon storage: 2021 and Post-restoration


Van Norden Meadow Restoration and Recreation Project

*Proposed Recreation
Actions*

- Map 3 of 3 -

Trail Structures

-  Bridge
-  Proposed Trailhead
-  Trailhead
-  Viewing Platform
-  Dam Berm
-  Proposed Trail
-  PG&E Powerline Road
-  Donner Lake Rim / Memorial Overland Emigrant Trail
-  Road
-  Cross-Country Ski Hut
-  Railroad
-  Tahoe National Forest Land
-  Other Owned Land

 NORTH
40'
Contour
Interval
1:10,000
0 0.25 Miles

