

**South Tahoe Greenway Shared Use Trail Project Modification
Initial Study/Mitigated Negative Declaration Supplement**

**Appendix B
Preliminary Wetlands Delineation**

The following pages provide excerpts from the 2015 Preliminary Jurisdictional Determination Report. The full report is available at http://tahoe.ca.gov/ctc_projects/south-tahoe-greenway-79/, or upon request from:

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CALIFORNIA TAHOE CONSERVANCY SOUTH TAHOE GREENWAY SHARED-USE TRAIL PROJECT

Preliminary Jurisdictional Determination Report



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5.0 RESULTS

The entire eight-acre Study Area was evaluated for the presence of Waters of the U.S. under Corps jurisdiction, as well as Waters of the State which may be regulated by RWQCB and/or CDFW. There are five distinct portions of the Study Area that have been classified as wetlands according to the National Wetland Inventory (NWI) maps: (1) Trout Creek is classified as Palustrine Scrub-Shrub Broad Leaved Deciduous, Temporarily Flooded (PSS1A) and (2) a portion of Bijou Meadow that occurs within the Study Area is classified as Palustrine, Emergent, Palustrine Emergent Persistent, Temporarily Flooded (PEM1A)(USFWS 2015).

The results of jurisdictional site evaluation are described below. Field data were recorded on datasheets provided in Appendix A. Maps in Appendix B depict the extent of potentially jurisdictional areas within the Study Area. A list of plant species observed during the site visits was compiled and is provided in Appendix C. Representative photographs were also taken during site surveys to document existing site conditions and are provided in Appendix D. Descriptions of potential federal and state jurisdictional waters and wetlands found on the Study Area are provided below.

5.1 Potential Section 404/401 Wetlands

Approximately **4.57 acres** of potential jurisdictional wetlands occur on the Study Area, shown on maps in Appendix B1 and B2. Situated within distinct topographic swales, well defined channels, or on active floodplains, wetland features A through N are characterized by sample points TC-1 through TC-15 (Trout Creek) and wetland feature O in Bijou Meadow is characterized by BM-1 through BM-9. Wetlands are situated within Trout Creek and Bijou Creek subwatersheds, which are tributaries of Lake Tahoe, an interstate water and TNW. Wetlands along these tributaries are also hydrologically connected to the Upper Truckee River, which is also a TNW. It is therefore presumed that all features that meet the Corps' wetland criteria will be considered jurisdictional, as they either are a Relatively Permanent Water (RPW) that drains into a TNW or interstate water, or they are adjacent to an RPW that is directly confluent to a TNW or interstate water.

Potential Section 404 wetlands identified within the Study Area were classified into three types based on their vegetation structure (i.e., forested or emergent), plant species composition and wetland indicator status (Lichvar and Kartesz 2014), hydroperiod, and topographic landform.

5.1.1 Montane Dry Meadow Wetland

Montane dry meadow wetlands were identified as potentially jurisdictional wetlands situated in broad, open swales or valleys. Montane meadows support primarily herbaceous plant species

and develop on mineral soils, some with high organic content, and tend to be seasonally saturated (Corps 2010). The primary source of hydrology for these wetlands is seasonal fluctuations in the groundwater table. Vegetation cover tends to be 75-80 percent cover, is less than 0.75 meter high and is dominated by several species of sedges and rushes.

Approximately **0.84 acre** of montane dry meadow (Appendix B2) was mapped within Bijou Meadow and is characterized by sample points BM-5 through BM-8 (Appendix A). These wetlands supported a variety of sedges (*Carex* spp.) mixed with facultative uplands species such as hairy arnica (*Arnica mollis*), yarrow (*Achillea millefolium*), and Kentucky bluegrass (*Poa pratensis*). Based on an observation of groundwater within the upper 12 inches at a monitoring well located on the southwestern portion of the mapped feature, it was assumed that this meadow complex is saturated for at least 14 days during the growing season and therefore meets the Corps' wetland hydrology criterion. In addition, oxidized rhizospheres, a primary hydrology indicator, was observed in all wetland sample points and were used as the key indicator for determining the wetland/upland boundary, as this indicates that the soils undergo a seasonal wetting and drying cycle within the root zone and upper 12 inches of the profile. Hydric soil indicators observed within montane dry meadow wetlands includes Redox Dark Surface (F6) and Depleted Matrix (F3).

5.1.2 Emergent Floodplain Wetland

Approximately **2.01 acre** of emergent floodplain wetlands M and N were mapped within the Study Area at Trout Creek and are characterized by sample points TC-4 through TC-7. This wetland classification is primarily based on topographic position, proximity to an active stream channel, and subsequent primary source of hydrology, which is direct inundation from an adjacent active stream channel. These features are perennially saturated to inundated and support a predominance of perennial OBL and/or FACW-classified wetland vegetation. Hydrophytic plants observed within this wetland type include Nebraska sedge (*Carex nebrascensis*; OBL), slender beak sedge (*Carex athrostachya*; FACW), hairgrass (*Deschampsia cespitosa*; FACW), Oregon checkermallow (*Sidalcea oregana* ssp. *spicata*; OBL), and (*Potentilla glandulosa*; OBL) and Baltic rush (*Juncus balticus*; FACW). Redoximorphic concentrations were observed within the soil matrix and along root channels and soil texture was sandy loam or silty clay. Hydric soil indicators within emergent floodplain wetlands were Redox Dark Surface (F6) and Depleted Matrix (F3). Wetland hydrology was evidenced by Oxidized Rhizospheres along Living Roots (C3), a primary indicator, and Geomorphic Position (D2) and/or FAC Neutral Test (D5), secondary indicators. Wetland boundaries were defined by the upper edge of the inundated to saturated portion of the floodplain and a distinct shift in plant species composition.

5.1.3 Riparian Wetland

Riparian wetlands in the Study Area occur on the Trout Creek floodplains in an area with a high water tables (Corps 2010). Approximately **1.72 acres** of riparian wetland features A through L were mapped within the Study Area at Trout Creek (Appendix B1) and are characterized by sample points TC-8, TC-9, TC-10, TC-11, TC-13, and TC-14 (Appendix A). Riparian wetlands were characterized by stands of Lemmon's willow (*Salix lemmonii*; FACW) and shining willow (*S. lucida* ssp. *lasiandra*; FACW) that comprised the overstory, with a sparse herbaceous understory of sedges, rushes, and various grasses and forbs. Hydric soil indicators observed within riparian wetlands includes Redox Dark Surface (F6), Sandy Redox (S5), and Depleted Matrix (F3). These wetlands exhibited primary wetland hydrology indicators such as inundation, saturation, water marks, and sediment deposits, as well as secondary indicators including drainage patterns and passing the FAC-neutral test. Wetland boundaries were interpreted primarily by following drainage-like topography and interpreting a shift in plant dominance from woody riparian species and emergent wetland plants to upland Jeffrey pine forest with a montane chaparral understory.

5.2 Lakes, Ponds and Streams/ Non Tidal Waters/ Other Waters of the U.S.

Approximately **0.16 acre** or **300 linear feet** of non-wetland other waters (Trout Creek) was mapped within the Study Area. The Ordinary High Water Mark (OHWM) had an average width of 18 feet and was delineated along the active floodplain. The OHWM was clearly discernible by bed-and-bank topography, shelving, and destruction of terrestrial vegetation. Trout Creek is a Relatively Permanent Water (RPW) that drains the Upper Truckee River, a TNW, and discharges into Lake Tahoe, a TNW and interstate water; therefore, this feature is expected to be regulated under Section 404 of the CWA.

6.0 CONCLUSIONS

6.1 Waters of the U.S. Including Wetlands

The Study Area has 15 features with positive wetland indicators ranging in size from less than 0.01 acre to 1.15 acre (Table 2). In addition, there is one (1) other water feature (Trout Creek) that exhibited evidence of an OHWM. All of these features are confluent to the Upper Truckee River (TNW) and are tributaries to Lake Tahoe (TNW and Interstate Water) and are therefore expected to be considered jurisdictional by the Corps. All jurisdictional wetlands hydric soils characterized by redoximorphic features, a predominance of hydrophytic vegetation with FAC-, FACW-, and/or OBL-classified plants, and wetland hydrology characterized by iron deposits, oxidized rhizospheres, geomorphic position, drainage patterns, and the FAC-neutral test. Hydric soil indicators observed within jurisdictional features includes Redox Dark Surface (F6), Sandy Redox (S5), and Depleted Matrix (F3). All features that meet the definition of jurisdictional wetlands and other waters for Section 404 of the Clean Water Act and are listed in Table 2 below.

Table 2. Summary of Potential Section 404 Jurisdictional Areas within the Trout Creek and Bijou Meadow Study Areas.

Map Feature ID	Wetland/Water Type	Study Area Section	Area of Potential Section 404 Jurisdiction		
			Square Feet (sf)	Linear Feet (lf)	Acres (A)
A	Riparian Wetland	Trout Creek	47,189	n/a	1.08
B	Riparian Wetland	Trout Creek	3,234	n/a	0.07
C	Riparian Wetland	Trout Creek	776	n/a	0.02
D	Riparian Wetland	Trout Creek	2,177	n/a	0.05
E	Riparian Wetland	Trout Creek	339	n/a	0.01
F	Riparian Wetland	Trout Creek	867	n/a	0.02
G	Riparian Wetland	Trout Creek	1,915	n/a	0.04
H	Riparian Wetland	Trout Creek	2,446	n/a	0.06
I	Riparian Wetland	Trout Creek	431	n/a	0.01

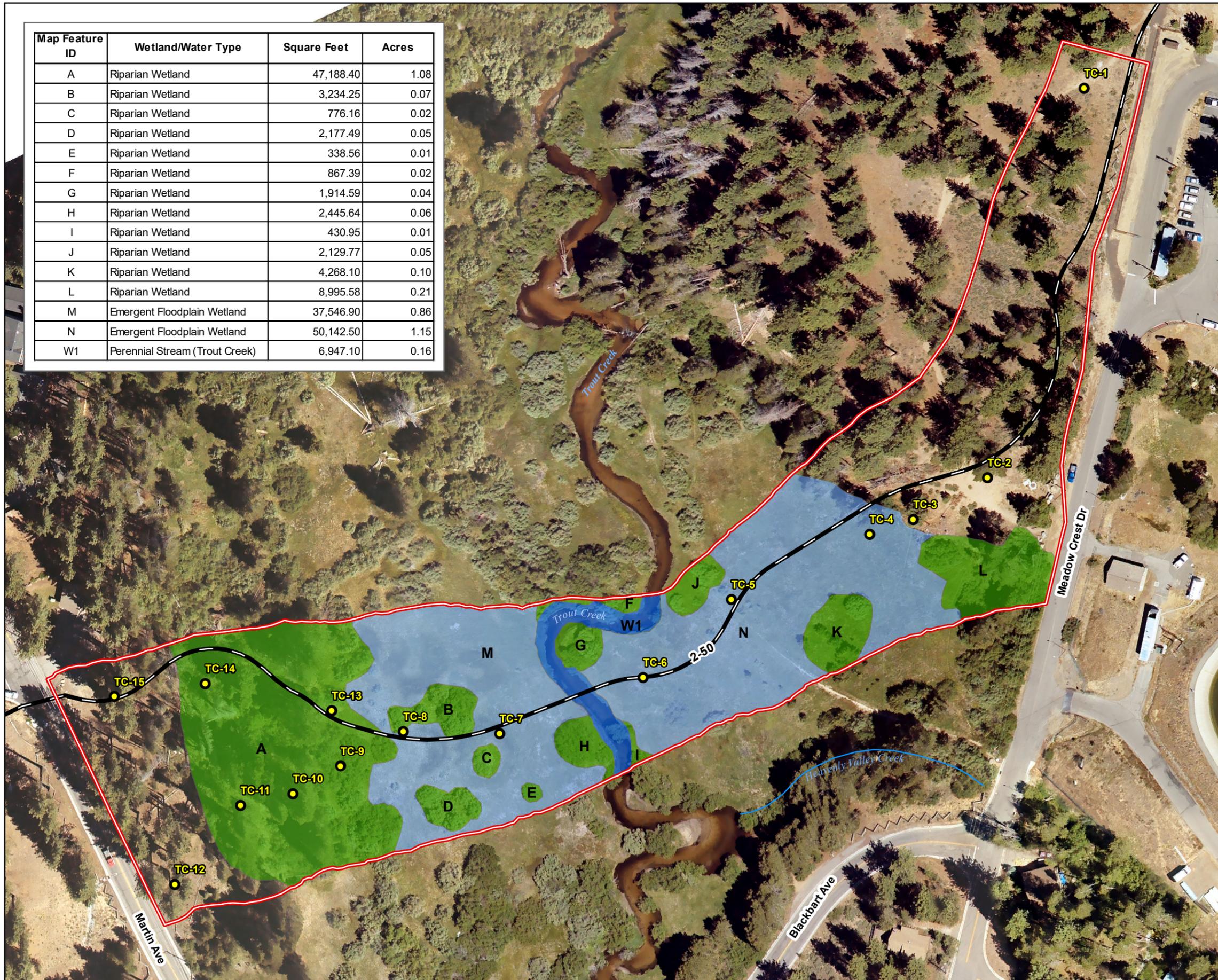
Map Feature ID	Wetland/Water Type	Study Area Section	Area of Potential Section 404 Jurisdiction		
			Square Feet (sf)	Linear Feet (lf)	Acres (A)
J	Riparian Wetland	Trout Creek	2,130	n/a	0.05
K	Riparian Wetland	Trout Creek	4,268	n/a	0.10
L	Riparian Wetland	Trout Creek	8,996	n/a	0.21
M	Emergent Floodplain Wetland	Trout Creek	37,547	n/a	0.86
N	Emergent Floodplain Wetland	Trout Creek	50,143	n/a	1.15
W1	Perennial Stream (Trout Creek)	Trout Creek	6,947	300	0.16
O	Montane Dry Meadow	Bijou Meadow	36,590	n/a	0.84
TOTAL			205,995		4.73

6.2 Waters of the State

All wetland and water features identified within Study Area may also be regulated by the RWQCB as Waters of the State through Section 401 of the CWA and/or the State Porter-Cologne Act. All ecological systems associated with drainages (i.e., riparian wetlands) and drainage features with bed and bank topography (Trout Creek) would be regulated by Sections 1600-1616 of the California Fish and Game Code. All water features would be considered jurisdictional streambeds and were delineated from the top of bank, which was synonymous with the Corp's OHWM. In conjunction with the Section 404 permit, impacts to wetlands and waters will likely require a Section 401 Water Quality Certification or Waste Discharge Requirement from RWQCB and CDFW Section 1602 Streambed Alteration Agreement.

These results are considered to be preliminary until verified by these agencies and/or until any permits are issued by these agencies authorizing activities within or near these areas. The conclusion of this delineation is based on conditions observed at the time of the field surveys conducted on August 27, September 1, September 9, and October 9, 2015.

Map Feature ID	Wetland/Water Type	Square Feet	Acres
A	Riparian Wetland	47,188.40	1.08
B	Riparian Wetland	3,234.25	0.07
C	Riparian Wetland	776.16	0.02
D	Riparian Wetland	2,177.49	0.05
E	Riparian Wetland	338.56	0.01
F	Riparian Wetland	867.39	0.02
G	Riparian Wetland	1,914.59	0.04
H	Riparian Wetland	2,445.64	0.06
I	Riparian Wetland	430.95	0.01
J	Riparian Wetland	2,129.77	0.05
K	Riparian Wetland	4,268.10	0.10
L	Riparian Wetland	8,995.58	0.21
M	Emergent Floodplain Wetland	37,546.90	0.86
N	Emergent Floodplain Wetland	50,142.50	1.15
W1	Perennial Stream (Trout Creek)	6,947.10	0.16

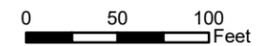
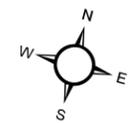


Greenway Bike Trail
Placer County, California
Trout Creek Study Area

Appendix B1.
Preliminary Jurisdictional
Determination of Potential
Section 404 Jurisdiction

Legend

- Study Area Boundary (6.26 ac)
- Greenway Trail Centerlines
- Sample Points
- Potential Section 404 Jurisdictional Features**
- Emergent Floodplain Wetland (2.01 ac)
- Riparian Wetland (1.72 ac)
- Perennial Stream (0.16 ac, 300 linear ft)



1:1,200
1 inch = 100 feet

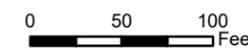
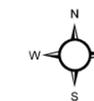
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Greenway Bike Trail
Placer County, California
Bijou Meadow Study Area

Appendix B2.
Preliminary Jurisdictional
Determination of Potential
Section 404 Jurisdiction

Legend

-  Study Area Boundary (1.76 ac)
-  Greenway Trail Centerlines
-  Sample Points
-  Ground Water Monitoring Well
-  Potential Section 404 Montane Dry Meadow Wetland (0.84 ac)



1:1,200
1 inch = 100 feet

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