

EXHIBIT G

Future ILF Projects

Truckee Meadows Restoration Project (TAH-1)



**Sacramento District California
In-Lieu Fee Program
Tahoe Service Area**

Project Development Plan

May 25, 2018



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Truckee Meadows Restoration Project (TAH-1)

In October 2014, the National Fish and Wildlife Foundation (“NFWF”) established the Sacramento District California In-Lieu Fee Program (“ILF Program”), which provides a collaborative and strategic approach to wetlands mitigation pursuant to and in accordance with the 2008 Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332; 40 CFR Part 230) (“2008 Rule”).

The ILF Program was approved through the execution of an Enabling Instrument (“Instrument”), dated October 10, 2014, by and among NFWF as the ILF Program Sponsor, the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, National Marine Fisheries Service, the California State Water Resources Control Board, the Central Valley Regional Water Quality Control Board, and the Lahontan Regional Water Quality Control Board. These federal and state agencies (individually an “Agency” and collectively the “Agencies”) comprise the Interagency Review Team (“IRT”).

Truckee River Watershed Council (“TRWC”) and NFWF have jointly prepared this Project Development Plan (“Plan”) for the Truckee Meadows Restoration Project (“ILF Project”). The Plan was prepared in accordance with Section VI.B.1 of the Instrument and the requirements of the 2008 Rule, and includes the 12 necessary elements as set forth in 33 CFR 332.4(c)(2) through (13).

The ILF Project is located in the ILF Program’s Tahoe Service Area and would generate up to 2.33 Aquatic Resource Released Credits by restoring (rehabilitating) 6.56 acres of montane wet meadow habitat. The Credits would be released in accordance with the Credit Release schedule described in Section 5 of this Plan and would be credited towards the fulfillment of NFWF’s existing compensatory mitigation obligation resulting from the authorized sale of 1.50 Advance Credits in the Tahoe Service Area.

1. Objectives

The ILF Project proposes to restore (rehabilitate) 6.56 acres of montane wet meadow habitat within an 11.86-acre parcel (Table 1). The ILF Project site includes a portion of the Hilltop-Ponderosa Wetlands complex sometimes known as “Winter Creek Meadow” and is located on the south side of Brockway Road in Truckee, California (see Attachment 1, Figures 1-3). The hydrology of the site is driven by groundwater seepage and surface water that originates from developed springs, hillslope seepage, and precipitation.

Table 1. List of resources types and amounts within the parcel.

Resource Name	Holland Classification ¹	Cowardin Classification ²	Total Acres
Preserve Area (credit provided)			
Winter Creek Meadow	Wet montane meadow	Palustrine emergent, persistent, seasonally flooded (PEM1C)	6.56
Buffer Areas (no credit provided)			
Winter Creek Meadow (30-foot road buffer and utility easement area, excluded from credit calculations)	Wet montane meadow	Palustrine emergent, persistent, seasonally flooded (PEM1C)	0.49
Upland buffer habitat	Sierran mixed conifer forest	n/a	4.81
Parcel Total			11.86

¹Holland 1986; ²Cowardin *et al.*, 1979

Montane wet meadows such as this one are biodiversity hotspots (Graber 1996) and perform a variety of valuable ecosystem services including flood attenuation, water storage, water filtration, and habitat for native plants and wildlife (Viers *et al.* 2013). However, it is estimated that 40-60% of meadows have been substantially degraded by past development and land uses such as timber harvest and mining, road construction, and over-grazing (NFWF 2010). As such, there have been large-scale declines in these ecosystem services throughout the Sierra Nevada (Pope *et al.* 2015), including in the Tahoe Service Area.

The ILF Project site is representative of many disturbed meadows in the Sierra Nevada and has experienced a decline in ecological function due to the construction of artificial drainage ditches in the 1950s and 1960s that contribute to more rapid runoff and drawdown of the water table at the ILF Project site. In addition, a small portion of the meadow was filled with approximately 150 cubic yards of soil and rock in 1980.

These on-site impacts, in combination with historical and modern land uses in the vicinity, have altered and disconnected the hydrology of the system. Moreover, these alterations have promoted increased erosion and export of sediment to the Truckee River immediately downstream of the ILF Project site. The ILF Project aims to restore hydrologic function and natural processes to improve water storage and flood attenuation, wildlife and plant habitat, carbon sequestration, and downstream water quality.

The ILF Project will contribute to the desired watershed conditions outlined in the Coordinated Watershed Management Strategy for the Middle Truckee River (TRWC 2004). More specifically it addresses the conditions of 1) riparian, wetland, and meadow systems; 2) hydrology, water management, and water quality; and 3) soils and sediment as described below.

1. The structure and ecological function of riparian, wetland, and meadow systems are protected and enhanced by improving or restoring structural diversity of plant and animal communities to maintain or improve proper functioning condition;
2. Water resources are managed to preserve and improve existing water quality and quantity;
3. Sediment that negatively impacts proper functioning conditions or beneficial uses in the Truckee River and its tributaries is reduced by appropriate restoration activities.

Furthermore, the ILF Project is part of TRWC's sustained effort to implement restoration projects in support of the Total Maximum Daily Load ("TMDL") for sediment in the Truckee River. The Truckee River has been identified by the State Water Resources Control Board as impaired under Section 303(d) of the Clean Water Act for excess sediment in violation of water quality standards (LRWQCB 2008). TRWC seeks to alleviate downstream erosion/sedimentation and improve water quality in the Truckee River by slowing flow velocities through the ILF Project site, reducing peak runoff rates, and dispersing surface water flows across the meadow surface.

2. Site Selection

The ILF Project site was identified as a priority for restoration by TRWC, a regional leader in ecological restoration, in collaboration with Truckee Donner Public Utilities District and the Town of Truckee. The ILF Project site is one of the largest remaining wetland complexes in the Town of Truckee, is highly visible within the community, and contributes to significant downstream runoff, erosion, and sedimentation. Convened in 2010, the project partners concluded that there was significant potential for restoration at the site which could improve on- and off-site ecological functions and services.

TRWC and the project partners evaluated a number of restoration alternatives during the planning and design process (see Attachment 2 for Conceptual Design Basis Report). The final design was selected to minimize potential impacts to the existing functions and services of the meadow, while addressing the key stressors that are degrading the overall condition of the meadow (i.e., drainage ditches and fill). The final design includes filling the primary constructed drainage ditch, installing stabilizing and dispersing log features, installing bio-engineered "sod blocks" in the secondary drainage ditches, and removing fill material from the meadow (see Attachment 3 for 100% Design Plan Set).

The ILF Project has a high probability of achieving ecologically self-sustaining restoration, because its design focuses on restoring natural hydrologic processes. The ILF Project site was historically part of a larger wet meadow complex and continues to benefit from a natural, spring-fed perennial water source. Currently, the chief impediments to hydrologic function at the site are the drainage ditches which move surface water through the system more rapidly than would occur under natural conditions. The ILF Project's design counteracts these effects and disperses surface

water across the meadow surface, promoting infiltration, improved groundwater conditions, and hydrologic connectivity. Furthermore, recognizing that the meadow currently functions at a modest level, the ILF Project's design focuses on minimizing potential impacts to the existing meadow while maximizing function.

TRWC has successfully implemented 60 meadow and stream restoration projects in the Truckee River watershed. Similar projects have included Coldstream Canyon, Perazzo Meadow, Middle Martis, Dry Creek, and Davies-Merrill Creeks. These were all complex restoration projects and included similar restoration strategies to those proposed for this project. These past projects exemplify TRWC's record of success and also the proven feasibility of the proposed techniques in successfully restoring hydrologic function, groundwater conditions, and hydrophytic plant communities.

3. Site Protection Instrument

The ILF Project site is located on Nevada County Parcel # 19-810-01, which is owned in fee title and managed by the Truckee Donner Land Trust ("TDLT"; www.tdlandtrust.org), an accredited land trust recognized by the Land Trust Accreditation Commission. This parcel is a key component of TDLT's Truckee open space land conservation effort. TDLT has no intention of developing the parcel in the future. In addition, a deed restriction/restrictive covenant will be recorded on the title. A draft deed restriction has been prepared using a U.S. Army Corps of Engineers (USACE) template and is consistent with the regulatory guidance outlined in the Compensatory Mitigation Site Protection Instrument Handbook for the Corps Regulatory Program (Wood and Martin 2016). The draft deed restriction is included in Attachment 4.

The complete Title Report dated July 7, 2017, for the parcel is included in Attachment 5. A summary of each exception to the title report is provided below and is depicted in Attachment 1, Figure 4. TDLT will also protect the ILF Project site through the procurement and maintenance of a conservation defense liability insurance policy covering the parcel.

From Schedule B, Exceptions to Title:

- 1-3) General and special taxes and assessments (no effect on ILF Project).
- 4) An agreement between the Union Ice Company and the United States of America for a 40-foot road right-of-way and a 12-foot telephone line right-of-way. This agreement is dated April 15, 1937 and predates the construction of Brockway Road. As such, it is believed to be associated with Brockway Road. Brockway Road is located outside of the ILF Project area and would not affect ILF Project implementation or site protection. Additionally, the portion of the parcel within a 30-foot buffer of Brockway Road has been excluded from the Credit calculations.

- 5-6) Two agreements between Truckee Donner Public Utility District and the State of California for “a waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway or roadway, as contained in the document.” This highway easement is associated with Brockway Road/State Highway 267, which is located outside of the ILF Project area and would not affect ILF Project implementation or site protection. Additionally, the portion of the parcel within a 30-foot buffer of Brockway Road has been excluded from the Credit calculations.
- 7) An easement to Truckee Donner Public Utility District for utility purposes on, over, under and across a strip of land having a right angle width of thirty (30) feet. This easement area is depicted on Attachment 1, Figure 4 and has been excluded from the Credit calculations and would not affect ILF Project implementation or site protection.
- 8) A map depicting the same easement described in exception 7. This has no additional effect on ILF Project implementation or site protection.
- 9) A map depicting the same easement described in exception 7. This has no additional effect on ILF Project implementation or site protection.
- 10) “Any and all offers of dedications, conditions, restrictions, easements, notes and/or provision shown or disclosed by the filed or recorded map referred to in the legal description.” This has no additional effect on ILF Project implementation or site protection.
- 11) An agreement between Truckee Donner Land Trust and Truckee Partners, Inc. for a storm drain detention basin easement for the benefit of Wintercreek Homeowner’s Association. The approximate boundaries of this easement are depicted on Attachment 1, Figure 4. The storm water detention basin is located outside of the wetland rehabilitation area and would not affect ILF Project implementation or site protection.

4. Baseline Information

Setting and Location

The ILF Project site is located within the Town of Truckee, approximately 0.75 mile east of downtown Truckee in the Hilltop-Ponderosa area (39.3258°N, -120.1736°W; see Attachment 1, Figures 1-3). It is situated on the south side of Brockway Road, near its intersection with Estate Drive. The ILF Project site comprises 6.56 acres of montane wet meadow within a larger meadow complex and is surrounded by an upland buffer of 4.81 acres of Sierran mixed conifer forest. It is situated on a broad terrace above the Truckee River to the north. The meadow is transected by a constructed ditch sometimes referred to as “Winter Creek.”

Mean annual precipitation at the ILF Project site is approximately 30 to 34 inches (Balance Hydrologics 2014), the majority of which falls during the winter months as rain and snow. The approximate size of the contributing watershed is 313 acres (Balance Hydrologics 2014).

Hydrology

The hydrology of the site is driven by groundwater seepage and surface waters from developed springs, hillslope seeps, and precipitation. There are numerous seeps and springs that emanate from the adjacent hillslope to the south. Several of those on the parcel to the west have been developed, one of which is operated as a production well for the Truckee Donner Public Utilities District. Surface waters flow from west to east across the sloping meadow terrace. The majority of surface water and shallow ground water is captured in a constructed ditch (i.e., Winter Creek) that runs from developed springs on an adjacent property to the meadow's outlet at a culvert under Brockway Road. Several other smaller constructed ditches convey surface water from the east to the meadow outlet under Brockway Road.

Several culverts convey water under Brockway Road and Estates Drive to another fragmented wet meadow complex on the north side of Brockway Road, which would also be restored as part of a larger project under a separate funding source. Several of these culverts are undersized and may have negative slopes, so water seasonally collects on the lower portions of the ILF Project site (Balance Hydrologics 2014).

Pre-construction monitoring at the site has revealed strong seasonal patterns in groundwater conditions. In less disturbed portions of the meadow complex the ground surface is saturated for the majority of the winter. Winter water table levels are lower in areas directly affected by ditch drainage, adjacent upland areas, and in areas with artificial fill. Groundwater levels decline with snowmelt in mid-March and are generally more than 5 feet below the surface by mid-July. Late summer groundwater conditions are primarily maintained by flows from the developed spring on parcel to the west (Balance Hydrologics 2014).

A 2015 wetland delineation was conducted for the larger TRWC project area, which include the ILF Project site (see Attachment 1, Figure 5 for Wetland Delineation Map and Attachment 6 for full wetland delineation report). The wetland delineation identified 7.05 acres within the ILF Project site parcel as jurisdictional wetland (i.e., wet meadow habitat).

Soils and Geology

The ILF Project site occupies a terrace mapped as old glacial outwash and described as “poorly sorted boulder and cobble gravel, sand and silt” (USFS 1993; Saucedo 2005). These deposits sit on the Prosser Creek alluvium and olivine-latitude volcanic flow bedrock that forms the hills immediately to the south. (Balance Hydrologics 2014). It is possible that the numerous seeps and springs at the toes of those hills emanate from the alluvium or volcanics (Balance Hydrologics 2014).

According to the regional soil survey one continuous wetland soil unit of Aquolls-Borolls extends across much of the terrace (NRCS 2017; Table 2; Attachment 1, Figure 6). These soil units are poorly drained and form in valleys, swales, and drainages. These are typically associated with hydrophytic vegetation that can tolerate high groundwater conditions. The soil stratigraphy in the wetland consists of historical silty loam hydric soils overlying clays. Artificial fill is present in portions of the site adjacent to the meadow outflow (Balance Hydrologics 2014).

Table 2. List of primary soil mapping units on the ILF Project site parcel and their characteristics.

Soil Map Unit Name	Landform	Landform position	Parent Material	Natural Drainage Class	Hydric Soil Rating	Hydric Soil Criteria	Percent of Site
Aquolls and Borolls, 0 to 5 percent slopes	Marshes	Toeslope	Alluvium derived from igneous, metamorphic and sedimentary rock	Very poorly drained	Yes	2	73.8%
Kyburz-Trojan complex, 9 to 30 percent slopes	Mountain slopes	Backslope	Residuum weathered from volcanic rock	Well drained	No	n/a	26.2%

Vegetation

Herbaceous perennial species dominate the vegetation communities at the ILF Project site. Graminoid species (grasses, sedges, rushes) account for roughly 48% of vegetative cover and hydrophytic (OBL/FACW) plant species account for roughly 42% of cover. Key species include Nebraska sedge (*Carex nebrascensis*), Baltic rush (*Juncus balticus*), Kentucky bluegrass (*Poa pratensis*), northwest cinquefoil (*Potentilla gracilis*), and Rydberg's penstemon (*Penstemon rydbergii*). Hydrophytic plant cover is visibly lower in those areas significantly impacted by disturbances (e.g., areas adjacent to the primary ditch and with artificial fill). There are small inclusions of willow (*Salix* sp.), especially near the meadow outflow, and conifers such as lodgepole pine (*Pinus contorta* ssp. *murrayana*) are encroaching from the surrounding forest matrix. Invasive species cover on the site is currently minimal. There is a small (~200 sq ft) patch of poison hemlock (*Conium maculatum*) in the northwest corner of the site and some scattered bull thistle (*Cirsium vulgare*) in previously disturbed areas. Both of these species have been assigned a "Moderate" rating by the California Invasive Plant Council (Cal-IPC 2018). No other invasive species are known to be present in the ILF Project site.

Overall Conditions

The development of springs, constructed ditches, and historical and modern land uses have substantially altered the hydrology of the site. However, despite these alterations the meadow still functions at a moderate level based on the results of functional and conditional assessments. Based on the metrics for non-channelized meadows included as part of the American Rivers' Meadow Condition Scorecard (American Rivers 2012, Attachment 9), the meadow condition ranges from slightly to heavily impacted. The primary impediments to the meadow's function are the

constructed ditches, artificial fill, and the culvert system that drains the ILF Project site. A California Rapid Assessment Methodology (“CRAM”) baseline assessment was also conducted and the site received an overall score of 64 (see Attachment 9).

5. Determination of Credits

The ILF Project will generate Released Credits primarily via rehabilitation of wet montane meadow habitat by filling artificial drainage ditches, removing fill, and installing bio-engineered structures (e.g., sod block and logs) to help slow runoff and more evenly disperse flows across the meadow. The ILF Project would provide functional lift by restoring high levels of functions and services including flood attenuation, water storage, water filtration, and would improve habitat quality for native plants and wildlife. The ILF Project would also improve water quality downstream in the Truckee River by reducing flow velocities, erosion, and sedimentation from the ILF Project site. We expect a gradient in the levels of functional lift across the site with more lift expected in the areas closest to the drainage ditches and less lift expected in the areas furthest from the drainage ditches. For example, baseline hydrology data from Piezometer 15-1 (Attachment 10) indicates that the area immediately adjacent to the ditch does not currently meet the minimum hydrology criterion under the USACE’s wetland definition. Therefore, the areas in close proximity to the ditches would be re-established (a higher level of lift), rather than rehabilitated. Areas further from the ditch would experience less functional lift and could be characterized as enhancement (a lower level of lift), rather than rehabilitation. However, there are no clear boundaries between these zones and delineating these three discrete areas (i.e., re-establishment, rehabilitation, and enhancement) would be extremely challenging and time consuming. From a practical standpoint we have chosen to treat the site as a single zone and to characterize the site as rehabilitation, which is intermediate between re-establishment and enhancement and thus reasonably representative of an overall average for the site.

A 2.5:1 Credit ratio has been proposed based on an assumed 40% increase in wetland functions as a result of the ILF Project. Although a CRAM assessment was completed for the site to document pre-project conditions, it is important to note that “CRAM does not measure functions, which are rates of characteristic processes or services over time,” and has a number of limitations (CWMW 2009). As stated in the *Using CRAM to Assess Wetland Projects As an Element of Regulatory and Management Programs Technical Bulletin*, “CRAM is designed to evaluate the ecological condition of a wetland in terms of its ability to support characteristic plants and animals” (CWMW 2009). CRAM was not designed to assess all wetland functions and cannot be used to assess water quality objectives, flood attenuation, and a variety of other functions. Instead, “CRAM is intended to be used to inform decisions that are made based on numerous considerations and may include other assessments in addition to CRAM” (CWMW 2009). Therefore, the ILF Project was also qualitatively assessed using the “Qualitative comparison of functions” table included in the U.S. Army Corps of Engineers South Pacific Division’s Mitigation Ratio calculator guidance document

(12501.2 SPD Regulatory Program) as well as the American Rivers Meadow Condition Scorecard (see Attachment 9).

Approximately 7.05 acres of the 11.86-acre ILF Project site parcel have been delineated as jurisdictional wetland. However, approximately 0.49 acre of the wet meadow is located within 30-feet of Brockway Road and is within a designated utility easement. As such, no Released Credits are proposed to be granted for this area and only the remaining 6.56 acres of the rehabilitated meadow are proposed to generate Released Credits (see Table 3).

Table 3. Credit determination.

Mitigation Activity	Total Acres	Proposed Credit Ratio	Multiplier	Total Credits	ILF Funding Percentage	Total ILF Released Credits
Meadow rehabilitation	6.56	2.5:1	0.5	2.62	89.0%	2.33
Total						2.33

Credits would be released according to the schedule described in Table 4.

Table 4. Credit Release schedule.

Milestone	Percentage of Total Credits Released	Number of Credits Released	Cumulative Number of Released Credits
IRT ¹ approval of the Project Development Plan and the securing of appropriate site protection.	15%	0.35	0.35
IRT approval of the as-built drawings (which shall describe in detail any minor deviation from the Project Development Plan).	25%	0.58	0.93
Attainment of the applicable year-two Performance Standards and submittal of the annual monitoring report.	15%	0.35	1.28
Attainment of the applicable year-three Performance Standards, and submittal of the annual monitoring report.	15%	0.35	1.63
Attainment of the applicable year-four Performance Standards and submittal of the annual monitoring report.	15%	0.35	1.98
Attainment of the applicable year-five Performance Standards, aquatic resource delineation and submittal of the annual monitoring report.	all remaining credits	0.35	2.33

6. Mitigation Work Plan


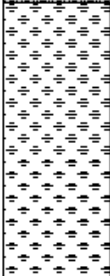

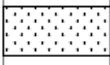
¹ “IRT” for the purposes of this Project Development Plan means the Signatory Agencies to the ILF Program Instrument that approved the Project Development Plan for the Truckee Meadows Restoration Project.

The ILF Project's design was developed to minimize potential impacts to the existing meadow functions and services while reversing, to the extent possible, the alterations to the site. The primary objective of the design is to re-establish surface water connections to the meadow to provide functional uplift to the meadow. The design maintains the connection to the existing sources of surface water (i.e., developed springs to the west and hillslope seepage) as well to as the downstream wetlands and drainage (restored under a separate funding source).

Detailed restoration plans are included as Attachment 3 and the basic design is shown in Attachment 1, Figure 7. The key design elements are:

- filling and/or blocking the drainage ditches;
- installing a stabilizing log feature;
- installing a log-weir at the meadow outflow;
- installing bio-engineered "sod blocks";
- removal of 150 cubic yards of artificial fill; and
- revegetation of disturbed areas in accordance with the 100% Design Plan Set and as summarized below.

PLANT MATRIX

Symbol	Treatment	Botanical Name	Common Name	Type / Size	Rate	Approximate Quantities
	MEADOW SEED MIX TYPE 1 (SUBMERSEED)	<i>Arnica chamissonis</i>	meadow arnica	Seed	Pure Live Seed (Pounds per Acre) 0.50	Pounds of Seed 0.5
		<i>Carex athroastachya</i>	slender beak sedge	Seed	1.50	1.6
		<i>Carex nebrascensis</i>	Nebraska sedge	Seed	1.50	1.6
		<i>Carex praegracilis</i>	field sedge	Seed	1.50	1.6
		<i>Deschampsia cespitosa</i>	tufted hair grass	Seed	0.25	0.3
		<i>Hordeum brachyantherum</i>	meadow barley	Seed	4.00	4.4
		<i>Mimulus guttatus</i>	sheep monkeyflower	Seed	0.10	0.1
		<i>Symphoricarpos patulatum</i>	western mountain aster	Seed	0.25	0.3
		<i>Potentilla gracilis</i>	northwest cinquefoil	Seed	0.25	0.3
		<i>Sidalcea oregana</i>	Oregon checkerbloom	Seed	0.50	0.5
			Total Seed Mix		1.090 acres	11.3
	MEADOW SEED MIX TYPE 2	<i>Arnica chamissonis</i>	meadow arnica	Seed	Pure Live Seed (Pounds per Acre) 0.10	Pounds of Seed 0.2
		<i>Carex praegracilis</i>	field sedge	Seed	0.50	0.9
		<i>Carex nebrascensis</i>	Nebraska sedge	Seed	0.50	0.9
		<i>Deschampsia cespitosa</i>	tufted hair grass	Seed	0.25	0.5
		<i>Elymus trachycarpus</i>	slender wheatgrass	Seed	4.00	7.4
		<i>Germ macrophyllum</i>	large leaf avens	Seed	1.00	1.9
		<i>Hordeum brachyantherum</i>	meadow barley	Seed	4.00	7.4
		<i>Penstemon rydbergii</i>	Rydberg's penstemon	Seed	0.50	0.9
		<i>Poa secunda</i>	Sandberg's bluegrass	Seed	1.00	1.9
		<i>Potentilla gracilis</i>	northwest cinquefoil	Seed	0.25	0.5
		<i>Sidalcea oregana</i>	Oregon checker bloom	Seed	0.50	0.9
		<i>Symphoricarpos patulatum</i>	western mountain aster	Seed	0.25	0.5
			Total Seed Mix		1.855 acres	23.8
	SAGESCRUB SEED MIX	<i>Artemisia tridentata</i> ssp. <i>vaseyana</i>	mountain big sagebrush	Seed	Pure Live Seed (Pounds per Acre) 0.50	Pounds of Seed 0.7
		<i>Bromus carinatus</i>	California brome grass	Seed	7.00	9.3
		<i>Elymus elymoides</i>	squirreltail	Seed	6.00	8.0
		<i>Ericameria nauseosa</i>	rubber rabbitbrush	Seed	2.00	2.7
		<i>Eriogonum umbellatum</i>	sulphur buckwheat	Seed	1.00	1.3
		<i>Lupinus argenteus</i>	silvery lupine	Seed	1.00	1.3
		<i>Lupinus grayi</i>	Sierra lupine	Seed	3.00	4.0
		<i>Penstemon speciosus</i>	royal penstemon	Seed	1.00	1.3
		<i>Poa secunda</i> ssp. <i>secunda</i>	Sandberg's bluegrass	Seed	0.50	0.7
		<i>Purshia tridentata</i>	antelope bitterbrush	Seed	1.00	1.3
		<i>Stipa occidentalis</i>	Sierra needlegrass	Seed	1.80	2.4
			Total Seed Mix		1.334 acres	33.1
	CUTTINGS	<i>Salix lasiandra</i>	Pacific willow	Cuttings	Spacing 3'-0" OC	# Cuttings 193
		<i>Salix lemmonii</i>	Lemmon's willow	Cuttings	3'-0" OC	193
		<i>Salix scouleriana</i>	Nuttall willow	Cuttings	3'-0" OC	193

The primary drainage ditch and two secondary constructed ditches will be blocked with boulders and native soil left on-site during prior construction (Attachment 3, sheet 3.1). The filled drainage ditches will be slightly crowned and will match existing grade to prevent surface flow concentration.

A ditch stabilization log (18 feet by 12-18 inches in diameter) will be installed at the top of the ditch blockage at the western (upstream) edge of the ILF Project site. The log will be nearly fully embedded in the meadow surface and set 3 feet into the adjacent meadow for stability (Attachment 3, sheet 4.0, detail 3).

A log weir structure will be installed in front of the inflow to the culvert under Brockway Road (i.e., at the outlet of the meadow; Attachment 3, sheets 3.0 and 4.0). This feature will promote slight ponding and increase inundation periods on the meadow surface. Complete restoration to a “pre-settlement” condition is not feasible in this case. However, the weir will passively improve the hydrologic conditions within the constraints of the existing infrastructure.

A series of four sod blocks will be installed across a secondary (i.e., smaller) drainage ditch from the east. This drainage ditch is not as significant as the primary ditch and does not warrant full blockage. Installation of the sod blocks will consist of installing a hand-compacted soil core across the drainage ditch (Attachment 3, sheet 4.1). Sod will be salvaged from earthwork locations and installed over the soil core and secured with two willow cuttings. The surrounding areas will be seeded with two native meadow seed mixes.

Approximately 950 square feet of the ILF Project site will be regraded near the inflow under Brockway Road to remove artificial fill in the meadow. The cut ranges from one to two feet and is a mix of soil and rock rip/rap materials. Following removal of the fill material, the area will be fine-graded to match existing topography and provide appropriate infiltration. Existing vegetation will be preserved to the maximum extent practicable.

Following all earthwork and construction activities the site will be revegetated through several methods (Attachment 3, sheet 5.1). First, salvaged sod will be installed across all ditch infill areas. Other construction areas will be broadcast seeded with two native meadow seed mixes (wet and moist). Wet meadow seed mixes will employ *Submerseed*—a clay/organic aggregate used to establish vegetation in inundated or near inundated conditions. Native willow cuttings will be installed in the area immediately surrounding the meadow outflow.

All construction shall be completed with a combination of machine and hand work to minimize impacts to the existing wetlands. Work limits are tightly constrained around restoration features and site access will be across construction protection mats to prevent soil compaction. Construction will be completed during the driest months (August to October) so that flows will be

minimal. Any surface waters in the drainage ditch will be pumped and sprayed across the surrounding meadow surface. All construction activities will be completed under the larger project's Stormwater Pollution Prevention Plan ("SWPPP") which details required Best Management Practices ("BMPs"). In general, however, the ILF Project will employ linear erosion control features (e.g., fiber rolls, pine needle wattles, silt fencing) to control sediment movement during construction. Furthermore, the meadow outlet at the culvert under Brockway Road will be blocked with temporary gravel bags to prevent the movement of sediment.

The control of non-native, invasive plant species is included in several facets of the ILF Project. First, the contractors are required to employ the BMPs on all vehicles, equipment, and materials entering the site. Furthermore, construction and maintenance crews are required to complete trainings to recognize the non-native invasive plant species that are likely to be at the site (e.g., poison hemlock and bull thistle). Prior to any soil or revegetation work, the contractor will treat all non-native invasive plant species per the recommendations of the California Invasive Plant Council. Lastly, the ILF Project's performance standards allow less than 10 percent cover by non-native invasive plant species.

7. Short-term Maintenance Plan

The goal of maintenance is to transition the Project from initial construction to attainment of performance standards, and maintenance will continue until all performance standards have been met. Maintenance during the first five years post-construction will be conducted in two phases. Maintenance and monitoring site visits will occur on a monthly basis during the growing season (May to October) for the first two years and will be the responsibility of TRWC's construction contractor(s). Maintenance will be conducted as-needed and could include treatment of non-native invasive plants, re-planting, re-seeding, and minor repairs to structures or erosional features. The Project budget (Attachment 8) includes \$18,625 for interim monitoring and maintenance. More substantial corrective actions would be noted during site visits and addressed following proper planning and obtaining necessary approvals from the IRT as well as any required permits. Any required work exceeding the designated budget would draw from the Program Contingency Sub-Account as described in Section 12.

Maintenance and monitoring in post-construction years three to five will be scaled back to annual visits by TRWC staff and contractor(s). Additional monitoring visits may be warranted during and following extreme weather or climate events and will be conducted as needed.

8. Performance Standards

Performance standards have been developed based on the South Pacific Division's (SPD) Uniform Performance Standards for Compensatory Mitigation Requirements. The ILF Project can be

characterized as rehabilitation of a wet meadow (i.e., a slope wetland) and would target a variety of objectives/functions including improved water storage/flood attenuation, water filtering and improved downstream water quality, and improved habitat for native plants and wildlife. The primary treatment is restoration of natural hydrology via filling of artificial ditches, removal of fill, and the diffusion of flows with bio-engineered structures such as logs and “sod blocks.” Performance standards that are applicable include physical, hydrologic, and flora metrics. Fauna and water quality metrics have been excluded due to the relatively small size of the ILF Project site and the inability of the ILF Project to control external factors that may affect these variables. As described in the Uniform Performance Standards document and at 33 CFR 332.5(b) performance standards should be based on a reference site where feasible. Available reference sites for non-channel wet meadows in this region are limited. Only two CRAM assessments have been entered in EcoAtlas for non-channeled wet meadows on the north side of the Tahoe Basin and both sites are highly disturbed. Most other meadows in the region are associated with stream channels (i.e., riparian meadows) and function differently from non-channeled meadows, such as the ILF Project site. The best reference site is likely the wet meadow delineated on the north side of Brockway Road labeled as WM-2 in the delineation report (Salix Consulting 2015) and depicted on Figure 8. Although this site has also experienced disturbance from nearby development it appears to be less impacted by ditching and draining compared to the ILF Project site. Additionally, this site is part of the same historical wetland complex as the ILF Project site and already has a piezometer installed (piezometer 13-04, Balance Hydrologics 2014). During initial studies (Balance Hydrologics 2014), this location generally had the highest water table of the five wetland sampling locations in the area and therefore likely has the most natural hydroperiod. This reference location also had an estimated 85% relative cover of FACW/OBL plant species during preliminary monitoring. Dominant plant species at the reference site include Baltic rush (FACW), leafy leopardbane (*Arnica chamissonis*, FACW), meadow barley (*Hordeum brachyantherum*, FACW), and sedges (*Carex* spp.).

The proposed ecological performance standards are described in detail in Table 5.

Table 5. List of performance standards and monitoring schedule for the ILF Project.

#	Performance Standard Type	Performance Standard	Applicable Portion of ILF Project Area	Target	Method	Timing/ Applicability
1	Hydrologic	Depth to water table	Rehabilitated meadow	Depth to water table at Piezometer 15-1 is \leq 125% of reference site (Piezometer 13-04) or within 12 inches of the surface for a minimum of 60 consecutive days.	Existing piezometers (13-4 and 15-1) or replacement piezometers if deemed necessary in consultation with the IRT.	Monitored continually via data loggers; applicable in Years 2-5.
2	Physical	Gullies/ditches	Entire ILF Project area	Existing gullies/ditches filled per 100% design plans and no evidence of new gullies or erosional features in all years.	Visual observation and photo documentation.	Monitored annually, each growing season (May-Oct); applicable in Years 2-5.
3	Flora	Dominance of hydrophytes	Rehabilitated meadow	Percent absolute cover of hydrophytes (OBL/FACW) \geq 75% of reference site with the exception of areas of project-related ground disturbance which are subject to standard #4.	Ocular estimate of areal cover based on CNPS Rapid Assessment Protocol (CNPS 2007) and latest version of the National Wetland Plant List indicators for the Western Mountains, Valleys, and Coast Region.	Monitored annually, each growing season (May-Oct); applicable in Years 2-5.
4	Flora	Plant recruitment	Areas of project-related ground disturbance	Percent absolute cover of native vegetation \geq 25% reference by Year 2, \geq 45% reference by Year 3, \geq 60% reference by Year 4, and \geq 75% reference by Year 5.	Ocular estimate of areal cover based on CNPS Rapid Assessment Protocol (CNPS 2007).	Monitored annually, each growing season (May-Oct); applicable in Years 2-5. Year 2: \geq 25% reference Year 3: \geq 45% reference

#	Performance Standard Type	Performance Standard	Applicable Portion of ILF Project Area	Target	Method	Timing/ Applicability
						Year 4: $\geq 60\%$ reference Year 5: $\geq 75\%$ reference
5	Flora	Invasive cover	Entire ILF Project area	<10% absolute cover of invasive species rated as “moderate” or “high” on the Cal-IPC database (cal-ipc.org/paf)	Ocular estimate of areal cover based on CNPS Rapid Assessment Protocol (CNPS 2007).	Monitored annually, each growing season (May-Oct); applicable in Years 2-5.

9. Monitoring Requirements

Maintenance and monitoring site visits will take place as described in Sections 7 and 8. At a minimum, the following data will be collected annually:

- depth to water table in rehabilitated meadow areas;
- ocular estimates of percent absolute cover of plant species in the rehabilitated meadow and in the areas of project-related ground disturbance;
- ocular estimates of percent absolute cover of invasive species and a map showing invasive species locations (if present);
- documentation of any erosion/gullying, conifer encroachment, or any other issues that warrant management actions;
- documentation of any trash or trespass; and,
- photo-documentation at established long-term monitoring points.

A post-restoration CRAM assessment using the Slope Wetlands Module for non-channeled wetlands and an aquatic resource delineation will also be completed during Year 5 to document pre- and post-project condition. Annual reports during the Interim Monitoring Period will be submitted by December 31st of each year. Annual reports will be submitted to the IRT electronically via email and uploaded to RIBITS.

10. Long-Term Management Plan

The site will be owned and maintained by TDLT in accordance with the LTMP included as Attachment 7, and incorporated herein by reference.

The long-term funding for management and protection of the ILF Project site are governed by the terms of the LTMP, and associated Long-Term Funding Agreement, which is Attachment C to the LTMP.

11. Adaptive Management Plan

While it is not anticipated that major management actions will be needed, an objective of the LTMP is to conduct monitoring to identify any issues that arise, and use adaptive management to determine what actions might be appropriate. TDLT has the knowledge, training, and experience to accomplish monitoring responsibilities.

Adaptive management means an approach to natural resource management which incorporates changes to management practices, including corrective actions as determined to be appropriate by the IRT in discussion with the land manager (i.e., TDLT). Adaptive management includes those

activities necessary to address the effects of climate change, fire, flood, or other natural events, force majeure, etc. Before considering any adaptive management changes to the long-term management plan, the IRT will consider whether such actions will help ensure the continued viability of ILF Project Site's biological resources.

Funding for adaptive management during the Interim Management Period would come from the performance security as described in Section 12 (i.e., the Program Contingency Sub-Account) if needed. Funding for adaptive management during the Long-Term Management Period would come from the Long-Term Management and Maintenance Fund in accordance with the Long-Term Management Plan.

12. Financial Assurances

TRWC has implemented 60 successful stream and meadow restoration projects including Coldstream Canyon, Perazzo Meadow, Middle Martis, Dry Creek, and Davies-Merrill Creeks. TRWC has long-history of effective collaboration with project partners, stakeholders, funders, contractors, and regulatory agencies to ensure the long-term success of projects. Based on this history of past performance there is a high probability of success for the rehabilitation of the wet montane habitat at the project site.

The ILF Program also incorporates the following features to provide financial assurances that the Program Sponsor will perform the Compensatory Mitigation for Advance Credits Transferred:

- ILF projects will not be undertaken until all funding has been secured to complete construction and monitoring of the ILF project. Funds held in the applicable Service Area Sub-Account for an approved ILF project, as set forth in the ILF project budget, will be obligated to the ILF project and disbursed after work has been completed in accordance with the agreed upon payment schedule.
- Funds set aside in the Program Contingency Sub-Account (currently over \$1.6 million unobligated) may be used for contingencies and Remedial Actions for an ILF project, ensuring the Performance Standards are achieved as proposed in the Project Development Plan. Specifically, consistent with the South Pacific Division's Mitigation Bank Enabling Instrument (BEI) Template, the amount designated as a performance security will be an amount equal to 20% of the estimated construction cost of the ILF Project until such time as all Performance Standards are met.

With respect to this ILF Project, NFWF proposes to satisfy the requirement for financial assurances specifically with reference to (1) the deposit of \$225,000.00 in the ILF Program's Sub-Account for the Tahoe Service Area resulting from the authorized sale of 1.50 Advance Credits in the Tahoe Service Area, and the existence of these funds in the Sub-Account for the Tahoe Service Area, as

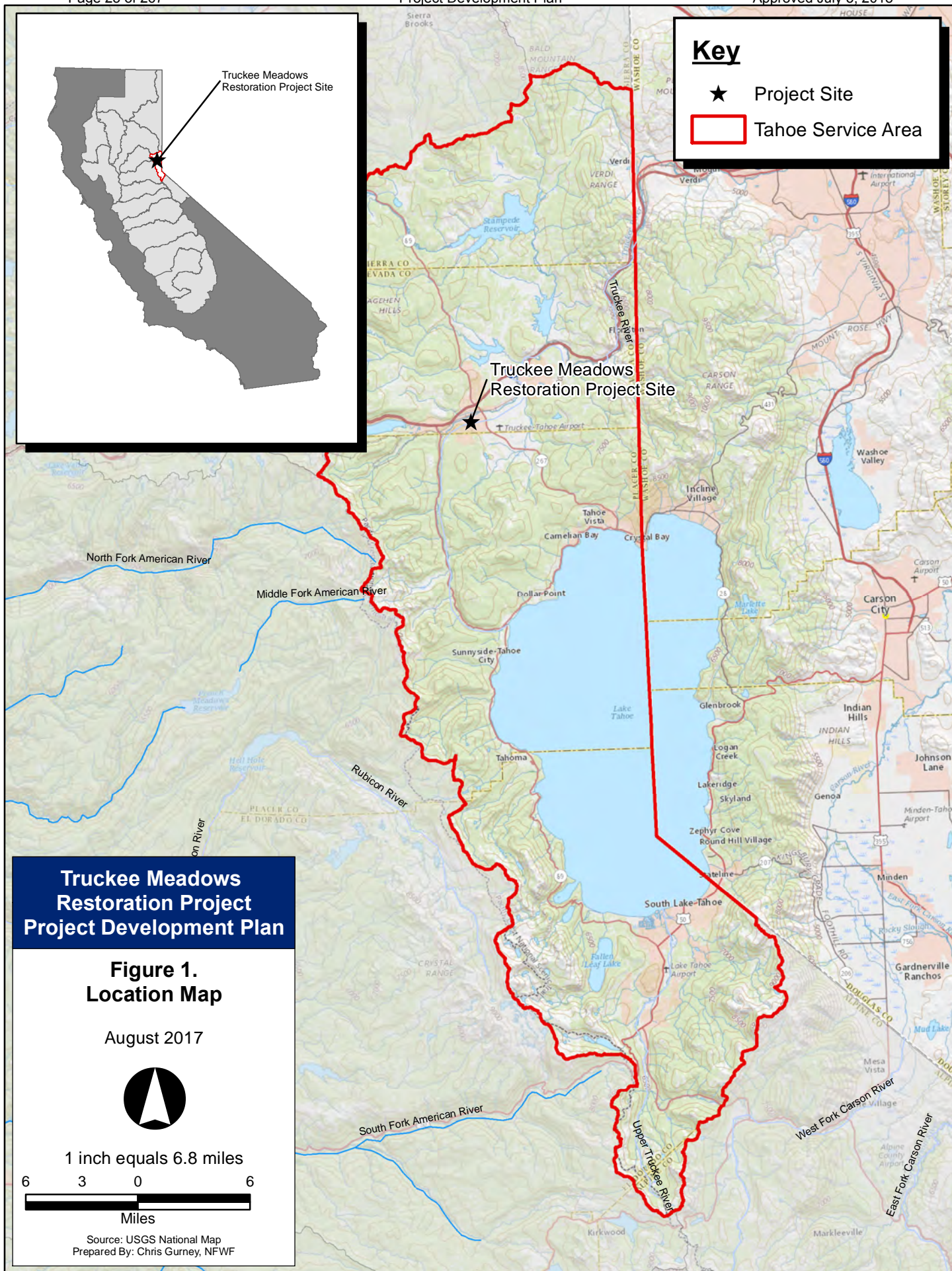
of the date of this Project Development Plan, for the ILF Project, as compared to the ILF Project's budget of \$224,915.70; and (2) the existence of over \$1,600,000 unobligated in the ILF Program's Program Contingency Sub-Account, as of the date of this Project Development Plan, of which \$34,975.00 will be designated (and therefore deemed obligated until drawn or released) as a "performance security" for this ILF Project until such time as all Performance Standards are met. This amount is equal to 20% of the estimated construction cost of the ILF Project, which is estimated to be \$174,875.00.

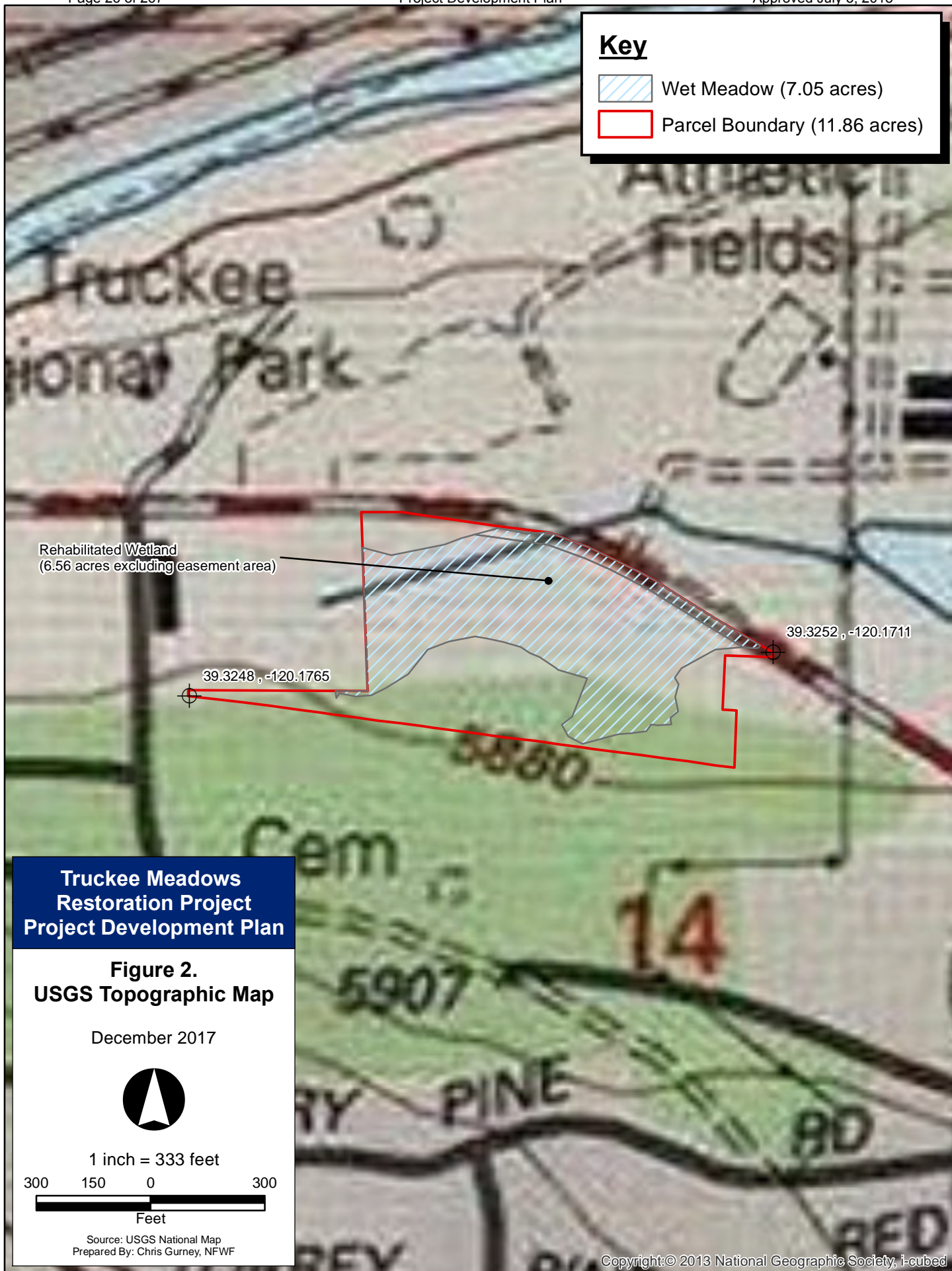
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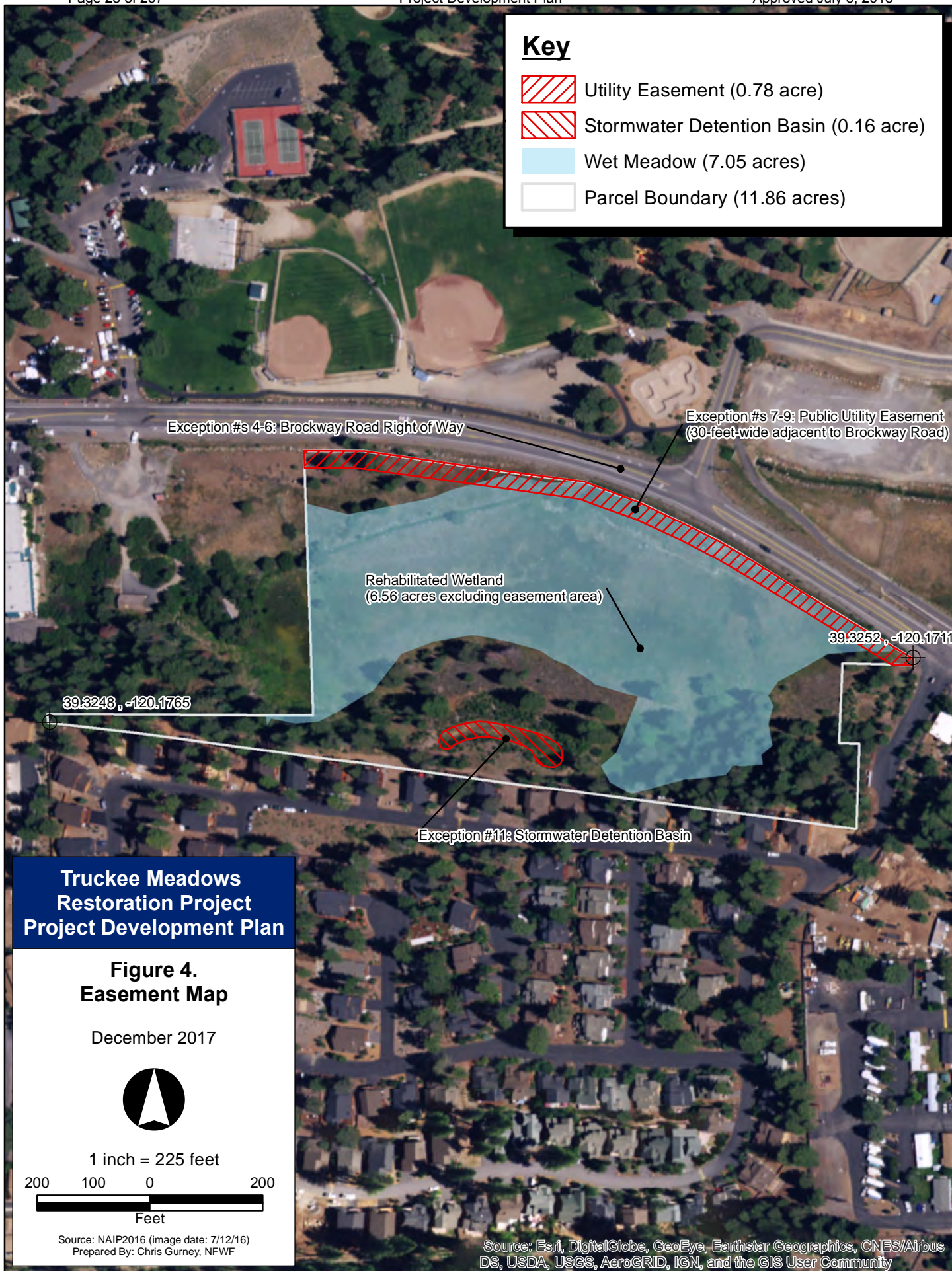
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Attachment 1. ILF Project Figures

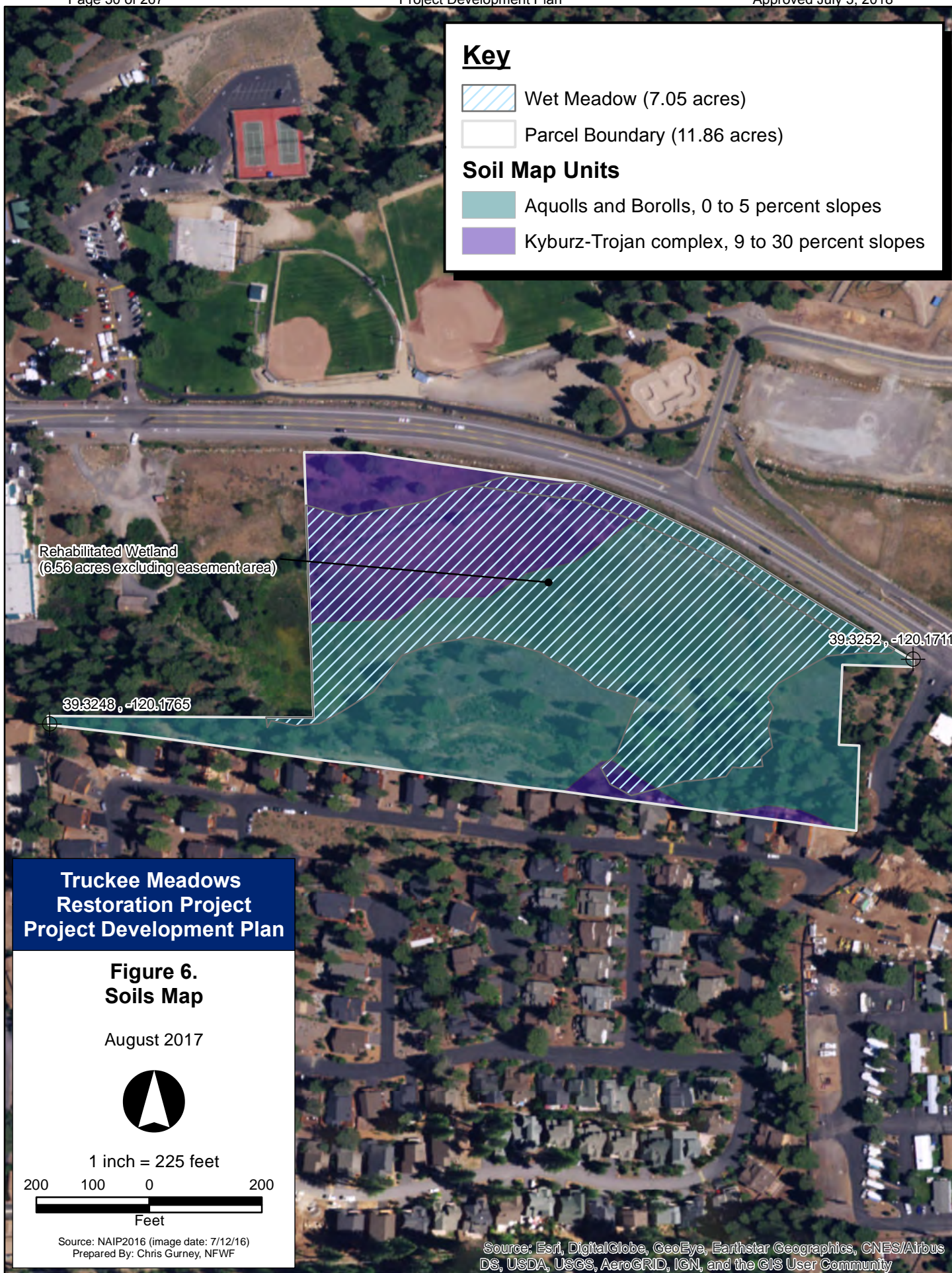


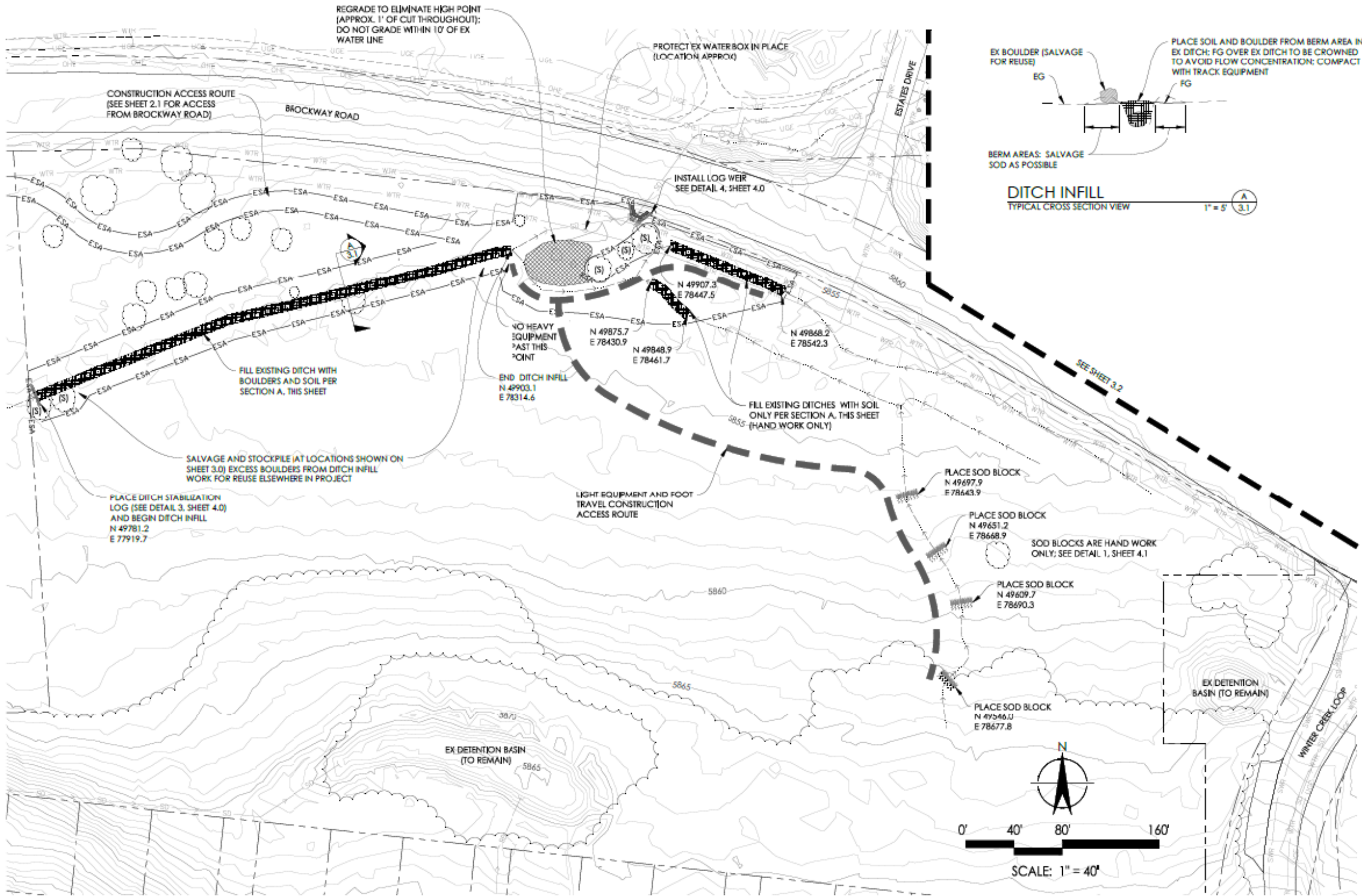












Truckee Meadows
Restoration Project
Project Development Plan

Figure 7.
Restoration Plan

December 2017



Source: Balance Hydrologics

Key

- Piezometer Location
- Reference Site Wet Meadow
- Rehabilitated Wet Meadow (7.05 acres)
- Project Site (11.86 acres)

Truckee River

Project Site Piezometer (15-1)

Reference Site Piezometer (13-4)

39.3252, -120.1711

39.3248, -120.1765

Truckee Meadows Restoration Project Project Development Plan

**Figure 8.
Reference Site Location**

May 2018



1 inch = 333 feet



Source: NAIP2016 (image date: 7/12/16)
Prepared By: Chris Gurney, NFWF

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Attachment 2. Conceptual Design Basis (Balance Hydrologics 2014)

Truckee Wetlands Restoration Partnership Conceptual Design Basis Report

A report Prepared for:
Truckee River Watershed Council

March 14, 2014



A report prepared for:

March 24, 2014
Truckee River Watershed Council
Attention: Jeannette Halderman
10418 Donner Pass Road
Truckee, California, 96161
(530) 550-8760
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by

David Shaw, P.G.
Principal Hydrologist / Geologist

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APPENDICES

Appendix A. Conceptual Wetland Restoration Design

Appendix B. Test Pit Logs

Appendix C. Site Observer Log

1 INTRODUCTION

1.1 Purpose

This report presents the results of our initial field studies and hydrologic analyses of the Hilltop-Ponderosa Wetlands Complex in the Town of Truckee, California, and accompanies conceptual alternatives developed for restoration of portions of the wetland complex (**Appendix A**). The conceptual alternatives presented are focused on restoring wet meadow processes and functions and maintaining recreational and other existing land uses. The mechanism that has been established to do this is termed the 'Truckee Wetlands Restoration Partnership' (TWRP), and includes public and private landowners and agencies that manage infrastructure along Brockway Road Corridor in the Town of Truckee. Balance Hydrologics' (Balance) scope of work on this project includes a comprehensive site assessment, followed by development of a conceptual restoration plan in conjunction with Landscape Architects at L&P DesignWorks.

Earlier work was completed by Balance for the TWRP and summarized in a November 2010 letter report to Lisa Wallace (Shaw, 2010). These investigations concluded that the Hilltop-Ponderosa area was once a single connected wetland complex that discharged to the Truckee River, but has since been impacted by land uses and urban development within the Town of Truckee. Potential restoration strategies and alternatives were identified for specific areas, as well as additional focused studies for particular areas. This report outlines the findings of a more focused assessment and presents conceptual restoration designs developed through a stakeholder planning and review process. The proposed design concept is suitable for presentation to and discussion among the landowners and project partners; however, this report should always accompany the proposed designs when they are distributed.

1.2 Goals and Objectives

The goal of the hydrology and soils investigation is to evaluate the feasibility of restoring wetland and meadow processes and functions in this location. Specific restoration goals and objectives include the following:

- Restore hydrologic and ecologic continuity across the Hilltop-Ponderosa Wetlands Complex with connectivity to the Truckee River;
- Restore wet meadow conditions to impacted areas;
- Maintain hydrologic support to existing functional wetland areas;
- Maintain water supply for irrigation of the Ponderosa Golf Course Irrigation Pond
- Remove or modify historical features or watershed disturbances that have re-routed dominant streamflow patterns;
- Restore flow and saturation to previously abandoned wet meadows and wetland areas;
- Provide a sustainable trail network based on existing patterns of use;

- Engage and educate the community about local wetland resources through improved aesthetics, access and interpretive features

To evaluate the feasibility of achieving these objectives, we completed an initial assessment and detailed evaluation of site hydrology. This has included:

- An evaluation of soils and water-holding properties of soils,
- Estimates of water volumes and peak flow rates that can be expected, and
- Surface water and groundwater monitoring to evaluate the hydrologic support that may be available to seasonal wetlands and swales into the spring and early summer; the program also serves as an important site baseline for comparison against future post-project conditions.

1.3 General Technical Approach and Work Conducted

Balance's scope of work on this project includes a comprehensive site assessment, followed by development of restoration alternatives with the Truckee River Watershed Council and TWRP and selection of a preferred alternative. This report outlines the findings of our site assessment and presents conceptual restoration designs developed through a stakeholder planning and review process.

Including initial work completed in 2010, the following site-specific data, reports, and/or information have been reviewed for this project:

- Soil survey of the Tahoe National Forest area (USDA USFS, 1993);
- Geologic mapping of the Lake Tahoe Basin (Saucedo and others, 2005);
- A geotechnical investigation completed for the Hilltop Master Plan (Holdrege & Kull, 2004);
- A geotechnical investigation report for the Brockway Road Trail Project (Lumos and Associates, 2010)
- Detailed topography (1-ft contours) based on aerial photogrammetry obtained by Lumos Engineers for the Town of Truckee in the vicinity of the Brockway Trail;
- Detailed topography (1-ft contours) of the project site, based on aerial LiDAR surveys obtained by the Truckee Donner Public Utility District (TDPUD);
- Final plans for the Brockway Road Trail Project (Lumos and Associates, 2013)
- Wetland delineations covering portions of the wetland complex and surrounding areas (Garcia and Associates, 2002; Glazner, 2002; Merron, 2002; Glazner and Anderson, 2003; Juncosa, 2003; Juncosa, 2005; JBR Environmental Consultants, 2009; and TDPUD, 2010);
- Historical maps, aerial photographs, and anecdotal information provided by members of the Truckee-Donner Historical Society; and

- Golf Course Irrigation Pond water usage information provided by the Truckee Donner Recreation and Park District;

On December 13, 2012, Balance initiated a surface water- and groundwater-monitoring program by excavating several backhoe test pits and installing piezometers (shallow monitoring wells) in the pits. Continuous water level recorders were installed in each piezometer, as well as in the Ponderosa Golf Course Irrigation Pond and Irrigation Pond inflow and outflow channels. As initial restoration concepts and potential design elements were discussed among the project team, our field program and modeling scope evolved to include evaluations of watershed hydrology and peak flows according to Town of Truckee Drainage Standards. Additionally, a water balance-based model was developed in order to estimate the timing and volume of water at the site on a seasonal basis, so that the duration and magnitude of seasonal low flows, irrigation supply, and hydrologic support for downstream wetlands under a range of seasonal conditions could be evaluated.

The combined monitoring and modeling efforts allow for multiple lines of evidence that can be used in the sizing and design of channel and wetland restoration elements.

2 SETTING

2.1 Hydrography and Climate

Comprehensive site descriptions and the historical setting has been provided in an earlier Balance Hydrologics letter report (Shaw, 2010), and are briefly summarized here in order to provide context for the attached restoration plan alternatives.

The Hilltop-Ponderosa Wetland Complex is located along Brockway Road in the Town of Truckee on the south side of the Truckee River, as shown in **Figure 1**. The meadow and terrace is bounded on the south side by uplands and residential areas and on the north side by Brockway Road, Truckee Regional Park, residential housing, and a steep escarpment above the Truckee River. Surface water originates from developed springs and hillslope seeps, and precipitation, and flows from west to east across a gently sloping terrace ranging in elevation from 5,880 feet near the Hilltop Area to approximately 5,850 feet near the Ponderosa Golf Course. The Golf Course is managed by the Truckee Donner Recreation and Park District (TDRPD), which utilizes a shallow pond (the "Irrigation Pond") located at the east end of the terrace for irrigation purposes, supplementing spring-fed inflows with groundwater pumped from a nearby well. The Irrigation Pond drains through two outflow channels, across a meadow, to a relatively steep channel that routes flows north through a residential area and the Town of Truckee Corporation Yard, before discharging into the Truckee River at an elevation of 5,750 feet.

Mean annual precipitation is approximately 30 to 34 inches at this site, as recorded at the U.S. Forest Service Truckee Ranger Station in Truckee and NRCS SNOTEL Station "Truckee #2" near Bald Mountain. As is typical of the region, most precipitation falls during the winter months as snow and rain, with occasional summer thunderstorms. The contributing watershed area to this drainage is difficult to discern due to drainage modifications and undocumented storm drain configurations. To conservatively estimate peak flows at the Golf Course Irrigation Pond and Brockway Road Crossings, we have measured and established the contributing watershed area to be approximately 313 acres (0.49 square miles).

2.2 Published Geology and Soils Information

BEDROCK GEOLOGY

The Hilltop-Ponderosa Wetland Complex occupies a terrace mapped by the USDA USFS (1993) as old glacial outwash and described by Saucedo and others (2005) as poorly-sorted boulder and cobble gravel, sand and silt. These deposits overlie and are adjacent to the bedrock that forms the hills immediately south of the wetland terrace. Bedrock consists of both Prosser Creek alluvium — older and indurated (cemented) sediments ranging in size from lake bed clays to boulders — as well as olivine-latitude volcanic flows which erupted from Bald Mountain to the south. There are a number of seeps and springs along the toe of the hillside to the south, perhaps emanating from the Prosser Creek alluvium, the interbedded alluvium and volcanics, or both sources. At least two of the springs have been developed for water supply, and the Tahoe Donner Public Utility District (TDPUD) currently operates a production well near one of the

springs. The elevation of the wet meadow and terrace appears to be controlled by bedrock and a mapped fault at the west end of the Hilltop Area, and by volcanic bedrock, which outcrops at the east (downstream) end of the study area just north of Estates Drive.

PUBLISHED SOILS INFORMATION

The regional soil survey (USDA USFS, 1993) shows one continuous wetland soil unit (Aquolls-Borolls) extending from near Hilltop Road to the Ponderosa Golf Course, indicating that this area was historically a single continuous wetland (see Figure 1). The Aquolls and Borolls units are very poorly drained soils which form in valley floors, swales, and drainages and consist of stratified coarse sand to clay. These soils are typically associated with wet meadow vegetation that can tolerate a high groundwater table during much of the year, primarily rushes (*Carex* and *Juncus* species), with some alder, willow, and aspen trees. The soil survey designates Aquolls-Borolls as Hydrologic Soil Group D, soils with very low infiltration rates, which may support areas of ponded water in topographic depressions. The surrounding Kyburz-Trojan soils complex is described as being relatively shallow, with depth to bedrock commonly at 34 to 38 inches, relatively low infiltration rates and rapid runoff.

Downstream, soils of the lowest terrace surface and the Truckee River floodplain are mapped as part of the Inville-Riverwash-Aquolls complex, a relatively heterogeneous mix of glacial outwash (Inville series), recent alluvium (Riverwash), and marshes (Aquolls). Consistent with the inclusion of Aquolls, a number of existing wetlands are evident through aerial photography interpretation and field observations, most notably between the Truckee River and the west end of the Tahoe-Truckee Sanitation Agency (T-TSA) ponds, and along the south bank of the Truckee River, at a point just east of the Highway 267 overpass (see Figure 1).

3 SITE INVESTIGATION

3.1 Methods

SOILS ASSESSMENT

Existing studies and published mapping do not provide information on the alluvial deposits and soil properties at a suitable resolution for wetland and channel restoration planning and design. Therefore, a site investigation was executed prior to and during the design period.

Using a backhoe, a number of trenches were excavated on December 13, 2012 to provide more accurate detail regarding soil types across the site. Three trenches (12-01 through 12-03) were excavated using a backhoe and 24-inch bucket to a depth ranging from 3.2 to 6.3 feet, as dictated by refusal in boulders and/or bedrock. In more sensitive wetland and saturated areas, borings were hand-augured to approximately 3 feet on March 5, 2013. Following review of initial groundwater monitoring data from the early portion of water year 2013¹ and development of preliminary design alternatives, we returned to the site on March 5, 2013 and hand-augured additional shallow borings. Boring and Test Pit logs are presented in **Appendix B** and locations are shown as piezometers in **Figure 2**.

GROUNDWATER AND SURFACE WATER INVESTIGATIONS

Piezometers were installed in all backhoe-excavated trenches with screened intervals as indicated in test pit logs included in **Appendix B**. The annular space around the screen and 0.5- to 1-foot above the screen was filled with 30-mesh Monterey sand and the remaining portion of the test pit was backfilled and compacted with native soil. Native soil was also mounded around the piezometer head to prevent surface water ponding or preferential infiltration at the location of the piezometer. Piezometers generally have a 1- to 2-foot 'stickup' above the mound surface and are secured with a compression cap. All piezometers were instrumented with near-continuous water-level recorders and calibrated with periodic manual measurements. Depth-to-water measurements and specific conductance readings were carried out for calibration of the water level records.

Upon project initiation, the Irrigation Pond inflows and outflows, as well as the pond itself, were instrumented with a staff plate and near-continuous water-level recorder to monitor water levels through winter and spring snowmelt, and to relate pond drawdown to water table declines and fluctuations into spring and summer 2013. The staff plate consists of a metal graduated plate mounted on a 2x4, and a 2-inch slotted PVC pipe houses a submersible water level recorder.

¹ The term 'water year 2013' refers to the period from October 1, 2012 to September 30, 2013.

WATER BALANCE MODELING

We developed a pre-project hydrologic response model in order to characterize the hydrologic effects of restoring meadows in this area. In particular, the model allows us to estimate the magnitude, duration and frequency of the flows that contribute water to the Irrigation Pond, where channel and wetland re-alignments are being considered. The hydrology model also allows us to evaluate the water supply available for irrigation and for release to downstream areas.

PEAK-FLOW MODELING

In addition to the baseflow calculations, we developed an event-based model to estimate peak runoff values for a design storm, as based on Town of Truckee Engineering Standards, which call for use of the Rational Method for watershed areas up to 320 acres. The Town provides maps and tables necessary to calculate pre-defined precipitation depths and infiltration rates. Due to the significant unknowns in watershed storm drainage conditions and total watershed area, along with the variable influences of snowmelt, this calculation is made on a preliminary basis, in order to evaluate existing culverts and channel and culvert sizing considerations.

3.5 Findings

ANTECEDENT CONDITIONS DURING THE STUDY

Total precipitation during the early part of water year 2013, prior to initiation of the on-site monitoring program, was significantly above average, with 20.3 inches of precipitation recorded from October through December at the Truckee #2 SNOTEL site (Table 1). The remainder of the monitoring period, from January through September, 2013, however, was extremely dry, with 6.03 inches of precipitation. Several summer thunderstorms occurred during 2013, but limited to no precipitation was recorded at nearby rainfall gages.

Based on this intra-annual precipitation distribution, observed springflow to the site is considered to be representative of short-term dry conditions. Recent and long-term groundwater monitoring conducted by the California Department of Water Resources (DWR), however, indicates limited or no decline in regional groundwater levels during water year 2013, indicating that groundwater conditions during the study may also be reflective of long-term average conditions. In other words, early-season snowpack and recharge appears to have maintained groundwater conditions and spring flows at nearly-normal conditions.

SOILS

Soils encountered at the site were found to be dominated by brown to dark-brown sandy and gravelly clays, with water flowing freely from cobbly and gravelly strata overlying clay. Depth to bedrock ranges from roughly 3 to 6 feet, with the shallowest bedrock found at the northeastern end of the terrace (Appendix B). These observations are consistent with those of Lumos Engineers (2010) and published geologic maps of the area, and reflect a relatively thin veneer of glacial outwash overlying a bedrock terrace or 'strath terrace.' As such, wetlands on the terrace

surface appear to be readily maintained by saturation of the thin, clay-rich overburden, with downward percolation limited by bedrock and lateral flow limited by low slopes and fine-grained soils.

GROUNDWATER AND SURFACE WATER OBSERVATIONS

All groundwater and surface water observations are compiled in the site Observer Logs, presented as **Appendix C**.

Ponderosa Golf Course Irrigation Pond

Figure 3 shows the Ponderosa golf Course Irrigation Pond hydrology during the monitoring period. Peak instantaneous flow for the period of record² was approximately 23.5 cfs in mid-January. As is typical of spring-supported systems, pond inflow remained fairly constant, with baseflows ranging from approximately 0.04 cubic feet per second (cfs; 18 gpm) during a cold snap in January to 0.36 cfs during peak snowmelt. Inflows during the summer months remained steady, fluctuating between 0.15 and 0.31 cfs (67 to 139 gpm) suggesting that the spring-fed ditch is perennial and the primary hydrologic support for the Wetlands Complex and Irrigation Pond

Pond outflow was mostly steady during the winter months and roughly equal to pond inflow until late April, when air temperatures rose and golf course irrigation apparently began. Pond water levels and outflow fluctuated after this period, with pond stage peaking during cool periods around 5,849.8 feet and falling to a low of approximately 5,848.4 feet during hot periods.

Pond outflow ceased in late June. Limited or no flow continued past the terrace to downstream portions of the project site.

Groundwater levels

The site was largely saturated during soils investigations and initiation of the monitoring program. **Figure 4** shows that groundwater levels were initially close to the ground surface, with maximum depth to water found in upland areas with artificial fill on the north side of the irrigation pond (Piezometer 12-02). In areas where fill was encountered, groundwater levels appeared to be maintained at or above the clay-rich native soils, at the bottom of the artificial fill layers. Relatively undisturbed meadow areas (Figure 2, Piezometer 12-03) remained saturated at the ground surface through most of the winter months.

Upon initiation of snowmelt and warmer temperatures in mid-March, groundwater levels began to decline across the meadow, while the Irrigation Pond remained full and

² Water year 2013 peak flow likely occurred on November 30 or December 2, 2012, prior to initiating the monitoring program.

spilling. The rates of water table decline increased significantly once water levels in the irrigation pond began to fall and surface outflows declined significantly. **Figure 5** shows this increased rate of decline beginning around April 18, 2013. Rapid declines in the Irrigation Pond water level are assumed to be a result of pumping for irrigation use, with relatively rapid recovery assumed to be from pond inflows. It is also possible that recovery was augmented by well pumping, but spring-supported appear to have been sufficient to support pond filling alone. Groundwater levels do not respond to these rapid fluctuations, reflecting the low-transmissivity nature of the soils on site.

Figure 6 shows groundwater contours and inferred groundwater flow directions during winter and summer conditions, and illustrates the influence of the Irrigation pond on local groundwater conditions. During the winter and early spring, the site is largely saturated, with groundwater flow directions mostly parallel to the axis of the meadow. Influences of the Irrigation Pond inflow ditch are apparent in winter and early spring, when the ditch conveys water across the site, draining or bypassing abandoned portions of the meadow. By summer, the ditch and irrigation pond bring water to the meadow, forming a groundwater mound above surrounding areas. The clayey and low-transmissivity nature of soils on the site maintain this mound at the ditch and pond, with very little leakage to adjacent areas.

WATER BALANCE MODELING

In order to evaluate how irrigation demand relates to meadow hydrology, as well as the potential to restore hydrologic and ecological continuity across the meadow and to the Truckee River, we have developed a water balance-based model of the pond. The governing equation of the water balance employed in this study is shown below (Gupta, 1995):

$$\Delta V = Q_{in,S} + P - E - Q_{out,S} - Q_{out,G} - Q_{out,G}$$

where:

ΔV	=	change in volume of water
$Q_{in,S}$	=	surface water inflow
P	=	direct precipitation
E	=	evaporation
$Q_{out,S}$	=	surface water outflow
$Q_{out,G}$	=	subsurface water outflow
$Q_{out,G}$	=	subsurface water outflow

This equation was applied to the pond on a monthly basis, with volumes expressed as average monthly flow rates. Surface water inflow was measured just upstream of the irrigation pond, and surface outflow was measured in the two outflow ditches (Figure 2). Direct precipitation is based on records maintained by the U.S. Forest Service for the Truckee Ranger Station, as reported by the California Data Exchange Center (CDEC station TKE). Evaporation is based on work conducted by the Desert Research Institute for lakes in the Middle Truckee River watershed (Huntington and McEvoy, 2011), and are

reported to be on the order of 0.2 feet in April, rising to around 0.6 feet per month in August (Huntington and McEvoy, 2011), or 4,300 to 14,000 gpd (2 to 6 gpm) across the 1.3-acre pond. Subsurface inflows and outflows are assumed to be equal and offsetting during the winter months, and negligible during the summer months, as indicated by groundwater monitoring data.

Monthly water balance calculations are summarized in **Table 1**, which includes monthly estimates of pond 'surplus' or 'deficit.' When a surplus is shown, pond inflows are greater than outflows, and when a deficit is shown, pond outflows are greater than inflows. Based on the field data collected, outflows exceed inflows during the winter months, and inflows exceed surface outflow through the summer months due to irrigation use. Irrigation use is reported by TDRPD to be on the order of 120,000 gallons per day, 6 days per week. Inflows from well pumping are not tracked and therefore not accounted for in the model, so surpluses during the summer irrigation season in the absence of outflows can be assumed to be the result of well pumping.

PEAK FLOW MODELING

Peak flow calculations were carried out according to Town of Truckee Design Standards, and indicate the 100-year flow to be approximately 430 cubic feet per second (cfs). The 10-year flow is estimated to be roughly 295 cfs. These are considered to be conservative estimates based on uncertain watershed areas, and should be refined prior to designing for infrastructure protection. The 40-foot long corrugated metal culvert (CMP) under Estates Drive is currently configured with a negative slope (i.e. the pipe exit is higher than the pipe entrance). In addition, the capacity of the culvert appears to be significantly limited. As a result, water backs up between the Estates Drive culvert and Brockway Road.

4 CONCEPTUAL RESTORATION DESIGN

4.1 Assessment Conclusions and Design Implications

Based on this site assessment, we conclude the following:

- The current meadow form appears to be dominated by a bedrock or 'strath' terrace overlain by a thin veneer of glacial outwash. Meadow hydrology is seasonal, with groundwater levels falling to more than 5 feet below the ground surface in many locations by mid-July. Late summer groundwater conditions are supported primarily by the developed springs and irrigation ditches with limited influence from the Irrigation Pond. Re-establishing surface water connections across the meadow, ditch, and pond is likely to re-establish wetland conditions across impacted meadow areas.
- Wetland restoration efforts should therefore utilize surface flow as the primary mechanism to distribute water across the meadow.
- Soil stratigraphy in the Wetland Terrace Complex consists of historical wetland soils (silty loam) overlying clays, with artificial fill present in portions of the site, north of the Irrigation Pond and south of Estates Drive. Removal of fill and exposure of historical wetland soils is anticipated to be a suitable wetland restoration approach in these areas.
- Water year 2013 has been characterized by very little precipitation after December. Results of the groundwater and surface-water monitoring program, however, indicate that spring-supported flows to the meadow and Irrigation Pond remain fairly steady, on the order of 0.2 to 0.3 cfs during the summer months. This supply may decline during very dry periods.
- Groundwater monitoring in the vicinity of the Irrigation Pond reflects a disturbed meadow system. During the winter months, saturation is relatively widespread, except for areas bypassed or drained by ditches, most notably west of the Irrigation Pond. During the summer months, the ditch and the pond hold water at elevations above the surrounding shallow groundwater table.
- Fluctuating water levels in the pond do not readily transmit across the meadow; therefore, restored meadow hydrology is not likely to be adversely affected by continued operation and short-term water level fluctuations in the Irrigation Pond.
- Water balance calculations reflect a condition in which pond inflows were on the order of 150,000 gpd during the irrigation season, sufficient to meet the golf course irrigation demand of 120,000 gpd. After consideration of evaporation from the pond, surplus water of approximately 10-15 gpm is available to support

downstream hydrology, rather than the roughly 100 gpm that would be available without irrigation demands.

4.2 Design Layout and Elements

Appendix A includes conceptual design drawings for four areas.

TDLT PARCEL (SOUTHWEST OF BROCKWAY ROAD, SHEET L-1.1)

The Truckee Donner Land Trust Parcel is located southwest of Brockway Road and north of the Winter Creek Subdivision, where the wetland crosses the terrace. The primary feature on this site is a constructed ditch that conveys water from developed springs, across Brockway Road to the Irrigation Pond. In order to reverse impacts associated with this feature, we propose blocking the ditch to disperse flows across the meadow surface and creating a formal walking path along the margin of the wetland and connects with the Palisades Drive commercial area.

Immediately upstream of the Brockway Road crossing, additional ditches are currently in place to convey water to the culverts under Brockway Road and Estates Drive. These culverts are undersized and with a negative slope (i.e. in the upstream direction). As a result, water collects on the TDLT property in lower portions toward the center of the meadow, maintaining saturation and ponding in the wetland. Conceptual restoration plans include an alternative culvert location under Brockway Road that would eliminate the need for the two culverts and more effectively convey water down the meadow (shown in Appendix A, Sheet L-1.2). Potential benefits of a culvert in this location are limited to effective draining of the meadow, while potential impacts include wetland dewatering. Therefore, in keeping with the objective of limiting disturbance to existing functional ecosystems, we do not recommend pursuing this alternative culvert location as a design element, due to the alterations to meadow hydrology that may result on the upstream side of the road.

PONDEROSA GOLF COURSE IRRIGATION POND (BETWEEN BROCKWAY ROAD AND ESTATES DRIVE, SHEET L-1.2)

The Irrigation Pond inflow ditch and adjacent areas are among the most heavily disturbed areas of the historical Hilltop-Ponderosa Wet Meadow Complex. Meadow restoration in this area will consist of filling the irrigation ditch to disperse flows across the former meadow surface. The meadow surface will be restored and expanded through relocation of parking areas, and the meadow will transition gradually into the irrigation pond. The pond will be reconfigured with more gradual side slopes and deeper central areas to increase storage volume. Removal of the existing chain link fence around the pond and establishment of formal trails will provide access and a park-like setting for nearby residents while limiting multiple informal access points and haphazard trail development.

CHANNELS AND SWALES TO THE TRUCKEE RIVER (NORTH OF ESTATES DRIVE, SHEETS L-1.3 AND L-1.4)

When outflow from the Irrigation Pond is sufficient for water to leave the terrace and flow toward the Truckee River, water first passes under Estates Drive, flows across a

maintenance road before flowing into a detention basin upslope of the former Town of Truckee Corporation Yard. Both the road crossing and the detention basin should be modified to better accommodate flows, and eliminate overflows into basins operated by T-TSA. Proposed modifications include installation of culverts under the maintenance road to convey flows from upstream swales to the detention basins. The detention basin will operate such that flows will rise and drain using a riser pipe. The pipe will outfall to a restored swale and riparian corridor through the former corporation yard, replacing the existing ditch and culvert system.

Downstream, given the existing infrastructure and need to protect the T-TSA basins, we anticipate utilizing existing culverts and pipes to convey flows down the embankment from the corporation yard to the Truckee River floodplain. An existing concrete ditch which receives flow from these culverts and crosses the floodplain will be removed. In its place, flow dispersal log and rock structures will be designed to spread water on the floodplain surface.

4.3 Design Criteria

CRITICAL ELEVATIONS FOR DESIGN

The conceptual alternatives presented in Appendix A intend to maintain and protect existing infrastructure associated with Brockway Road, Ponderosa Golf Course, and adjacent properties. Upstream project limits and project details are selected based on this existing infrastructure, with constraints imposed by the Brockway Road culvert, the Estates Drive culvert, the Irrigation Pond, and meadow elevations below the golf course. Finally, we identified existing infrastructure and culverts in the vicinity of the former Town of Truckee Corporation Yard, the Legacy Trail, and the Truckee River to guide the development of channel restoration plans between the Irrigation Pond and the Truckee River. Elevations for these features have not been surveyed, but provide the basis for design in areas immediately upstream and downstream.

HYDROLOGIC SUPPORT FOR EXISTING IRRIGATION USE AND DOWNSTREAM WETLANDS

The water balance analysis described in Section 3 of this report has been carried out with the goal of understanding how wetland hydrology is affected by use of the pond for irrigation, and vice versa. We have also used the model to evaluate the potential for increased evaporation and evapotranspirative demand that may result from restoring the meadow and increasing wetland saturation and ponding. Conceptual restoration plans include a roughly 3-fold increase in saturated or ponded areas, and may result in an additional 7 to 16 gpm of demand on the springflow source. As such, the volume of water available to flow to downstream areas may be reduced by approximately 10 percent. This reduction would likely be offset by increased water storage in currently dewatered portions of the meadow, with slow release of water later into the year. As a result, we expect no discernable changes in flow rates to downstream areas during the summer months.

Well yields from the Golf Course Well have not been evaluated as part of this study, but if well pumping is a viable alternative to support irrigation demand, increased

evapotranspiration rates may be easily offset. Increased use of alternative water sources would also aid in the restoration of flows to support downstream areas.

4.4 Design Constraints

Identification of site-specific constraints is a critical step to help establish restoration feasibility and a basis for design. Based on the hydrologic assessment outlined above, we have identified the following site constraints. The proposed conceptual plan attempts to address, mitigate for, minimize or outright avoid these constraints, but it should be noted that not all constraints can be avoided.

HYDROLOGY

Spring development and historical and modern land uses have fundamentally altered the hydrology of the system. Portions of the meadow are much wetter than would have occurred prior to European settlement, while other areas have been dewatered or filled. While the hydrology of the meadow is now better understood, it is not clear exactly what the historical hydrology was prior to development of springs, irrigation pond and ditches. Finally, it should be recognized that the existing wetlands on site are somewhat functional; designs have been developed to avoid direct or indirect impacts to existing functional habitat, focusing on enhancement of impaired areas.

INFRASTRUCTURE AND HUMAN USE

The proposed design concepts have been developed under the assumption that much of the existing infrastructure will remain. As such we have incorporated existing informal walking trails into the restoration design elements, and propose retaining existing culverts under Estates Drive and Brockway Road, as well as a number of culverts in the vicinity of the Former Town of Truckee Corporation Yard and the Truckee River Legacy Trail. Finally, the upstream (east) limit of the project is established outside of the Palisades Drive Commercial area and infrastructure associated with the TDPUD's Southside Well.

PROPERTY OWNERSHIP

The conceptual designs presented include design elements on multiple properties. Approval and implementation of these elements will require close coordination with all stakeholders or property owners. Existing conservation easements and constructed mitigation wetlands will be avoided, with the exception of the recently-constructed wetland which mitigates for impacts associated with the Brockway Trail. This wetland has been incorporated into the restoration design, in consultation with the Town of Truckee and Lahontan Regional Water Board staff.

4.5 Design Opportunities

WATER AVAILABILITY

Unlike many wetland restoration endeavors, this particular project includes a perennial source of surface water flow. Beyond the constraints listed above, a great deal of

habitat and water quality benefit can be gained simply by distributing perennial water to previously impacted portions of the meadow.

5 Limitations

This report was prepared in general accordance with the accepted standard of practice in surface-water and groundwater hydrology existing in Northern California and the Sierra Nevada for projects of similar scale at the time the investigations were performed. No other warranties, expressed or implied, are made.

As is customary, we note that readers should recognize that interpretation and evaluation of subsurface conditions and physical factors affecting the hydrologic context of any site is a difficult and inexact art. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive or extended studies, including additional hydrologic baseline monitoring, can reduce the inherent uncertainties associated with such studies. We note, in particular, that many factors affect local and regional groundwater levels. If the client wishes to further reduce the uncertainty beyond the level associated with this study, Balance should be notified for additional consultation.

We have used standard environmental information such as precipitation, topographic mapping, and soil mapping, in our analyses and approaches without verification or modification, in conformance with local custom. New information or changes in regulatory guidance could influence the plans or recommendations, perhaps fundamentally. As updated information becomes available, the interpretations and recommendations contained in this report may warrant change. To aid in revisions, we ask that readers or reviewers advise us of new plans, conditions, or data of which they are aware.

Concepts, findings and interpretations contained in this report are intended for the exclusive use of the Truckee River Watershed Council under the conditions presently prevailing except where noted otherwise. Their use beyond the boundaries of the site could lead to environmental or structural damage, and/or to noncompliance with water-quality policies, regulations or permits. Data developed or used in this report were collected and interpreted solely for developing an understanding of the hydrologic context at the site as an aid to conceptual planning and channel and wetland restoration design. They should not be used for other purposes without great care, updating, review of sampling and analytical methods used, and consultation with Balance staff familiar with the site. In particular, Balance Hydrologics, Inc. should be consulted prior to applying the contents of this report to geotechnical or facility design, routine wetland management, sale or exchange of land, or for other purposes not specifically cited in this report.

Finally, we ask once again that readers who have additional pertinent information, who observed changed conditions, or who may note material errors should contact us with their findings at the earliest possible date, so that timely changes may be made.

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TABLES

Table 1. Ponderosa Golf Course Irrigation Pond Hydrology, Truckee Wetlands Restoration Partnership, Truckee, California

	INFLOW				OUTFLOW									
	Inflow from ditch ¹		Direct Precipitation ²		Pond outflow ¹		Estimated evaporation from pond ³			Estimated Irrigation Use ⁴			Surplus or Deficit ⁵	
	<i>gpm</i>	<i>gpd</i>	<i>inches</i>	<i>gpd</i>	<i>gpm</i>	<i>gpd</i>	<i>ft</i>	<i>gpm</i>	<i>gpd</i>	<i>gpd</i>	<i>days/wk</i>	<i>gpm</i>	<i>gpm</i>	<i>gpd</i>
October	80	115,200	1.58	1,799	<i>nm</i>	<i>nm</i>	0.45	4.2	6,092	120,000	6	70	5.9	8,521
November	121	174,493	6.05	7,118	<i>nm</i>	<i>nm</i>	0.31	2.9	4,241	0	0	0	118.4	170,482
December	120	172,800	7.33	8,346	<i>nm</i>	<i>nm</i>	0.22	2.1	2,989	0	0	0	118.1	170,080
January	206	297,285	0.48	547	224	323,136	0.13	1.2	1,708	0	0	0	-19.1	-27,541
February	63	90,478	0.13	164	58	84,015	0.08	0.8	1,139	0	0	0	3.7	5,329
March	130	187,419	1.47	1,674	135	193,882	0.11	1.0	1,509	0	0	0	-5.5	-7,917
April	94	135,717	0.51	600	108	155,105	0.17	1.6	2,306	120,000	6	70	-84.9	-122,320
May	103	148,643	1.78	2,027	40	58,164	0.29	2.8	4,014	120,000	6	70	-9.8	-14,115
June	121	174,493	0.45	529	13	19,388	0.41	3.9	5,665	120,000	6	70	33.9	48,812
July	108	155,105	0.03	34	0	0	0.56	5.3	7,600	120,000	6	70	32.5	46,861
August	81	116,329	0.01	11	0	0	0.59	5.6	8,113	120,000	6	70	5.3	7,571
September	126	180,956	0.85	1,000	0	0	0.53	5.0	7,259	120,000	6	70	50.8	73,084

¹As measured during water year 2013 on a near-continuous basis, or estimated where shown in italics.

²As reported by the California Data Exchange Center (CDEC) for station TKE (Truckee Ranger Station).

³Evaporation is estimated based on mean monthly evaporation for Prosser Reservoir, Boca Reservoir, Martis Reservoir, and Donner Lake, as reported by Huntington and McEvoy (2011)

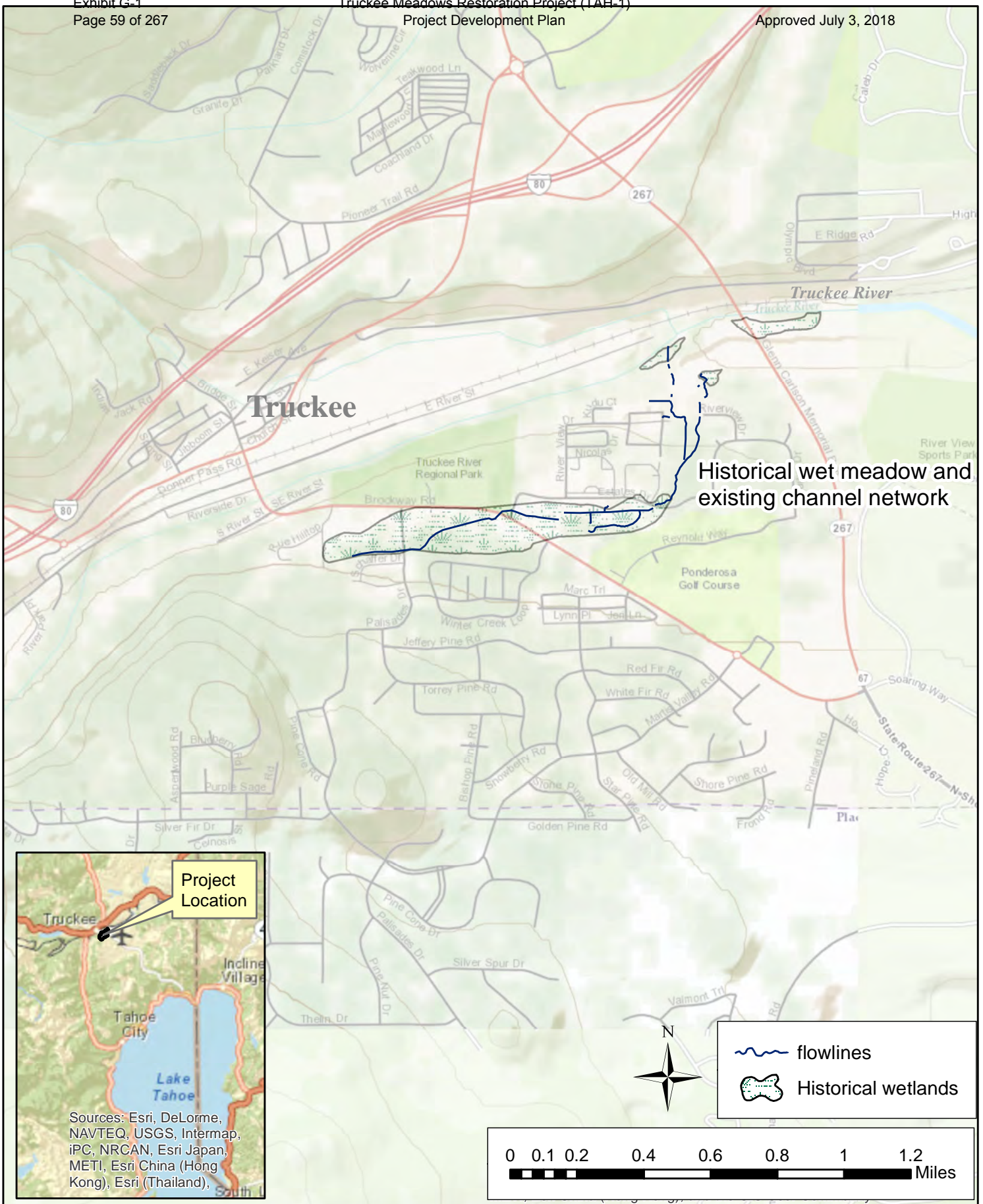
⁴As communicated verbally by Mike Steven (TDRPD) to Jeannette Halderman (TRWC) on May 3, 2013.

⁵When a surplus is shown, pond inflows are greater than outflows, and when a deficit is shown, pond outflows are greater than inflows.

Groundwater inflows and outflows are assumed to be equal, such that net groundwater gains or losses from the pond are assumed to be negligible.

nm = not measured, assumed to be negligible

FIGURES



**Figure 1. Project Location,
Truckee Wetlands Restoration Partnership,
Truckee, California**

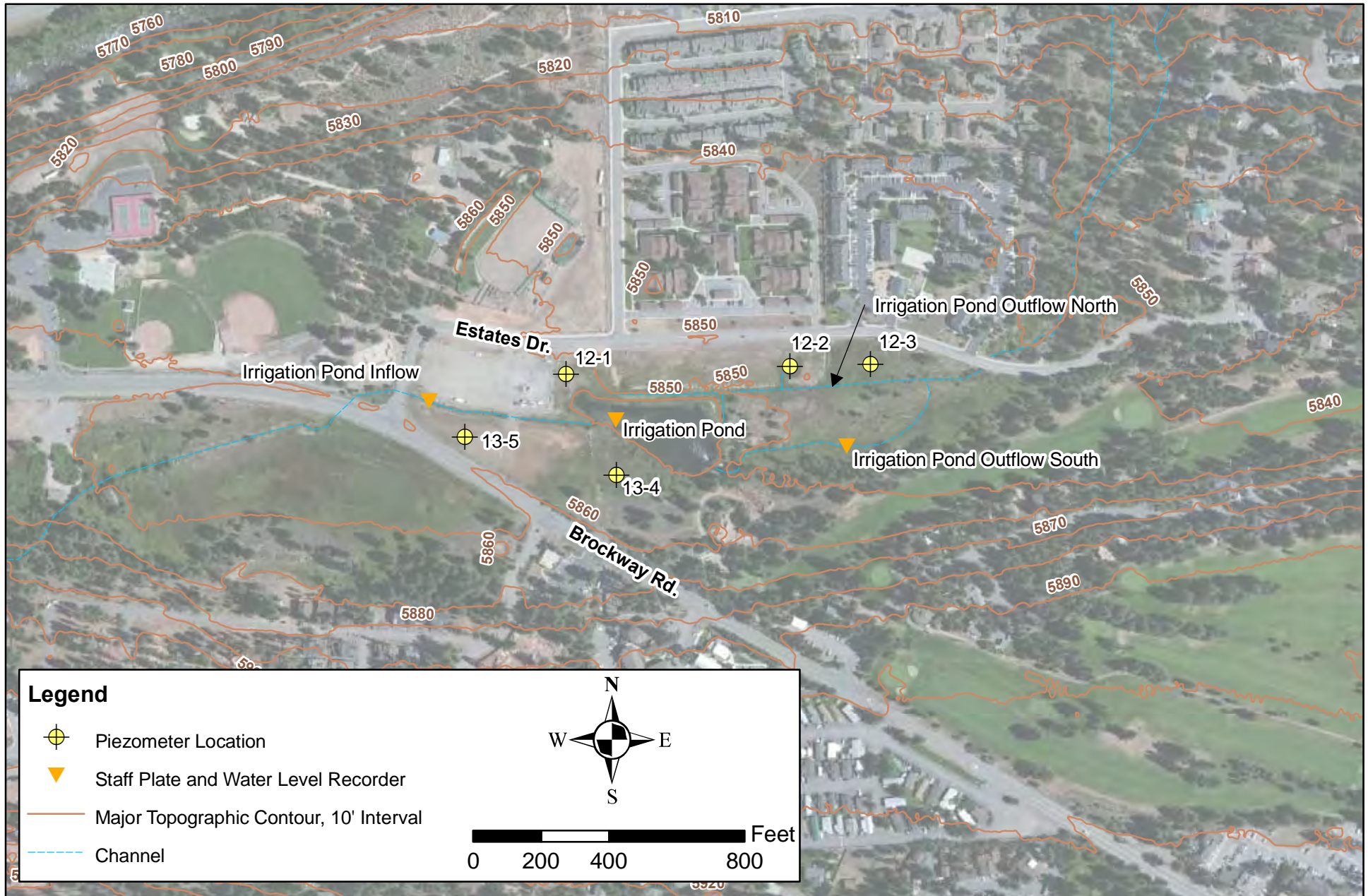


Figure 2. Surface water and groundwater monitoring locations, Truckee Wetlands Restoration Partnership, Truckee, California



**Balance
Hydrologics, Inc.**

W:\Projects\210028 GIS\Figure2.mxd

Basemap Source: ESRI

© 2013 Balance Hydrologics, Inc.

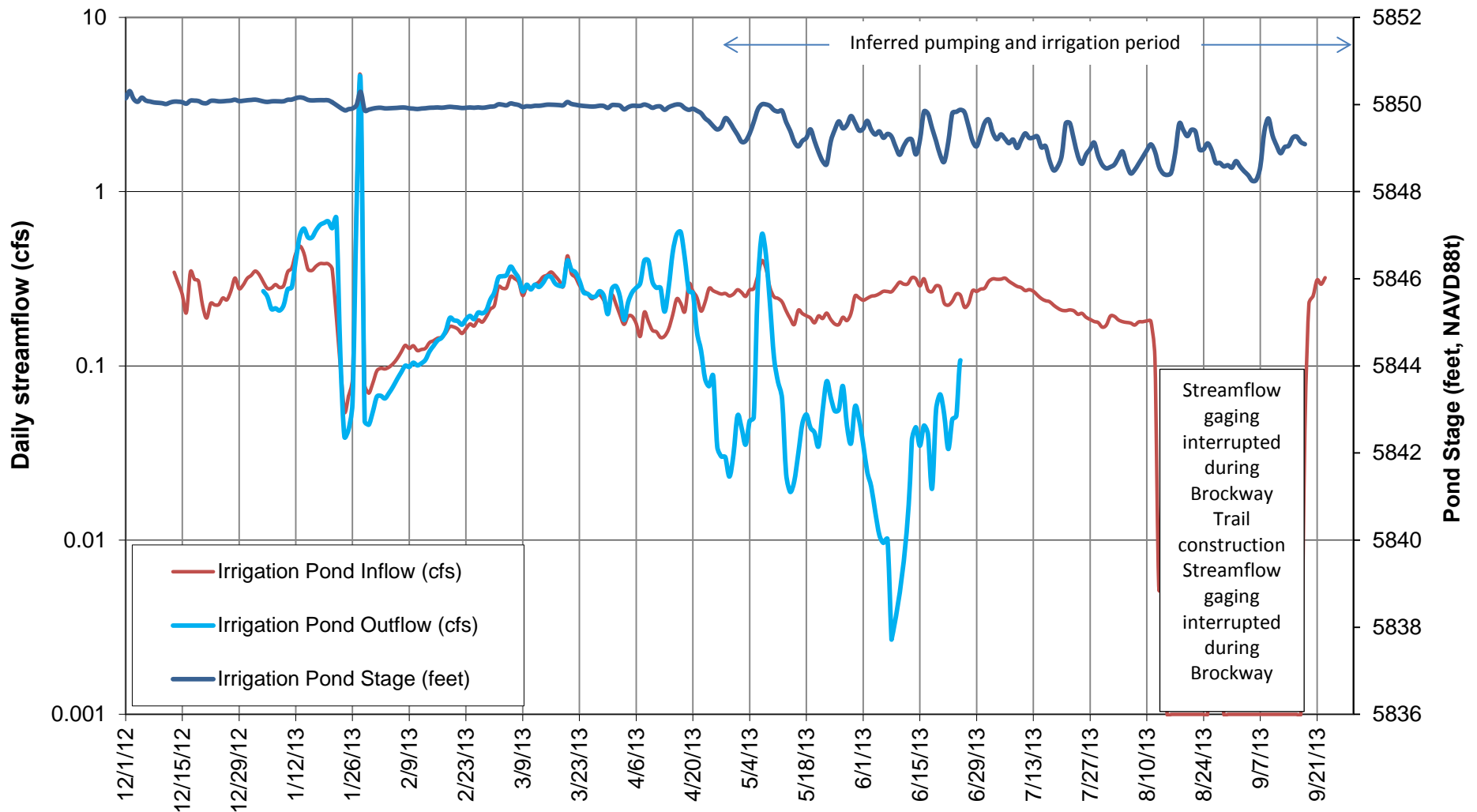


Figure 3. Irrigation Pond daily stage, inflow, and outflow, Truckee Wetlands Restoration Partnership, Truckee, California, water year 2013.

Pond outflow was approximately equal to inflow until pond water levels began to fluctuate in late April.

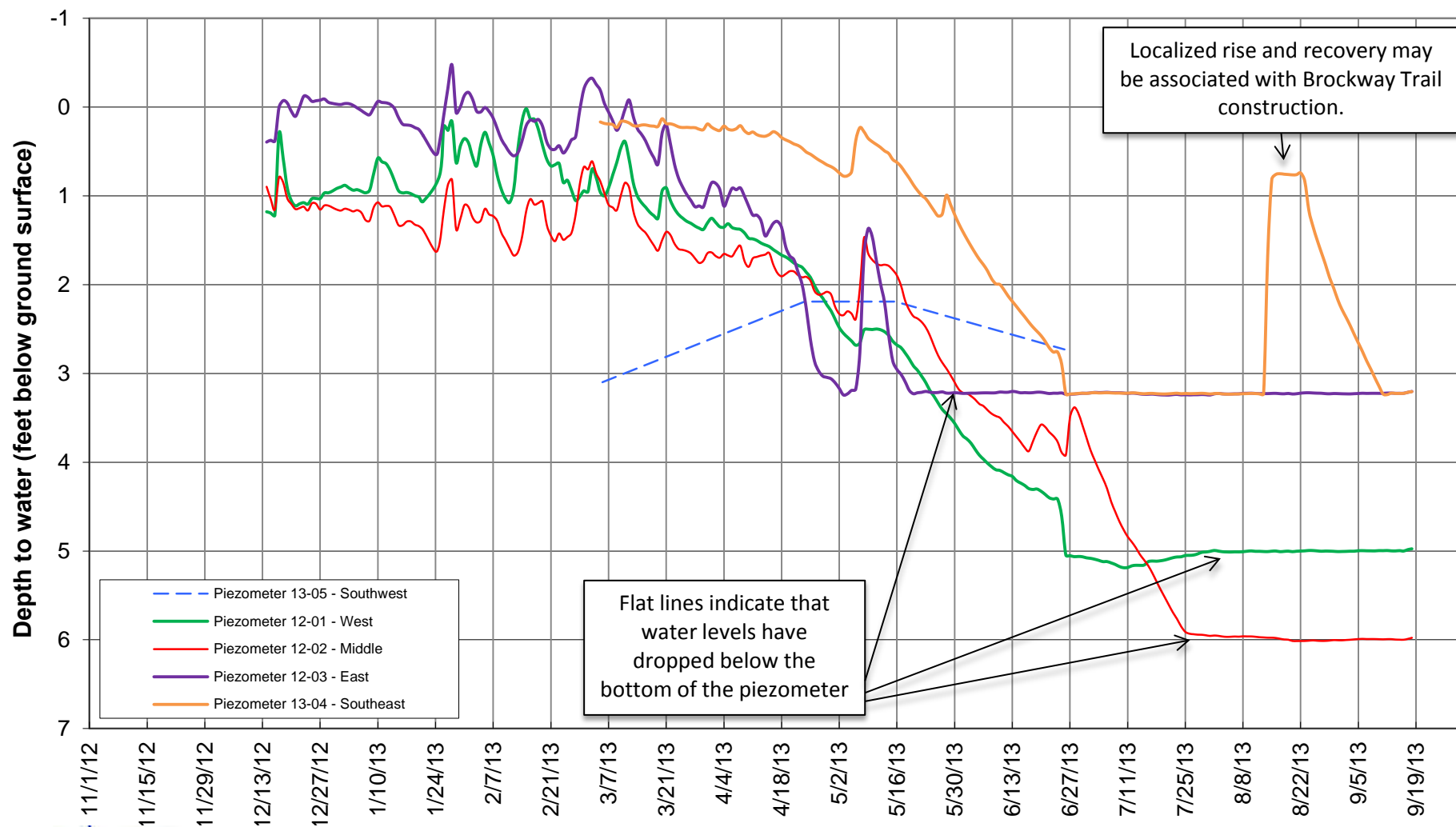


Figure 4.

Depth to groundwater

Truckee Wetlands Restoration Partnership, Truckee, California, water year 2013.

Groundwater levels were initially close to the surface, especially in relatively undisturbed meadow areas. Groundwater levels declined upon the onset of warmer temperatures and snowmelt, with more rapid declines in late April and early May

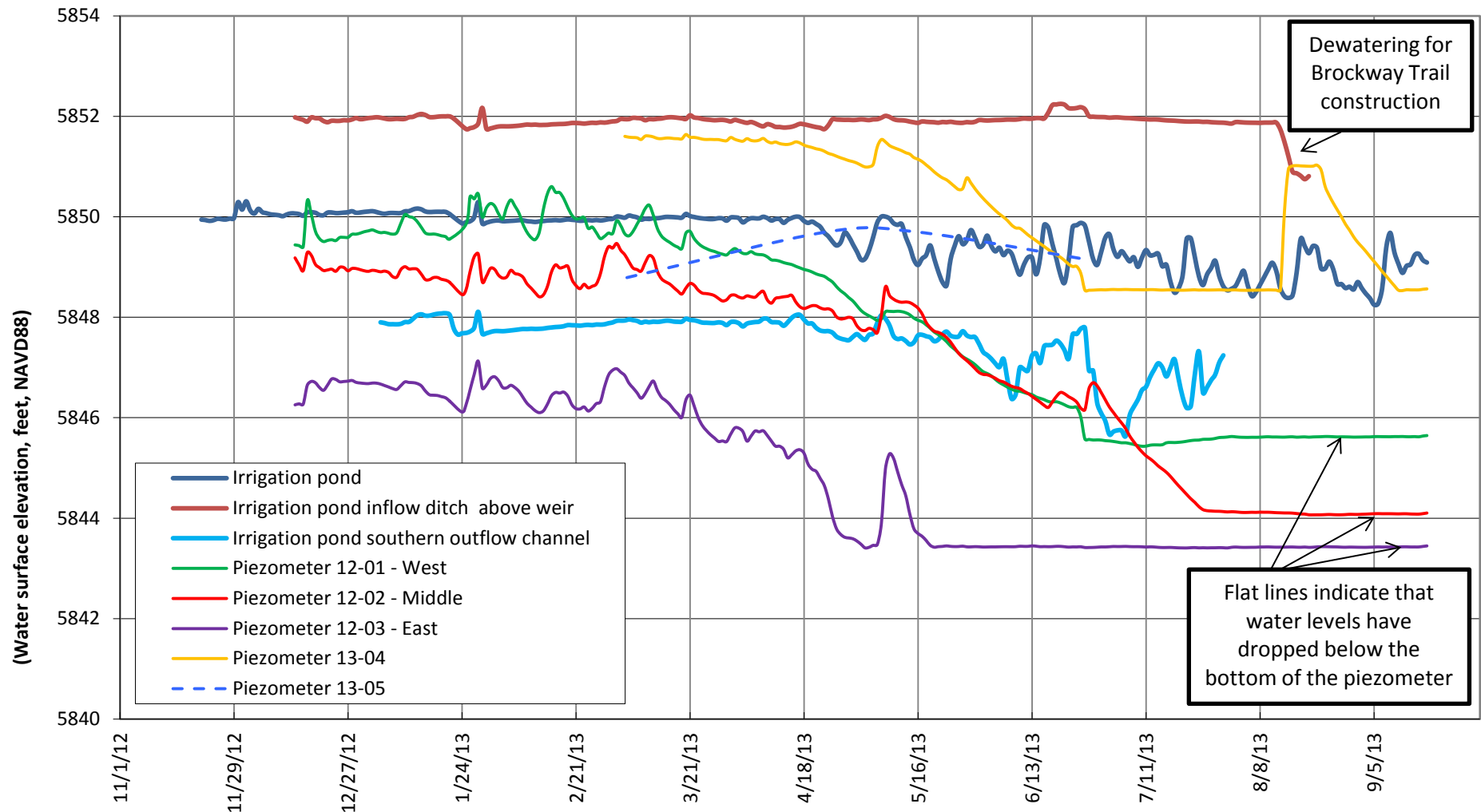


Figure 5. Surface water and groundwater elevations, Truckee Wetlands Restoration Partnership, Truckee, California, water year 2013.
Relative elevations imply a groundwater gradient from west to east, down the axis of the meadow. Groundwater levels do not appear to be affected by short-term variations in Irrigation Pond levels.

APPENDICES

APPENDIX A

Conceptual Wetland Restoration Design



Project:

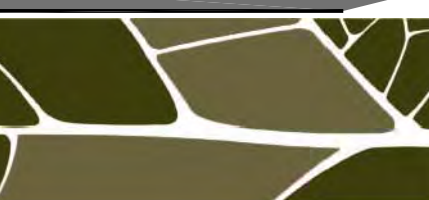
TRUCKEE WETLAND RESTORATION PARTNERSHIP

Site:

BROCKWAY ROAD
TOWN OF TRUCKEE,
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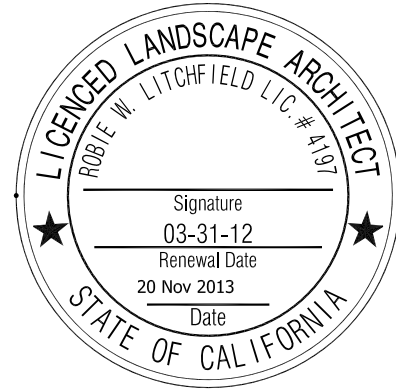
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INDEX SHEET

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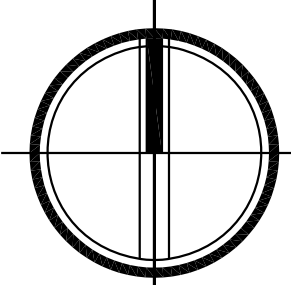
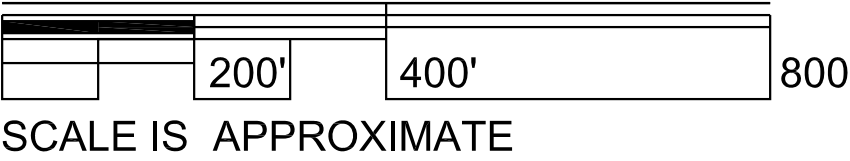


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INDEX
SHEET
Scale: 1" = 200' APPROX.
Sheet No:
L-1.0
4 OF 5





PROPOSED WETLAND
INTERPRETIVE KIOSK AND
OBSERVATION POINT - PER
TRUCKEE DONNER LAND TRUST
- SET ON DETENTION BASIN
BERM

PROPOSED BOULDER
DISSIPATERS - TYP.
UTILIZE EX. BOULDERS

FILL EXISTING DITCHES TO
DISPERSE WATER ACROSS AND
REVITALIZE HISTORIC WETLAND
- TYPICAL

LOG DIVERSION STRUCTURES TO DISPERSE FLOWS

PROPOSED WALKING CIRCUIT 4' WIDE
SOFT SURFACE WALKING PATH
TO BE LOCATED IN UPLAND
- UTILIZE EXISTING TRAILS AS FEASIBLE

EXISTING DETENTION BASIN

PROPOSED PATH FROM CLUSTER
BOX PARKING TO INTERPRETIVE POINT

EXISTING CLUSTER BOX PARKING

Project:

TRUCKEE
WETLAND
RESTORATION
PARTNERSHIP

Site:
BROCKWAY ROAD
TOWN OF TRUCKEE,
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CONCEPTUAL
DESIGN

TDLT PARCEL



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CONCEPTUAL DESIGN

TDLT PARCEL

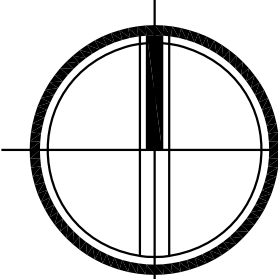
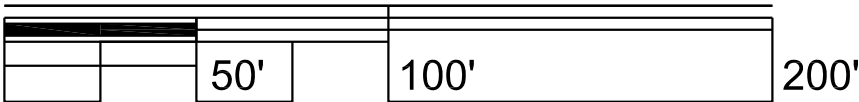
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Sheet No. 5

L-1.1

2 OF 5

NOTE: PARCEL LINES
AND PHOTO IMAGE ARE
APPROXIMATE AND ARE
INTENDED TO PROVIDE
CONTEXT ONLY



LOW IMPACT DEVELOPMENT
STORMWATER MANAGEMENT
FEATURES THROUGH
CENTER ISLAND AND
AROUND PARKING LOT
EDGES - TO DRAIN INTO
GRASSY AREA TO THE EAST

IMPROVED AUTO
PARKING
APPROX. 100 SPACES

REGIONAL
PARK

STORMWATER
AND SNOW
STORAGE
BASIN

ALT.
CULVERT
CROSSING
LOG DIVERSION
STRUCTURE

DIFFUSE FLOW ACROSS
RESTORED WETLAND -

FILL EXISTING DITCHES
TO MATCH EXISTING
GRADE - TYP.

6" SCH 80 PVC BY-PASS PIPES
PER LUMOS 100% DWGS - TYP

IVESIA PROTECTION AREA

BIKE PATH MITIGATION
AREA INCORPORATED
INTO EXPANDED POND

SWALE PROFILE STATIONS
- SEE EXISTING SWALE
PROFILE FOR FULL VIEW

WETLAND RESTORATION
INTERPRETIVE SIGNS - 3X5
GRAPHICS ON RAISED
PLATFORMS FOR SEATING,
FISHING, BIRD WATCHING,
VIEWING, ETC

TRAILS INTERPRETIVE

EQUESTRIAN STADIUM

GRADING
/RECONTOURING WILL BE
REQUIRED TO MEET
PROPOSED RESTORED
WETLAND GRADES AND
PARKING LOT GRADES

TRUCKEE SENIOR LIVING

TRAILER PARKING -
APPROXIMATELY 13 SPACES

DIFFUSE FLOW ACROSS
RESTORED WETLAND,
PRESERVE TRUCKEE PINES
MITIGATION SITE - TYP.

INSTALL CURB AND GUTTER,
BOULDER BOLLARDS AND
PLANTING TO PROTECT RE-
STORED WETLAND FROM
DRIVERS - MAY INCLUDE
PARALLEL PARKING

DECOMMISSION OLD
TRAILS AND
ESTABLISH
ONE MAIN PATH
ACROSS
PROJECT AREA
FROM
ESTATES TO
BROCKWAY

RESOURCES INTERPRETIVE

REMOVE SPOILS PILE AND
EXPAND POND CAPACITY -
UTILIZE MATERIALS
AS FILL FOR WETLAND
RESTORATION TRANSPLANT
TREES TO UPLAND REACHES,
LOCATIONS TO BE
DETERMINED

NEW FLOW CONTROL WEIR

EX. FLOW CONTROL WEIR,
TO BE REMOVED, PUMP
LOCATION TO BE
PRESERVED

NOTE: EXISTING
FENCE TO BE
REMOVED

POND FRINGE/
EMERGENT
VEGETATION, 1'-2'
DEEP - TYPICAL

OPEN WATER -
+/- 6' DEEP

POND
+/- 5851 ELEV
NATURALIZED

WILDLIFE INTERPRETIVE

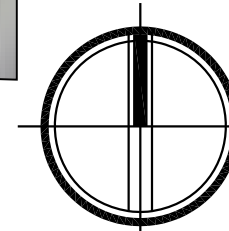
EXISTING UPLAND

PIPE AND GRAVEL
PASS THROUGH PER
LUMOS DWGS - TYP.

MATCHLINE - SEE SHEET L-1.1

NOTE: PARCEL LINES AND PHOTO IMAGE
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TO PROVIDE CONTEXT ONLY

50' 100' 200'



MATCHLINE - SEE SHEET L-1.3

Project:

TRUCKEE WETLAND RESTORATION PARTNERSHIP

Site:

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TOWN OF TRUCKEE,
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CONCEPTUAL DESIGN PONDEROSA POND

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CONCEPTUAL DESIGN

PONDEROSA POND

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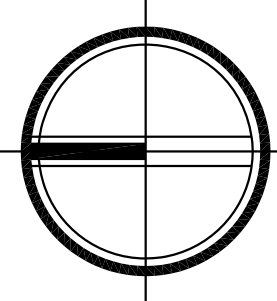
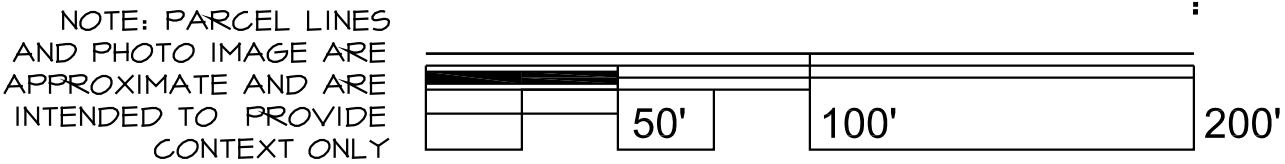
Sheet No:

L-1.2

3 of 5





MATCHLINE - SEE SHEET L-1.3



Project:
**TRUCKEE
WETLAND
RESTORATION
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Site:
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TOWN OF TRUCKEE,
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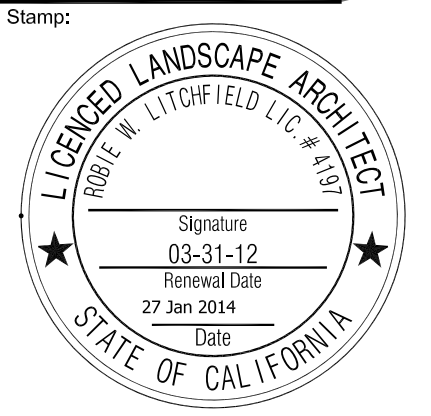
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CHANNEL TO THE
TRUCKEE RIVER**

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CONCEPTUAL DESIGN

CHANNEL TO TR (north)

Scale : 1" = 100'

Sheet No:

L-1.4
4 OF 5

MATCHLINE - SEE SHEET L-1.4



MATCHLINE - SEE SHEET L-1.2

Project:
**TRUCKEE
WETLAND
RESTORATION
PARTNERSHIP**

Site:
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TOWN OF TRUCKEE,
CALIFORNIA

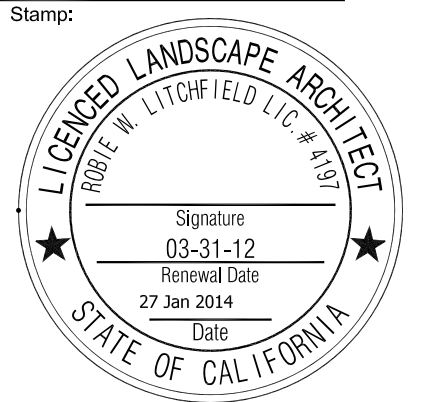
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CHANNEL TO THE
TRUCKEE RIVER**



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Rev.	Date	Remarks

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CONCEPTUAL DESIGN
CHANNEL TO TR (south)
Scale : 1" = 50'
Sheet No:
L-1.3
4 OF 5

APPENDIX B

Test Pit Logs

Appendix B

Test Pit Logs

Soils in all trenches were logged in detail using ASTM soil logging standards. Each soil type has a Unified Soil Classification System (USCS) identifier, such as CH or ML. Solid lines indicate changes in USCS type. At each change in soil type is a complete soil description, the components of which follow:

Hardness or density, moisture content, color, MAJOR CONSTITUENT, minor constituents with adjectives such as “with,” “few” or “trace”, sand and gravel grain sizes where appropriate, other associated textural or constituent descriptors.

The following abbreviations are occasionally employed within the test pit logs:

c	coarse
corr.	corrected
dk.	dark
f	fine
freq.	frequent
gr.	gravel
lt.	light
m	medium
qtz	quartz
sa.	sand
SS	sandstone
tr.	trace
w/	with

Where the constituents or appearance of a soil changed, without changing the USCS, only the pertinent changes are described. Within the soil descriptions, soil color is occasionally described using the Munsell Soil Color convention (i.e.: Hue Value/Chroma). Samples where collected and retained are indicated, as are notes on water observed during excavation. Well construction is also described on each log form in the indicated column.



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Project	TRUCKEE MEADOWS	Approved July 3, 2018	Boring No.
Number	210028		
Total Depth	6.3 ft		12-01
Sheet	1 of 1		

LOG OF BORING TEST PIT

Depth	Sample Type	Recovery	Blows/6'	USCS	DATE: 12/13/12	Description	Graphic Log	*	**	Remarks	Well Construction
1				GW	0-1.5'	LIGHT BROWN CLAY w/ ROUNDED COBBLE; ROOT DEPTH ~ 4"	0			WP571 2.7' stickup	
2				OH	FILL 1.5-3.5	3.0' DARK BROWN ORGANIC HORIZON (HISTOSOL?), SOME CLAY	SH			5' LENGTH SLOTTED PVC (.020) PACKED w/ #30 SAND.	
3					▽	WATER POURING INTO HOLE AT ~ 3' (ON TOP OF HARDER LAYER)					
4				CL	3.5-6.3	ROUNDED COBBLE/GRAVEL IN CLAY MATRIX	0				
5						LIGHT BROWN LEAN CLAY	0				
6						MOIST; (WATER APPEARS TO BE FLOWING ON TOP	0				
7						6.3 REFUSAL ON BEDROCK	111				

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Berkeley, CA 94710-2800

**

Logged by	D. SHAW
Drafted by	
Supervised by	



Balance
Hydrologics, Inc.

LOG OF BORING
TEST PIT

Project	TRUCKEE MEADOWS RESTORATION PROJECT	Approved July 3, 2008	Drilling No.
Number	210028		
Total Depth	5.5 ft		12-02
Sheet	1 of 1		

Depth	Sample Type	Recovery	Blows/6"	USCS	DATE: 12/13/12	Description	Graphic Log	*	**	Remarks	Well Construction
1	█			GW	0-1.5	BROWN SANDY LOAM / COBBLY CLAY (DRY)	0-0 0-0 0-0			WP 572 2.0' STICKUP	
2	█			CH	1.5-2.5	DARK GRAY CLAY W/ COBBLE SOME GLEYING	0-0 0-0			UPON EXCAVATING FURTHER TO NORTH, LOTS OF WATER ENTERING PIT AT 1' DEPTH, FROM GRAVELLY	
3					2.5-5.5	ORANGE-BROWN MOTTLED CLAY W/ ROUNDED COBBLE (GLACIAL OUTWASH)	0-0 0-0 0-0 0-0			5' LENGTH SLOTTED PVC PACKED W/ #30 SAND	
4	█			CL							
5											
6					5.5	REFUSAL ON BEDROCK	///				

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**



Logged by	D. SHAW
Drafted by	
Supervised by	



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LOG OF BORING
TEST PIT

Project	TRUCKEE WETLANDS	Approved July 3, 2018	Boring No.
Number	210028		
Total Depth	3.2 FT		12-03
Sheet	1 of 1		

Depth	Sample Type	Recovery	Blows/6"	USCS	DATE: 12/13/12	Description	Graphic Log	*	**	Remarks	Well Construction
						0-0.9'				WP 573	
1	 0.5'			OH		ORGANIC DARK BROWN CLAY LOAM, MOIST				3.0' BLANK RISER (stickup=1.8')	
2	 1.5'			GW		0.9-3.2' YELLOW BROWN GRAVELLY COBBLY LOAM, SOME CLAY					
3						WATER FLOWING IN COBBLY LAYERS				2.0' SLOTTED PVC PACKED W/ #30 SAND	
4						SOME BOULDERS					
5						3.2' REFUSAL IN BEDROCK					

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Logged by	D. SHAW
Drafted by	
Supervised by	



Log of Boring

Project	210020	Boring No.
Number	13-04	
Total Depth	3.45	13-04
Sheet	1 of 1	

Depth (ft)	Sample Type	Recovery	USCS	Description	Remarks	Well Construction
2				Hand auger 4" bit		
4				Sandy, loam, w/ gravels and some clay	native soil	
6				gravel in sandy clay sand, clay w/ gravel	Monterey #30 sand	
8				Silt 1160 1.6°C very low	Cap drilled w/ holes to drain	
10				difficult augering many attempts to get deeper than 3' cobbles/boulders?	stick up = 1.8'	
12					Ponded water on surface in western wetland	
14						
16						
18						
20						
22						
24						
26						
28						

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Hydrologics, Inc.

LOG OF BORING

Project	210328	Boring No. 13-05
Number	13-05	
Total Depth	3.30	
Sheet	1 of 1	

Depth	Sample Type	Recovery	Blows/6"	USCS	Description	Graphic Log	*	**	Remarks	Well Construction
1					Hand auger 4" bit					
2					clay					
3					clay w/ gravels					
3.3'					water filling borehole					
					difficult augering conditions attempted 9- boreholes refusal < 3.5'					

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**

Logged by	BKH
Drafted by	BKH
Supervised by	

APPENDIX C

Site Observer Log

Table C1. Surface water monitoring observations, Truckee Wetlands Restoration Partnership, Truckee, California, WY 2013

Site Conditions				Streamflow				Water Quality Observations				High-Water Marks		Remarks
Date/Time <small>(mm/dd/yr)</small>	Observer(s)	Stage (staff plate) <small>(feet)</small>	Hydrograph <small>(R/F/S/B)</small>	Measured Discharge <small>(cfs)</small>	Estimated Discharge <small>(cfs)</small>	Instrument Used <small>(AA/PY/B)</small>	Estimated Accuracy <small>(e/g/f/p)</small>	Water Temperature <small>(oC)</small>	Specific Conductance at field temp. <small>(µmhos/cm)</small>	Specific Conductance at 25C <small>(at 25 oC)</small>	Additional Samples	Estimated stage at staff plate <small>(feet)</small>	Inferred dates? <small>(mm/dd/yr)</small>	
Ponderosa Golf Course Pond Inflow (weir)														
11/15/12 16:00	cs	--	--	--	--	PY	--	5.0	120	197	--	--	--	Measured flow at Estates Drive culvert outflow; no staff plate installed at time of measurement Installed v-notch weir and levellogger+staff plate
12/13/12 17:04	ds, cs	1.33	R	0.27	--	B	g	2.2	111	197	--	--	--	
12/14/12 10:15	ds	1.35			--			1.5	72	129	--	--	--	
1/4/13 13:45	bkh	1.31	S	0.28	--	B	g	4.2	113	189	--	--	--	Snow on banks but not affecting stage; cold nights and melting snow during day--diurnal flux expected
3/5/13 12:15	bkh	1.31	S		--	--	--	3.9	111	188	--	--	--	Water clear, weir board slightly bowing outward; reinforced with a couple boulders.
3/14/13 17:45	bkh	1.345	S	0.29	--	B	g	8.3	130	195	--	--	--	Warm, sunny, snowmelt runoff; abundant algae in pool behind weir, higher stages may require alternative methods of flow measurement
3/20/13 10:30	bkh	1.45	S	0.48	--	B	g	4.2	180	302	--	--	--	Rain overnight; clearing with more rain/snow forecasted for afternoon; water clear;
4/23/13 14:00	ds	1.13	F	--	0.26	--	f				--	--	--	Most of flow is under weir; plugged back of weir with clay, stage rising
4/23/13 18:30	ds	1.29	R	0.28	--	B	g	7.6	256	392	--	1.36	4/4/2013	Stage recovered, weir in working order; flow appears to be constant
5/15/13 15:00	cs, bkh	1.22	S	0.14	--	B	e	9.8	148	214	--	1.35	4/29/2013	Sunny, warm, windy, weir losing flow under weir; plugged weir with clay, stage rose from 1.16 to 1.22; conducted flow measurements before (0.09 cfs) and after (0.14 cfs); Surveyed in the staff plate and notch today.
6/25/13 16:05	ds	1.44	f?	0.207	--	B	--	6.5	132	204	--	--	--	Some precipitation in last few days. Construcion happening near channel.
7/31/13 15:45	ds	1.22	B	0.142	--	B	--	8.7	140	201	--	--	--	Water clear, weir in good condition, no leaks, downloaded.
Ponderosa Golf Course Pond														
11/15/12 15:45	cs	3.42	S	--	--	--	--	--	--	--	--	--	--	Installed staff plate + levellogger in pond, west end
1/4/13 15:00	bkh	3.55	ICE	--	--	--	--	--	--	--	--	--	--	Pond frozen, stage reading with ice/snow
3/20/13 10:40	bkh	3.57	S	--	--	--	--	--	--	--	--	--	--	Elevated water surface, increased runoff from ditch; adjacent wetland areas saturated or ponded in small locations
4/23/13 15:00	ds	3.19	S	--	--	--	--	14.1	161	207	--	--	--	Downloaded levellogger;
5/15/13 14:00	bkh, cs	2.66	S	--	--	--	--				--	--	--	Surveyed in staff plate; no outflow
6/25/13 16:34	ds	3.41		--	--	--	--	12.4	159.0		--	--	--	
7/31/13 16:20	ds	2.18		--	--	--	--				--	--	--	
9/18/13 0:00	bkh	2.66		--	--	--	--	18.9	194.0	221.0	--	--	--	Downloaded.

**Table C1. Surface water monitoring observations, Truckee Wetlands Restoration Partnership,
Truckee, California, WY 2013**

Site Conditions				Streamflow				Water Quality Observations				High-Water Marks		Remarks
Date/Time	Observer(s)	Stage (staff plate)	Hydrograph	Measured Discharge	Estimated Discharge	Instrument Used	Estimated Accuracy	Water Temperature	Specific Conductance at field temp.	Specific Conductance at 25C	Additional Samples	Estimated stage at staff plate	Inferred dates?	
(mm/dd/yr)		(feet)	(R/F/S/B)	(cfs)	(cfs)	(AA/PY/B)	(e/g/f/p)	(oC)	(µmhos/cm)	(at 25 oC)		(feet)	(mm/dd/yr)	
Ponderosa Golf Course Pond Outlet (South Ditch)														
1/4/13 12:15	bkh	7.27	S	--	0.30	visual	p	-1.4	99	192	--	--	--	Installed staff plate + levellogger approximately 100 feet downstream of pond outlet
4/23/13 15:15	ds	6.90	B	--	0.01	visual	p	17.6	236	277	--	--	--	Water ponded at staff plate, but min or now flow in channel; download
5/15/15 14:15	bkh, cs	dry	--	--	--	--	--	--	--	--	--	7.1	--	HWM is an algae line; south ditch appears to be more dry than North Ditch.
6/25/13 16:50	ds	7.10	--	--	--	--	--	12.6	170	223		--	--	
7/31/13 16:50	bkh	dry	--	--	--	--	--	--	--	--	--	--	--	Outlet is dry.
9/18/13 17:19	BKH	dry	--	--	--	--	--	--	--	--	--	--	--	Outlet is dry.
Ponderosa Golf Course Pond Outlet (North Ditch)														
1/4/13 12:30	bkh	--	--	--	0.25	visual	p	-0.4	98	186	--	--	--	Most of channel covered in snow+ice;
5/15/13 14:30	bkh, cs	--	--	--	wet	visual	e	--	--	--	--	--	--	Wet soils, but no flow

Notes:

- 1) ds = Dave Shaw, bkh = Brian Hastings, cs = Collin Strassenburgh
- 2) -- is not applicable
- 3) Stage is an arbitrary datum, measured in decimal feet
- 4) Hydrograph abbreviations, R=rising, F=falling, S=Steady, B=Baseflow
- 5) Instrument used: PY: pygmy meter, AA: standard meter, B: bucket and stopwatch
- 6) Estimated accuracy: e= excellent (+/- 2%); g = good (+/- 5%); f = fair (+/- 8%); p = poor (> 10%)

**Table C2. Groundwater monitoring observations, Truckee Wetlands Restoration Partnership
Truckee, California, WY 2013**

Site Conditions					Water Quality Observations			Remarks
Date/Time	Observer	Top-of-casing to water (ft)	Depth to water (ft, bgs)	Water Surface Elevation NGVD/NAVD	Temperature (°C)	Specific Conductance (at field temp.) (µS/cm)	Specific Conductance (at 25 °C)	
Piezometer 12-01 - West								
Depth to bottom =		8.00 ft btoc		Installed 12/13/12				
Total Stickup =		2.93 ft above gs						
Elevation =		5853.55 ft						
12/14/12 13:53	ds	-4.09	1.16	5849.46	0.2	81	151	Installed levellogger
1/4/2013 14:20	bkh	-3.89	0.96	5849.66	3.9	104	176	Sunny, 30 deg with some melting snow near channel; very cold nights, surface hoar present on snow surface.
4/23/2013 15:45	ds	-4.75	1.82	5848.80	7.6	256	392	
5/15/2013 14:00	bkh, cs	-5.59	2.66	5847.96	7.4	391	602	Stratified, bottom is 696 at 25 deg C. mud at bottom burying LL
6/25/2013 17:30	ds	dry	dry	--	--	--	#VALUE!	Levellogger buried in sediment, cleaned.
7/31/2013 16:25	bkh	-7.95	5.02	5845.60	9.5	629	890	Downloaded.
9/18/2013 16:50	bkh	-8.41	5.48	5845.14				Mucky water at bottom of well, downloaded.
Piezometer 12-02 - Middle								
Depth to bottom =		7.50 ft btoc		Installed 12/13/12				
Total Stickup =		1.50 ft above gs						
Elevation =		5851.58 ft						
12/14/12 14:05	ds	-2.25	0.75	5849.33	0.7	81	150	Installed levellogger
1/4/2013 14:30	bkh	-2.70	1.20	5848.88	3.9	154	261	Snow covering piezometer; stratified: 204 uS at 4.3 deg C at max depth
4/23/2013 15:40	ds	-3.44	1.94	5848.14	9.0	756	1115	Definite transition from snowmelt infiltration to older groundwater
5/15/2013 14:05	bkh, cs	-3.33	1.83	5848.25	10.8	236	332	Stratified, 1271 uS at 25 deg C at bottom of well;
6/25/2013 17:20	ds	dry	--	--	--	--	--	Well is dry.
7/31/2013 16:35	ds	dry	--	--	12.8	65	86	Mud at bottom, water could be stagnant in bottom of piezo.
9/18/2013 16:50	bkh	dry	--	--	--	--	--	Mud ponded in bottom of well, downloaded.
Piezometer 12-03 - East								
Depth to bottom =		ft btoc		Installed 12/13/12				
Total Stickup =		1.80 ft above gs						
Ground Elevation =		5848.45 ft						
12/14/12 14:25	ds	-2.11	0.31	5846.34	1.5	72	129	Installed levellogger
1/4/2013 14:45	bkh	-1.8	0.00	5846.65	0.0	--	--	Water frozen in piezo; depth to ice reported; piezo was buried in snow.
4/23/2013 15:30	ds	-3.83	2.03	5844.62	7.3	472	729	Downloaded
5/15/2013 14:20	bkh, cs	-4.70	2.90	5843.75	7.2	305	472	no stratification
6/25/2013 17:10	ds	dry	dry	--	--	--	--	Well is dry.
7/31/2013 16:42	bkh	dry	dry	--	--	--	--	Well is dry.
9/18/2013 18:15	bkh	dry	dry	--	--	--	--	Well is dry.

**Table C2. Groundwater monitoring observations, Truckee Wetlands Restoration Partnership
Truckee, California, WY 2013**

Site Conditions					Water Quality Observations			Remarks
Date/Time	Observer	Top-of-casing to water (ft)	Depth to water (ft, bgs)	Water Surface Elevation NGVD/NAVD	Temperature (°C)	Specific Conductance (at field temp.) (µS/cm)	Specific Conductance (at 25 °C)	
Piezometer 13-04 - Southeast								
Depth to bottom		<i>ft btoc</i>						
Total stickup		<i>1.80 ft above gs</i>						
Ground elevation		<i>5853.57 ft</i>						
3/5/13 11:00	bkh	-1.90	0.10	5851.67	1.6	116	209	Installed piezometer south of pond, east of boulder fence; difficult auger conditions, final depth 3.45 ft bgs; ground free of snow, some standing water, subsurface conditions saturated, sandy loams with gravel and clay; instrumented with levellogger (hourly) begin at 12:00
4/23/2013 14:30	ds	-2.29	0.49	5851.28	8.7	144	214	Slightly stratified, 300 uS @ 25 C at depth.
5/15/2013 13:55	bkh, cs	-2.46	0.66	5851.11	7.2	200	310	No stratification, meadow verdant
6/25/2013 16:25	cs	dry	--	--	--	--	--	Well is dry.
7/31/2013 16:12	bkh	dry	--	--	--	--	--	Construction on bike trail, meadow is very dry, brown vegetation, some flowering species.
9/18/2013 17:20	bkh	4.63	--	--	13.1	246	319	Downloaded.
Piezometer 13-05 - Southwest								
Depth to bottom		<i>ft btoc</i>						
Total stick up		<i>1.40 ft above gs</i>						
Ground elevation		<i>5853.29 ft</i>						
3/5/13 12:20	bkh	-4.50	3.10	5848.79	3.9	904	1531	Installed piezometer, difficult conditions to auger, clay with sand transitioned to dry gravelly sand and loams; final depth: 3.30 ft bgs. Mostly dry, some water beginning to fill bottom of piezo.
4/23/2013 14:15	ds	-3.59	2.19	5849.70	9.4	117	171	Appears to be a transition from ground water to fresher water?
5/15/2013 13:45	bkh, cs	-3.59	2.19	5849.70	10.3	2040	2905	Stratified, 4,000 uS at 25 deg C at bottom of well;
6/25/2013 16:20	cs	-4.13	2.73	5849.16	14.0	1773	2260	Very little water in casing, no LL installed.
7/31/2013 0:00	bkh	dry	--	--	--	--	--	Well is dry.
9/18/2013 17:40	bkh	-4.53	--	--	18.2	5000	5740	

Notes:

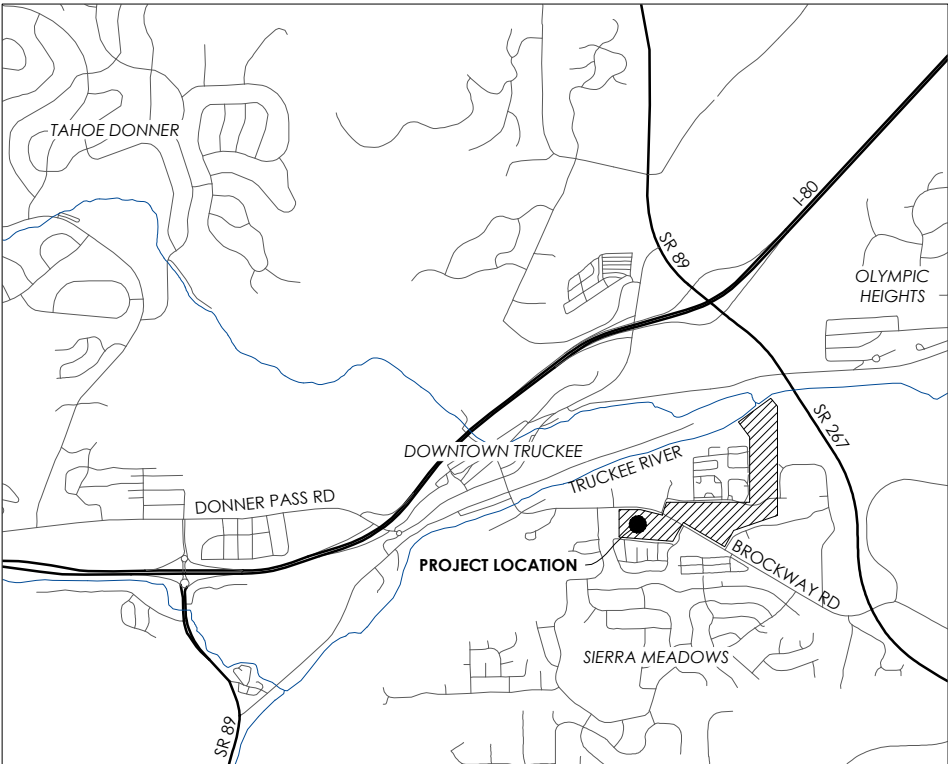
- 1) ds is David Shaw; bkh is Brian Hastings; cs is Collin Strassenburgh
 - 2) NR is not recorded, -- is not applicable
 - 3) Water surface elevations are based on ground surface elevations indicated on digital elevation models (DEM) provided by the USFS
 - 4) btoc=below top of casing; bgs=below ground surface
- Specific conductance: Measured in micromhos/cm in field using a YSI30 hand-held meter; then adjusted to 25degC by equation $(1.8813774452 - [0.050433063928 * \text{field temp}] + [0.00058561144042 * \text{field temp}^2]) * \text{Field specific conductance}$

Attachment 3. 100% Design Plan Set (Balance Hydrologics 2017)

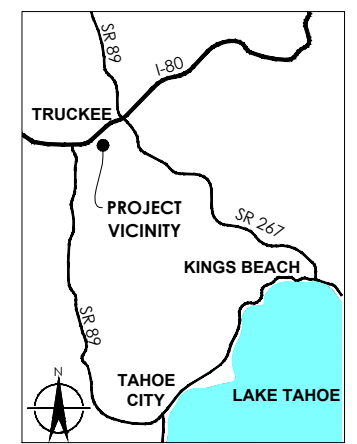
TRUCKEE MEADOWS RESTORATION

TOWN OF TRUCKEE, NEVADA COUNTY, CALIFORNIA

LOCATION MAP



VICINITY MAP



0' 1000' 2000'
SCALE: 1" = 2000'

SHEET INDEX

SHEET 1.0: COVER SHEET	SHEET 5.0: PLANTING MATRIX AND NOTES
SHEET 2.0: SYMBOLS AND GENERAL NOTES	SHEET 5.1: TDLT PARCEL PLANTING PLAN
SHEET 2.1: KEY MAP, SITE PREPARATION, AND ACCESS/STAGING PLAN	SHEET 5.2: TDRPD POND PLANTING PLAN
SHEET 3.0: DEMOLITION AND SOD HARVEST PLAN	SHEET 5.3: TDRPD POND TO ESTATES DRIVE PLANTING PLAN
SHEET 3.1: TDLT PARCEL RESTORATION PLAN	SHEET 5.4: TTAD ACCESS ROAD PLANTING PLAN
SHEET 3.2: TDRPD POND RESTORATION PLAN	SHEET 5.5: TOT OLD CORP YARD PLANTING PLAN
SHEET 3.3: TDRPD POND TO ESTATES DRIVE RESTORATION PLAN	SHEET 5.6: PLANTING DETAILS
SHEET 3.4: TTAD ACCESS ROAD RESTORATION PLAN	
SHEET 3.5: TOT OLD CORP YARD RESTORATION PLAN	
SHEET 3.6: CULVERT OVERFLOW	
SHEET 4.0: WETLAND DETAILS 1	
SHEET 4.1: WETLAND DETAILS 2	
SHEET 4.2: TRAIL DETAILS	
SHEET 4.3: TTAD ACCESS ROAD DETAILS	
SHEET 4.4: TDRPD POND CROSS SECTIONS	

PROJECT TEAM

CLIENT
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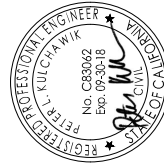
PREPARED FOR


Truckee River Watershed Council


Balance Hydrologics, Inc.

P.O. Box 1077
12020 Donner Pass Road
Truckee, CA 96161
Tel: (530) 550-9776
www.balancehydro.com

DESIGNED BY	DATE	BY	SUBMITTALS / REVISIONS
D SHAW	3-11-15	DS	30% PLANS
P KULCHAWIK	11-25-15	PK	60% PLANS
CHECKED BY	5-13-16	PK	95% PLANS
E BALLMAN	4-26-17	PK	100% PLANS
IN CHARGE	6-23-17	PK	100% PLANS (REVISED)
P KULCHAWIK	6-23-17		
DATE	6-23-17		



COVER SHEET

TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER 214128
SCALE -
SHEET 1.0

Y:_PROJECTS\2141281 TRUCKEE WETLANDS DESIGN\214128 CAD\214128 SHEETS\314128-0200-NOTES.DWG

LEGEND:

EXISTING MAJOR CONTOUR - 5 FT	
EXISTING MINOR CONTOUR - 1 FT	
EXISTING CHANNEL/FLOWPATH	
EXISTING OVERHEAD ELECTRIC LINE AND POWERPOLE	
EXISTING UNDERGROUND ELECTRIC LINE	
EXISTING UNDERGROUND COMMUNICATION LINE	
EXISTING GAS LINE	
EXISTING WATER LINE	
EXISTING SEWER LINE	
EXISTING STORM DRAIN	
EXISTING CULVERT	
EXISTING FENCE	
EXISTING EDGE OF GRAVEL AREA	
EXISTING TRAIL	
EXISTING WETLAND LIMIT	
EXISTING PROPERTY LINE	
EXISTING TREE/SHRUB LIMIT	
PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
PROPOSED FENCE	
GRADE BREAK	
GRADING LIMIT	
PRESERVATION FENCING	
TEMPORARY PINE NEEDLE WATTLE	
TEMPORARY DIVERSION PIPE	
PROPOSED FINISHED GRADE ELEVATION	
PROPOSED FINISHED GRADE SLOPE	
PROPOSED SURFACE FLOW DIRECTION	
PROPOSED EMBANKMENT SLOPE (3:1 UNLESS NOTED OTHERWISE)	
PRESERVE (SAVE) EXISTING TREE	
REMOVE EXISTING TREE	
EXISTING BOULDERS	
PROPOSED BOULDERS	
PROPOSED SOD BLOCK	
TEMPORARY GRAVEL BAG CHECK DAMS	
FILL EXISTING DITCH	
SCRAPE TO REMOVE HIGH POINT AND MATCH ADJACENT EG	
PLACE SURFACE AGGREGATE	
EXISTING RIP RAP/ROCK PILE	

SEE SHEET 5.0 FOR PLANTING SYMBOLS

ABBREVIATIONS:

'	FEET
"	INCH
#	NUMBER
AB	AGGREGATE BASE
APPROX	APPROXIMATE
CBF	CHANNEL BED FILL
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
DBH	DIAMETER AT BREST HEIGHT (4' FROM GROUND)
DG	DECOMPOSED GRANITE
DIA, Ø	DIAMETER
E	EASTING
EG	EXISTING GRADE
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
ESA	ENVIRONMENTALLY SENSITIVE AREA
EX	EXISTING
FES	FLARED END SECTION
FG	FINISH GRADE
FT	FEET
GALV	GALVANIZED
H	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
IE	INVERT ELEVATION
IN	INCH
INV	INVERT
LT	LEFT
LWM	LARGE WOODY MATERIAL
MAX	MAXIMUM
MIN	MINIMUM
N	NORTHING
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
PC	POLE CUTTING
PROP	PROPOSED
Q10	10-YEAR STREAMFLOW
Q100	100-YEAR STREAMFLOW
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RSP	ROCK SLOPE PROTECTION
STA	STATION
STR	STRUCTURE
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
T-TSA	TAHOE-TRUCKEE SANITATION AGENCY
TDLT	TRUCKEE DONNER LAND TRUST
TDPUID	TRUCKEE DONNER PUBLIC UTILITY DISTRICT
TDRPD	TRUCKEE-DONNER RECREATION & PARK DISTRICT
TOT	TOWN OF TRUCKEE
TSD	TRUCKEE SANITARY DISTRICT
TTAD	TRUCKEE TAHOE AIRPORT DISTRICT
TYP	TYPICAL
V	VERTICAL
W/I	WITHIN
WSE	WATER SURFACE ELEVATION
YR	YEAR
Z	ELEVATION

SEE SHEET 5.0 FOR PLANTING ABBREVIATIONS

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE PROJECT SITE TO VERIFY SITE CONDITIONS AND FOR COMPLETELY UNDERSTANDING THE REQUIRED SCOPE OF WORK SHOWN ON THESE DRAWINGS AND CONTAINED IN THE PROJECT SPECIFICATIONS.
2. ALL PARTS OF THIS PROJECT - INCLUDING SOIL PREPARATION, EARTHWORK, AND PLANTING - ARE SUBJECT TO FIELD DESIGN BY THE ENGINEER'S REPRESENTATIVE. AT ANY TIME, THE CONTRACTOR'S OPERATIONS AND CONSTRUCTION MAY BE SUBJECT TO OBSERVATION BY THE ENGINEER'S REPRESENTATIVE. WHEN REQUESTING THE PRESENCE OF THE ENGINEER'S REPRESENTATIVE AT THE PROJECT SITE FOR DESIGN CLARIFICATION, STAGE ACCEPTANCE, OR OTHER APPROVALS, THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCE NOTICE DIRECTLY TO THE ENGINEER'S REPRESENTATIVE.
3. UTILITY LOCATIONS DEPICTED HEREIN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES BEFORE THE START OF ANY CONSTRUCTION OPERATIONS, INCLUDING AND NOT LIMITED TO EXCAVATION OR TRENCHING. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (USA) AT 811/1-800-227-2600. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS ADVANCE NOTICE FOR LOCATING UTILITIES.
4. THE CONTRACTOR SHALL INSTALL PRESERVATION FENCING, STAKE AND FLAG THE LIMITS OF GRADING, AND INSTALL EXCLUSION FENCING AS PRESCRIBED IN THE SPECIFICATIONS AT LOCATIONS SHOWN ON THE DRAWINGS BEFORE THE START OF ANY OTHER SITE WORK INCLUDING DEMOLITION, CLEARING AND GRUBBING, AND EARTHWORK. REFER TO THE SPECIFICATIONS FOR ADDITIONAL PRESERVATION REQUIREMENTS AND INFORMATION.
5. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S REPRESENTATIVE IMMEDIATELY UPON FINDING ANY FIELD CONDITIONS THAT WOULD CONFLICT WITH THE INFORMATION INDICATED ON THESE DRAWINGS OR THE PROJECT SPECIFICATIONS. ALL FIELD ADJUSTMENTS MUST BE APPROVED BY THE ENGINEER'S REPRESENTATIVE BEFORE CONSTRUCTION OF SAID ADJUSTMENTS; FAILURE TO DO SO SHALL RESULT IN THE CONTRACTOR ASSUMING FULL RESPONSIBILITY FOR ANY REQUIRED REVISIONS OR FIELD MODIFICATIONS, AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE, AT NO ADDITIONAL COST.
6. CONFORM TO EXISTING GRADES AND CONDITIONS WHENEVER POSSIBLE. ANY ADJACENT OR OFFSET AREAS DISTURBED BY THE CONTRACTOR'S OPERATION MUST BE RESTORED BY THE CONTRACTOR TO THE PRE-DISTURBANCE CONDITIONS TO THE SATISFACTION OF THE ENGINEER'S REPRESENTATIVE.
7. ALL LUBRICATION, REFUELING, OR MAINTENANCE OF CONSTRUCTION VEHICLES SHALL BE CONDUCTED WITHIN APPROVED CONSTRUCTION STAGING AREAS AND BE A MINIMUM OF 100 FEET AWAY FROM EXISTING CHANNELS
8. STAGING AREAS MUST BE CONTAINED BY MEANS DESCRIBED IN THE SWPPP TO CONFINE THE AREA AND PREVENT CONTAMINANTS FROM ENTERING NEARBY CHANNELS AND WATER BODIES.
9. SEE SHEET 5.0 FOR ADDITIONAL REVEGETATION NOTES
10. ELEVATIONS ARE RELATIVE TO THE NAVD88 DATUM.
11. ADD 2,200,000 TO ALL NORTHINGS AND 7,000,000 TO ALL EASTINGS TO OBTAIN GRID COORDINATES IN CALIFORNIA STATE PLANE NAD83 ZONE II.
12. PRIOR TO ANY STAKING, THE CONTRACTOR SHALL VERIFY THAT A STAFF PLATE READING OF 3.50 FEET ON THE STAFF PLATE LOCATED AT THE SOUTHWEST END OF THE PONDEROSA GOLF COURSE IRRIGATION POND IS EQUIVALENT TO AN ELEVATION OF 5850.00 (NAVD88) WITHIN A TOLERANCE OF +/- 0.05 FEET. IF THE CONTRACTOR'S ESTIMATION OF THE ELEVATION CORRESPONDING TO 3.50 FEET ON THE STAFF PLATE IS NOT WITHIN THIS TOLERANCE, DO NOT PROCEED WITH STAKING WORK AND CONSULT WITH THE ENGINEER'S REPRESENTATIVE IMMEDIATELY.
13. WHERE NO WORK LIMIT IS SHOWN, THE PRESERVATION FENCING SHALL BE THE WORK LIMIT.
14. PRESERVE TREES AND VEGETATION OUTSIDE OF THE LIMITS OF WORK. ANY TREES OR VEGETATION DISTURBED OUTSIDE OF THE LIMITS OF WORK SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PREPARED BY

Truckee River Watershed Council
in partnership with Truckee River Watershed

Balance Hydrologics, Inc.

P.O. Box 1077
12020 Donner Pass Road
Truckee, CA 96161
Tel: (530) 550-1576
www.balancehydro.com

SUBMITTALS / REVISIONS		DESIGNED BY		DATE		BY	
		D SHAW		3-11-15		DS	
		DRAWN BY		11-25-15		PK	
		P KULCHAWIK		5-13-16		PK	
		CHECKED BY		4-26-17		PK	
		E BALLMAN		6-23-17		PK	
		IN CHARGE					
		P KULCHAWIK					
		DATE		6-23-17			



SYMBOLS AND GENERAL NOTES

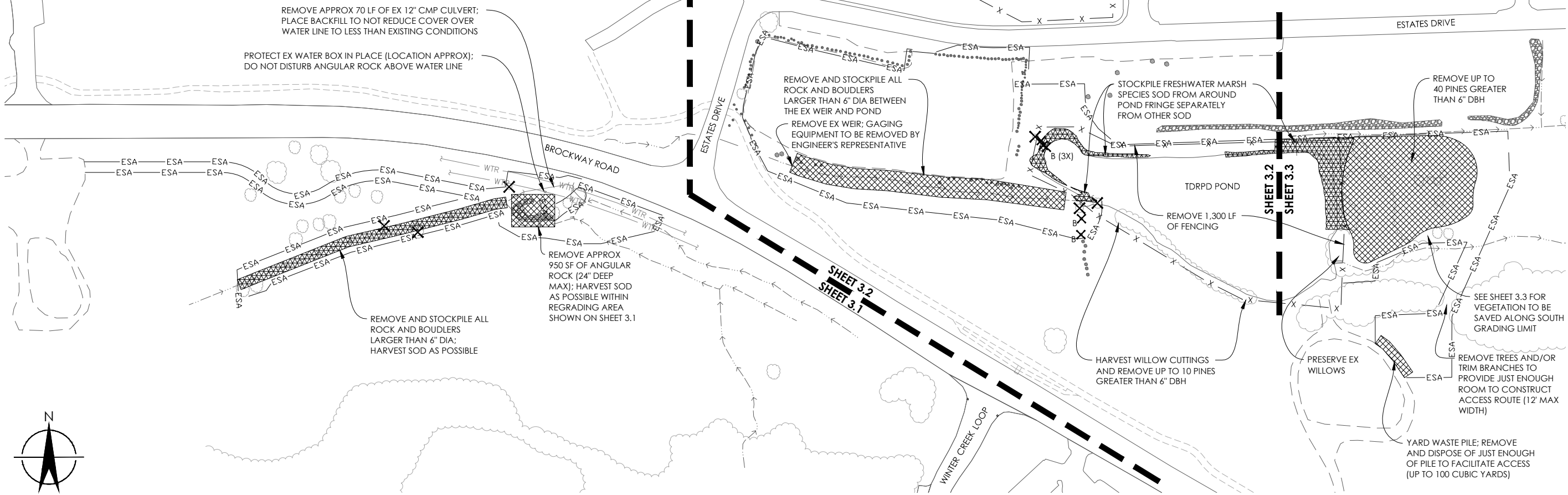
TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

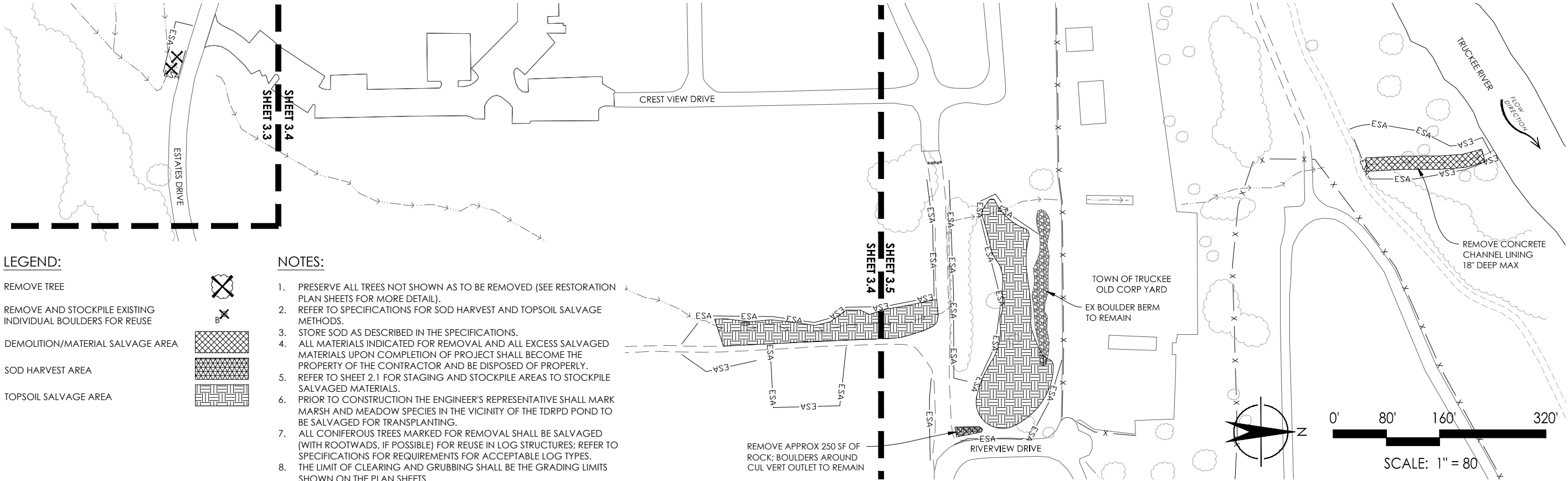
PROJECT NUMBER
214128

SCALE
-

SHEET
2.0

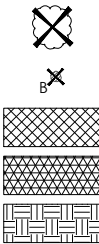


AREAS RELATIVE TO SHEETS 3.1, 3.2, AND 3.3
1" = 80'



AREAS RELATIVE TO SHEETS 3.3, 3.4, AND 3.5
1" = 80'

- LEGEND:**
- REMOVE TREE
 - REMOVE AND STOCKPILE EXISTING INDIVIDUAL BOULDERS FOR REUSE
 - DEMOLITION/MATERIAL SALVAGE AREA
 - SOD HARVEST AREA
 - TOPSOIL SALVAGE AREA



- NOTES:**
- PRESERVE ALL TREES NOT SHOWN AS TO BE REMOVED (SEE RESTORATION PLAN SHEETS FOR MORE DETAIL).
 - REFER TO SPECIFICATIONS FOR SOD HARVEST AND TOPSOIL SALVAGE METHODS.
 - STORE SOD AS DESCRIBED IN THE SPECIFICATIONS.
 - ALL MATERIALS INDICATED FOR REMOVAL AND ALL EXCESS SALVAGED MATERIALS UPON COMPLETION OF PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF PROPERLY.
 - REFER TO SHEET 2.1 FOR STAGING AND STOCKPILE AREAS TO STOCKPILE SALVAGED MATERIALS.
 - PRIOR TO CONSTRUCTION THE ENGINEER'S REPRESENTATIVE SHALL MARK MARSH AND MEADOW SPECIES IN THE VICINITY OF THE TDRPD POND TO BE SALVAGED FOR TRANSPLANTING.
 - ALL CONIFEROUS TREES MARKED FOR REMOVAL SHALL BE SALVAGED (WITH ROOTWADS, IF POSSIBLE) FOR REUSE IN LOG STRUCTURES; REFER TO SPECIFICATIONS FOR REQUIREMENTS FOR ACCEPTABLE LOG TYPES.
 - THE LIMIT OF CLEARING AND GRUBBING SHALL BE THE GRADING LIMITS SHOWN ON THE PLAN SHEETS.
 - NOT ALL UTILITIES ARE SHOWN, REFER TO RESTORATION PLAN SHEETS FOR APPROXIMATE UTILITY LOCATIONS.

PREPARED BY

Balance Hydrologics, Inc.

P.O. Box 1077
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Truckee, CA 96161
tel: (530) 550-5576
www.balancehydro.com

SUBMITTALS / REVISIONS	
DESIGNED BY	DATE
D SHAW	3-11-15
DRAWN BY	DS
P KULCHAWIK	11-25-15
CHECKED BY	PK
E BALLMAN	5-13-16
IN CHARGE	4-26-17
P KULCHAWIK	6-23-17
DATE	6-23-17

REGISTERED PROFESSIONAL ENGINEER

PEER K. KULCHAWIK

No. C83042

Exp. 09-30-18

STATE OF CALIFORNIA

DEMOLITION AND SOD HARVEST PLAN

TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA

TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER

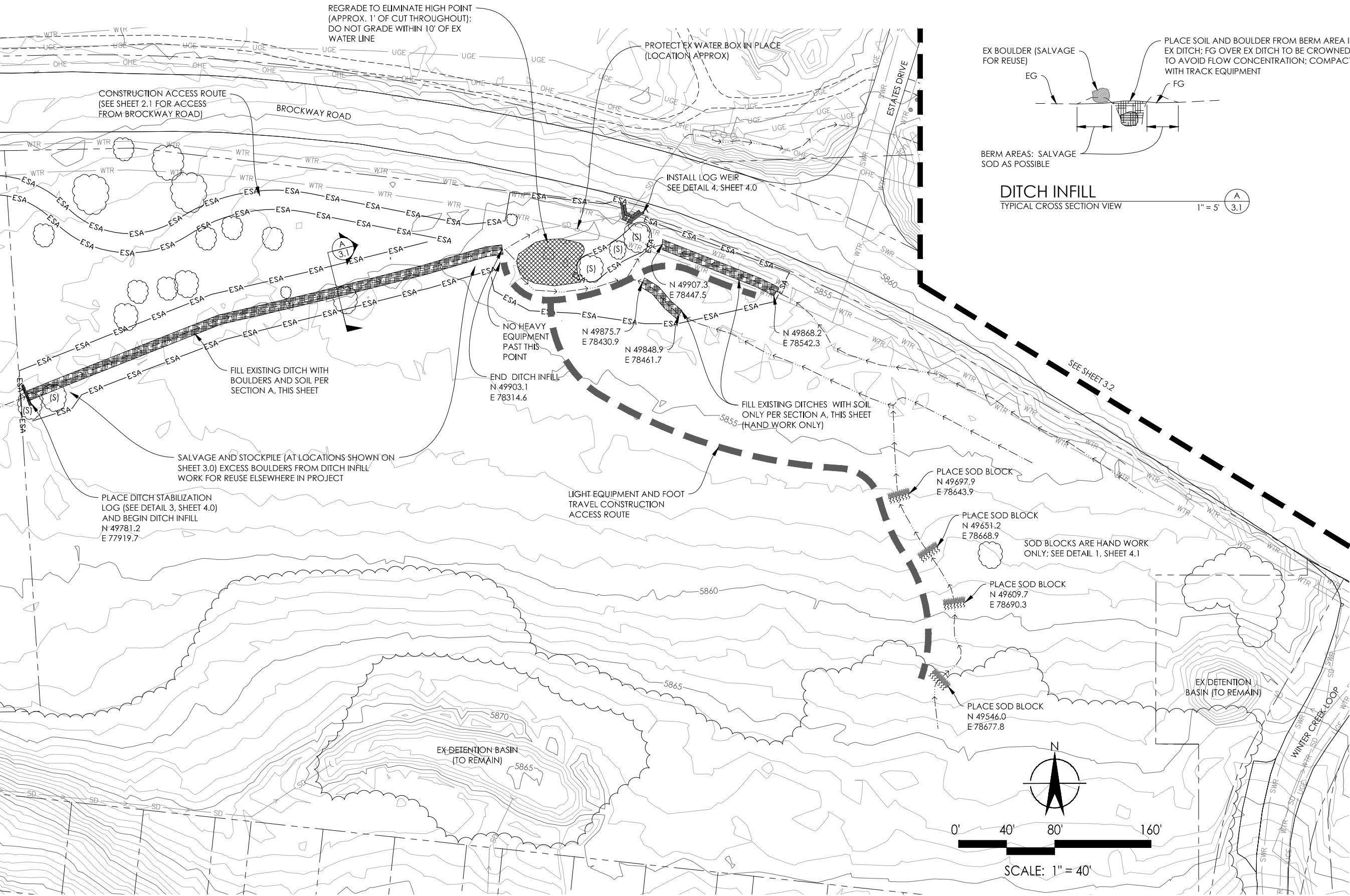
214128

SCALE

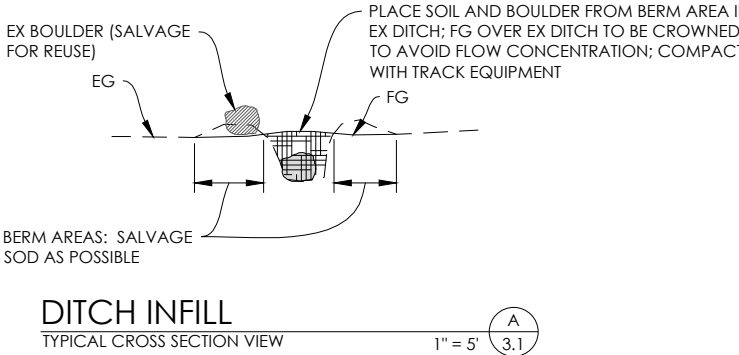
1" = 80'

SHEET

3.0



- NOTES:
1. TRIMMING OF BRANCHES ON TREES MARKED TO BE SAVED IS ALLOWABLE UPON APPROVAL BY THE ENGINEER'S REPRESENTATIVE.
 2. REFER TO SHEET 5.1 FOR PLANTING PLAN.
 3. REFER TO SHEET 2.1 FOR LIGHT EQUIPMENT DEFINITION.



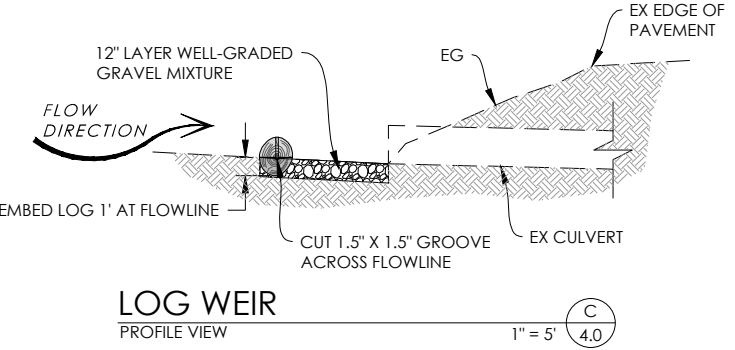
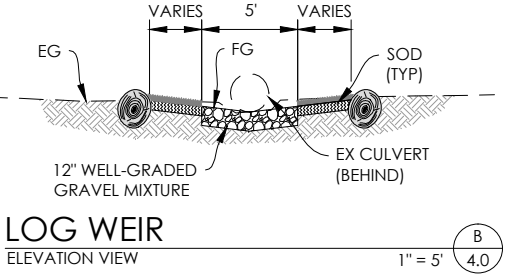
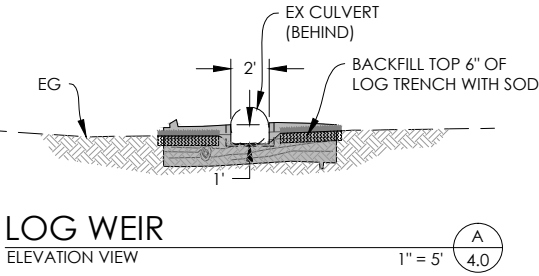
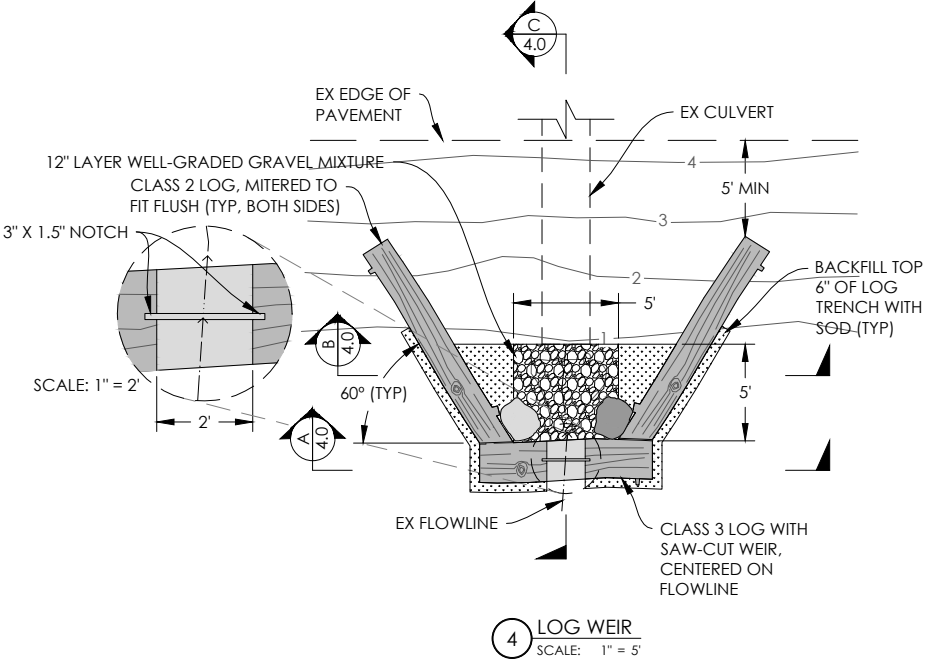
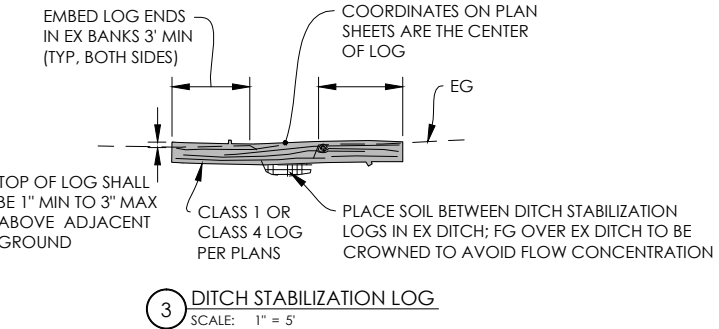
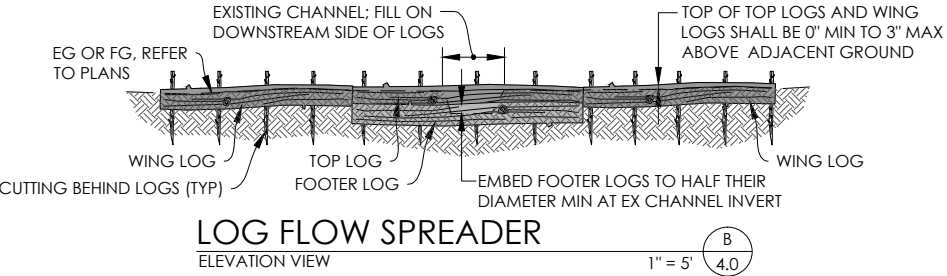
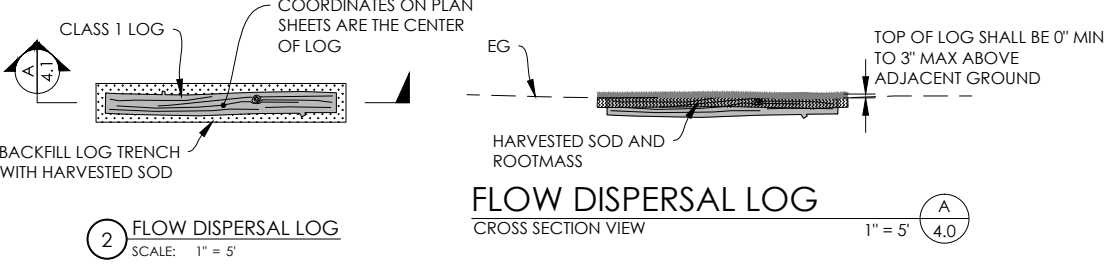
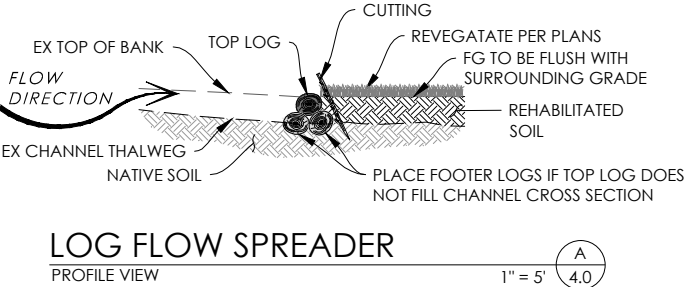
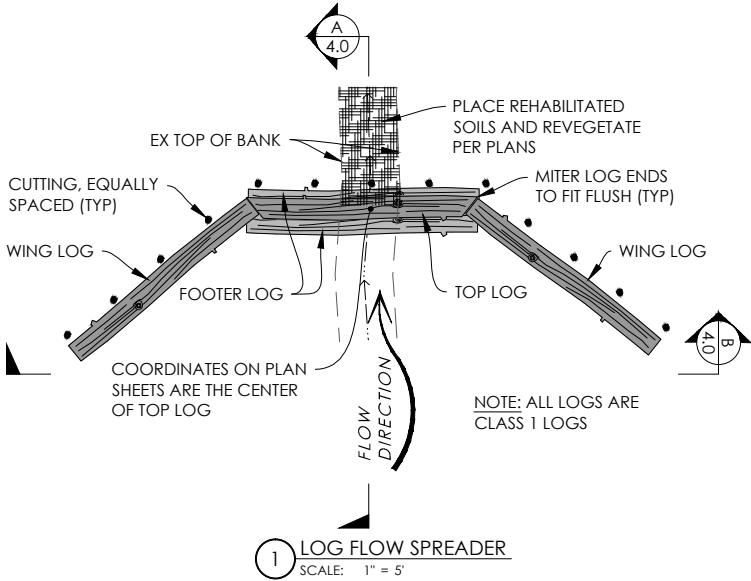
PREPARED BY
Balance Hydrologics, Inc.
P.O. Box 1077
12020 Donner Pass Road
Truckee, CA 96161
tel (530) 550-5500 fax (530) 550-5506
www.balancehydro.com

DESIGNED BY		DATE		BY		SUBMITTALS / REVISIONS	
D SHAW		3-11-15		DS		30% PLANS	
P KULCHAWIK		11-25-15		PK		60% PLANS	
CHECKED BY		5-13-16		PK		95% PLANS	
E BALLMAN		4-26-17		PK		100% PLANS	
IN CHARGE		6-23-17		PK		100% PLANS (REVISED)	
P KULCHAWIK							
DATE		6-23-17					



**TDLT PARCEL
RESTORATION PLAN**
TRUCKEE MEADOWS RESTORATION
NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER	214128
SCALE	1" = 40'
SHEET	



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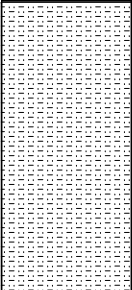
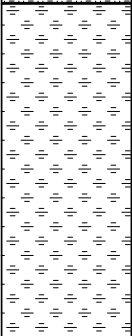
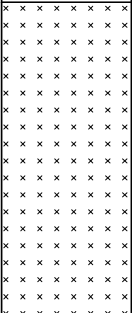
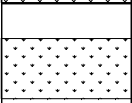
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IN CHARGE	6-23-17	PK	100% PLANS (REVISED)
P KULCHAWIK			
DATE	6-23-17		



WETLAND DETAILS 1
TRUCKEE MEADOWS RESTORATION
NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER 214128
SCALE AS SHOWN
SHEET

Y:_PROJECTS\2141281 TRUCKEE WETLANDS DESIGN\214128 CAD\214128 SHEETS\314128-0500-REV-EC00.DWG

Symbol	Treatment	Botanical Name	Common Name	Type / Size	Rate	Approximate Quantities
	MEADOW SEED MIX TYPE 1 (SUBMERSEED)	<i>Arnica chamissonis</i>	meadow arnica	Seed	Pure Live Seed (Pounds per Acre) 0.50	Pounds of Seed 0.5
		<i>Carex athrostachya</i>	slender beak sedge	Seed	1.50	1.6
		<i>Carex nebrascensis</i>	Nebraska sedge	Seed	1.50	1.6
		<i>Carex praegracilis</i>	field sedge	Seed	1.50	1.6
		<i>Deschampsia cespitosa</i>	tufted hair grass	Seed	0.25	0.3
		<i>Hordeum brachyantherum</i>	meadow barley	Seed	4.00	4.4
		<i>Mimulus guttatus</i>	seep monkeyflower	Seed	0.10	0.1
		<i>Symphytotrichum spathulatum</i>	western mountain aster	Seed	0.25	0.3
		<i>Potentilla gracilis</i>	northwest cinquefoil	Seed	0.25	0.3
		<i>Sidalcea oregana</i>	Oregon checkerbloom	Seed	0.50	0.5
			Total Seed Mix		1.090 acres	11.3
	MEADOW SEED MIX TYPE 2	<i>Arnica chamissonis</i>	meadow arnica	Seed	Pure Live Seed (Pounds per Acre) 0.10	Pounds of Seed 0.2
		<i>Carex praegracilis</i>	field sedge	Seed	0.50	0.9
		<i>Carex nebrascensis</i>	Nebraska sedge	Seed	0.50	0.9
		<i>Deschampsia cespitosa</i>	tufted hair grass	Seed	0.25	0.5
		<i>Elymus trachycaulus</i>	slender wheatgrass	Seed	4.00	7.4
		<i>Geum macrophyllum</i>	large leaf avens	Seed	1.00	1.9
		<i>Hordeum brachyantherum</i>	meadow barley	Seed	4.00	7.4
		<i>Penslemon rydbergii</i>	Rydberg's penstemon	Seed	0.50	0.9
		<i>Poa secunda</i>	Sandberg's bluegrass	Seed	1.00	1.9
		<i>Potentilla gracilis</i>	northwest cinquefoil	Seed	0.25	0.5
		<i>Sidalcea oregana</i>	Oregon checker bloom	Seed	0.50	0.9
		<i>Symphytotrichum spathulatum</i>	western mountain aster	Seed	0.25	0.5
			Total Seed Mix		1.855 acres	23.8
	SAGESCRUB SEED MIX	<i>Artemisia tridentata</i> ssp. <i>vaseyana</i>	mountain big sagebrush	Seed	Pure Live Seed (Pounds per Acre) 0.50	Pounds of Seed 0.7
		<i>Bromus cinnatus</i>	California bromegrass	Seed	7.00	9.3
		<i>Elymus elymoides</i>	squimeltail	Seed	6.00	8.0
		<i>Encamera nauseosa</i>	rubber rabbitbrush	Seed	2.00	2.7
		<i>Eriogonum umbellatum</i>	sulphur buckwheat	Seed	1.00	1.3
		<i>Lupinus argenteus</i>	silvery lupine	Seed	1.00	1.3
		<i>Lupinus grayi</i>	Sierra lupine	Seed	3.00	4.0
		<i>Penslemon speciosus</i>	royal penstemon	Seed	1.00	1.3
		<i>Poa secunda</i> ssp. <i>secunda</i>	Sandberg's bluegrass	Seed	0.50	0.7
		<i>Purshia tridentata</i>	antelope bitterbrush	Seed	1.00	1.3
		<i>Sipa occidentalis</i>	Sierra needlegrass	Seed	1.80	2.4
			Total Seed Mix		1.334 acres	33.1
	CUTTINGS	<i>Salix lasiandra</i>	Pacific willow	Cuttings	Spacing 3'-0" OC	# Cuttings 193
		<i>Salix lemmonii</i>	Lemmon's willow	Cuttings	3'-0" OC	193
		<i>Salix scouleriana</i>	Nuttall willow	Cuttings	3'-0" OC	193

REVEGETATION NOTES

GENERAL

- ALL AREAS OF REVEGETATION ARE SUBJECT TO IN-FIELD DESIGN VERIFICATION AND ADJUSTMENTS AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE. AT ALL TIMES, RETAIN EXISTING NATIVE VEGETATION WHENEVER POSSIBLE.
- EXISTING GRADES AND CONDITIONS SHALL BE CONFORMED TO WHENEVER POSSIBLE. ANY ADJACENT OR OFFSITE AREAS DISTURBED BY THE CONTRACTOR'S OPERATION MUST BE RESTORED BY THE CONTRACTOR TO THE PREDISTURBANCE CONDITION TO THE SATISFACTION OF THE ENGINEER'S REPRESENTATIVE.
- REFER TO THE PROJECT SPECIFICATIONS AND THE DETAILS ON THE DRAWINGS FOR ADDITIONAL INFORMATION.
- ALL REVEGETATION AREAS SHALL RECEIVE SOIL REHABILITATION TREATMENTS BEFORE PLANTING AND/OR SEEDING; REFER TO SPECIFICATIONS SECTION 32 91 00, PLANTING PREPARATION.

SOD NOTES

- HARVEST
 - ALL SOD (SOD STRIPS, SOD PLUGS, AND FRESHWATER MARSH SOD PLUGS) SHALL BE HARVESTED AND STORED AS DESCRIBED IN THE SPECIFICATIONS.
 - SOD STRIPS SHALL BE 2' BY 3' PIECES OF SOD, AS SHOWN IN DETAIL 1, SHEET 5.6.
 - SOD PLUGS SHALL BE 4-INCH DIAMETER, MINIMUM.
 - FRESHWATER MARSH SOD PLUGS SHALL BE 1' BY 1' SQUARE PIECES OF FRESHWATER MARSH SOD.
- GENERAL SOD INSTALLATION
 - SOD SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND APPROVED BY THE ENGINEER'S REPRESENTATIVE.
 - SCARIFY COMPACTED SOILS TO A DEPTH OF 6 INCHES MIN. PRIOR TO SOD PLACEMENT.
 - THE SUBGRADE BELOW SOD INSTALLATIONS SHALL CONSIST OF NATIVE OR REHABILITATED SOILS GRADED TO A SMOOTH, STABLE SURFACE, PRIOR TO PLACEMENT, THE SUBGRADE SHALL BE SATURATED TO A MINIMUM DEPTH OF 4 INCHES.
 - SOD STRIPS SHALL BE INSTALLED WITH SIDES SNUGLY ADJOINING ADJACENT SECTIONS. ANY VOIDS BETWEEN SOD STRIPS SHALL BE BACK-FILLED WITH NATIVE TOPSOIL AND HAND-TAMPED. SOD STRIPS SHALL BE FIRMLY TAMPED OR ROLLED AFTER PLACEMENT TO MINIMIZE AIR POCKETS BETWEEN THE PREPARED SURFACE AND ROOTS.
 - SOD PLUGS AND FRESHWATER MARSH SOD PLUGS SHALL BE INSTALLED WITH THE ROOT CROWN AT THE ADJACENT GRADE ELEVATION.
 - SOD PLUGS AND FRESHWATER MARSH SOD PLUGS SHALL BE FIRMLY TAMPED OR ROLLED AFTER PLACEMENT TO MINIMIZE AIR POCKETS.
- FRESHWATER MARSH SOD PLUG INSTALLATION
 - FRESHWATER MARSH SOD PLUGS SHALL BE INSTALLED IN A CHECKERBOARD PATTERN, LEAVING A 1'X1' SPACE BETWEEN PLUGS.

PLANTING

- PLANTING AREAS ARE SHOWN DIAGRAMMATICALLY. PLANTS SHALL BE LOCATED BY THE CONTRACTOR ACCORDING TO THE LAYOUT SHOWN ON THE DRAWINGS. PLANTS SHALL BE PLACED IN A RANDOM DISTRIBUTION TO MIMIC A NATURAL LAYOUT; REFER TO PLANT LAYOUT DETAIL ON SHEET 5.2.
- PLANT QUANTITIES SHOWN IN THE PLANT MATRIX ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL VERIFY AND INSTALL THE ACTUAL QUANTITIES FROM THE PLANTING PLANS.
- UNLESS OTHERWISE NOTED ON THE DRAWINGS OR DIRECTED BY THE ENGINEER'S REPRESENTATIVE, ANY AREA OUTSIDE OF THE GRADING LIMITS THAT IS DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE REVEGETATED USING WITH THE APPROPRIATE SEED MIX AT THE SATISFACTION OF THE ENGINEER'S REPRESENTATIVE.

IRRIGATION AND WATERING

- THE PROJECT HAS BEEN DESIGNED TO PROVIDE LONG-TERM HYDROLOGIC SUPPORT FOR THE PLANTING AREAS. WATERING IS PRESCRIBED FOR THE PLANT ESTABLISHMENT PERIOD, AND IS DESCRIBED IN THE SPECIFICATIONS. AN IRRIGATION SYSTEM IS NOT PRESCRIBED, HOWEVER, IF IN THE OPINION OF THE CONTRACTOR AN IRRIGATION SYSTEM IS NEEDED FOR SUPPLEMENTAL WATERING IN ORDER TO MEET THE PERFORMANCE STANDARDS, THEN THE CONTRACTOR MAY ELECT TO INSTALL A TEMPORARY IRRIGATION SYSTEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVIDING WATER TO THE PLANTING AREAS AS NECESSARY TO MEET THE PERFORMANCE STANDARDS (SEE SECTION 32 98 00 PLANT ESTABLISHMENT OF THE SPECIFICATIONS).
- THE SOURCE OF IRRIGATION WATER SHALL BE THE TDRPD POND (AS APPROVED BY TDRPD).

PLANT ESTABLISHMENT

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE PLANTS IN A HEALTHY CONDITION AND THE IRRIGATION SYSTEM THROUGHOUT THE PLANT ESTABLISHMENT PERIOD ACCORDING TO THE SPECIFICATIONS.
- THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS DURING THE PLANT ESTABLISHMENT PERIOD WHICH WILL BEGIN UPON THE FINAL ACCEPTANCE OF THE CONTRACTOR'S INSTALLATION OPERATIONS. ALL PLANT ESTABLISHMENT ACTIVITIES SHALL BE COORDINATED WITH THE ENGINEER'S REPRESENTATIVE.

PREPARED BY



Balance Hydrologics, Inc.

P.O. Box 1077
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tel: (530) 550-1576
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SUBMITTALS / REVISIONS					
DESIGNED BY	DATE	BY			
J HALDERMAN	3-11-15	DS	30% PLANS		
DRAWN BY	11-25-15	PK	60% PLANS		
P KULCHAWIK	5-13-16	PK	95% PLANS		
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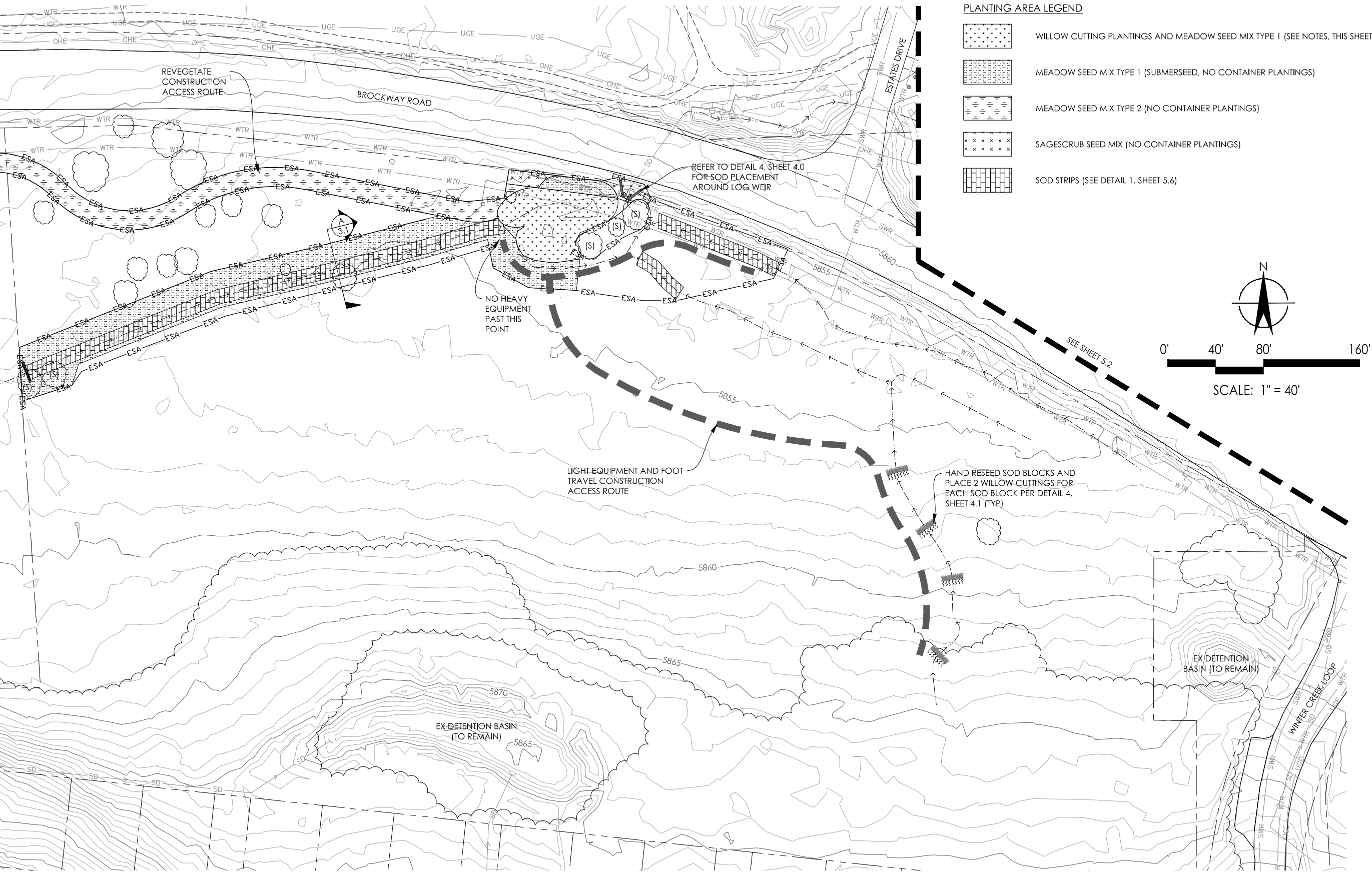
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PLANTING MATRIX AND NOTES

TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER 214128
SCALE -
SHEET 5.0



PLANTING AREA LEGEND

- WILLOW CUTTING PLANTINGS AND MEADOW SEED MIX TYPE 1 (SEE NOTES, THIS SHEET)
- MEADOW SEED MIX TYPE 1 (SUBMERSEED, NO CONTAINER PLANTINGS)
- MEADOW SEED MIX TYPE 2 (NO CONTAINER PLANTINGS)
- SAGESCRUB SEED MIX (NO CONTAINER PLANTINGS)
- SOD STRIPS (SEE DETAIL 1, SHEET 5.6)

- NOTES:**
- 1. SEE SHEET 3.1 FOR RESTORATION PLAN
 - 2. INSTALL WILLOW CUTTINGS 3'-0" ON CENTER WHERE SPECIFIED

PREPARED BY

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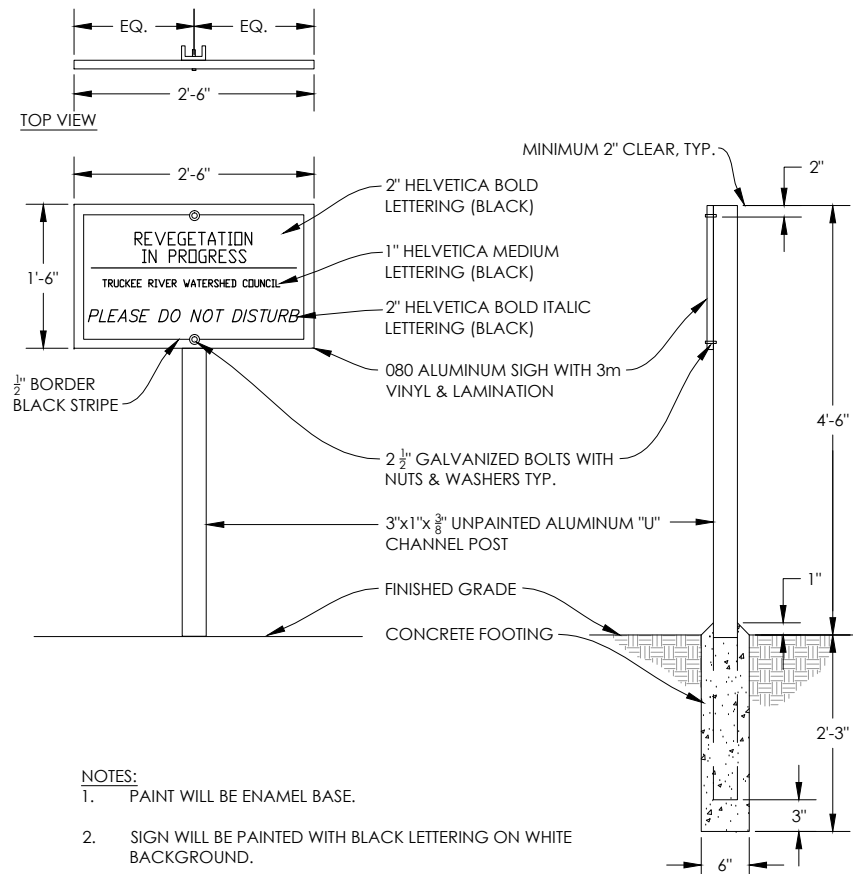
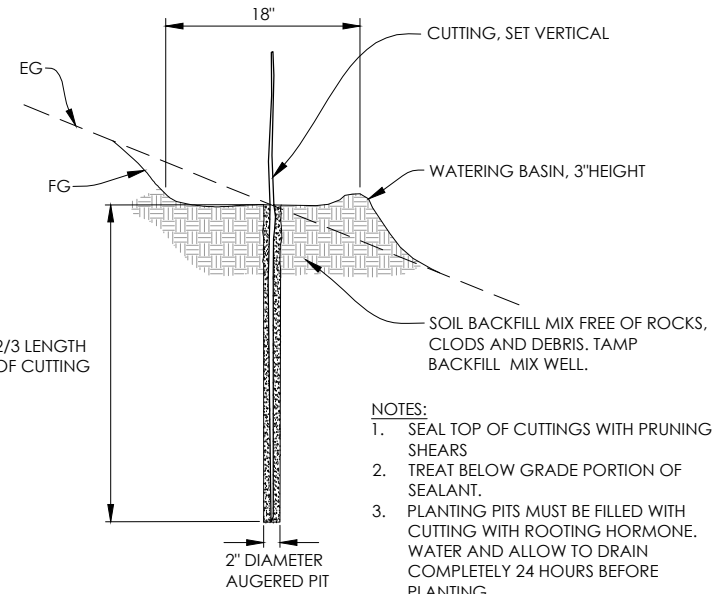
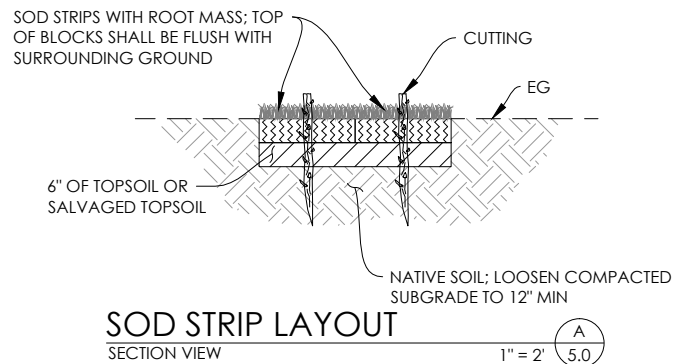
**TDLT PARCEL
PLANTING PLAN**

TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER 214128
SCALE 1" = 40'
SHEET

5.1



Pre-Application –

- o Take care not to allow product to be exposed to excessive cold, heat, direct sun, or moisture prior to or during application. If short-term storage is necessary, the product should be stored in its original packaging in a cool (optimally 50 to 70 degree Fahrenheit) location, away from exposure to direct sunlight. Basements and garages are often the most appropriate location for storage, but take care not to place the product in a location that is prone to excessive afternoon heating or broad temperature swings. Stable conditions are preferable.
- o Target the **shallow water zone** where water is usually present but is usually less than six (6) inches deep during the growing season (May – August). Do not hesitate to apply product to substrate that is not currently inundated (covered with water), especially if there are clues to suggest that water does reach the area during a good portion of the growing season (**transition zone**). NOTE: If the transition zone where the product is placed becomes excessively dry especially early on in the plant's development, periodic watering will increase germination success.
- o Seek out soft (e.g., sandy, muddy, etc.) soils rather than seeding on a stone-lined bank. If stone banks are the only option, consider adding some organic topsoil to create a more inviting setting for plant development. Be sure that the amount of available moisture is appropriate (see below).
- o Avoid seeding in areas that are almost always dry (**upland zone**) or where water is almost always deeper than six (6) inches (**deep water zone**). Obligate species thrive in moist to shallow-water conditions, but extremely dry conditions or deep waters will not allow for germination or long-term survival. Unless a significant drawdown is anticipated **DO NOT SOW PRODUCT IN MORE THAN SIX (6) INCHES OF WATER – GENERALLY, SHALLOWER IS BETTER**

Application –

- o Establish **planting plots** (like the ones shown above) by marking the corners of each plot with a **boundary stake** – the stakes can be removed after application (take care not to disturb product), or can be left in place until the seedlings are well established. A typical application rate is 2,000-lbs of SummerSeed per surface acre (43,560 square feet) or ~1 lb/22 square feet. This rate attempts to ensure sufficient coverage over a given area without adding so much material that resulting seedlings struggle from competitive forces with plants from adjacent particles.
- o The **planting plots** should be small enough (no larger than 20' x 20') that product can be evenly distributed throughout their area. Example: (see above) – Planting plot = 16' or 30 square feet. Each planting plot – in the example above – would require 1.5 pounds of product. **General Rule of Thumb:** At the 2,000-lb/acre application rate, particles should average one to three inches from their nearest neighboring particle.
- o When possible, sow product in a consistent **planting direction** (i.e. shore line, out – left to right) to best ensure uniform coverage.

Post-Application --

- o Consider protecting the area from waterfowl, at least until seedlings are well established. Document the seeded location for future reference and to monitor establishment through time.
- o Make a conscious effort to avoid disturbance of areas already sown with product. Take care to minimize traffic over these areas until plants can establish themselves. Depending on weather and site-specific conditions, plants may not bloom until their second or even third full season. Be patient; nature has a tendency to move at its own pace.



AquaBlok, Ltd.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614 U.S.A.
Telephone (800) 688-2649
Facsimile (419) 385-2990



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6-23-17			

PLANTING DETAILS

TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER
214128
SCALE
AS SHOWN
SHEET

5.6

Attachment 4. Deed Restriction

RECORDING REQUESTED BY:

WHEN RECORDED RETURN TO:

Attention: _____

THIS SPACE FOR RECORDER'S USE ONLY

DECLARATION OF RESTRICTIONS

THIS DECLARATION OF RESTRICTIONS is made as of _____, 2018, by Truckee Donner Land Trust, a not-for-profit Land Trust Accreditation Commission accredited land trust.

WHEREAS, Declarant is the owner of certain real property located in the Town of Truckee, County of Nevada, California, described in Exhibit "A" and depicted in Exhibit "B" attached hereto and incorporated hereby by this reference (hereinafter "Preserve Area"); and

WHEREAS, Declarant intends to develop the above described property as wildlife habitat and a wetland preserve area, to be so held in perpetuity subject to restrictions in accordance with the provisions of the Project Development Plan for the Truckee Meadows Restoration Project approved under the Sacramento District California In-Lieu Fee Program (herein "ILF Program") including the Long Term Management Plan for the Truckee Meadows Restoration ILF Project (Exhibit C) (hereinafter the "Plan"). The Plan was approved through execution of an amendment to the ILF Program Instrument ("Instrument") by the Sacramento District of the U.S. Army Corps of Engineers (hereinafter "USACE"), Region IX of the U.S. Environmental Protection Agency (hereinafter "USEPA"), the State Water Resources Control Board ("State Water Board"), and the Lahontan Regional Water Quality Control Board (hereinafter "Lahontan Water Board") (hereinafter jointly referred to as "Agencies") on **MONTH DAY**, 2018;

WHEREAS, this Declaration of Restrictions is intended to implement the provisions of the Plan requiring a binding covenant running with the land, but shall not be construed to impose restrictions in addition to those provided for by the Plan; and

WHEREAS, the Preserve Area consists of both jurisdictional wetland features and associated natural upland areas;

WHEREAS, the Declaration will benefit all parties to the Declaration in that it will assist in preserving and maintaining the drainage and wildlife habitat in the Preserve Area;

NOW THEREFORE, Declarant declares as follows:

1. Covenant Running with Land. In consideration of the foregoing benefits flowing to all parties; in consideration of the benefits obtained by the Declarant from the Plan, and other valuable consideration, the receipt and adequacy of which is hereby acknowledged, the Declarant does hereby covenant and agree to restrict, and does by this instrument intend to restrict, the future use of the Preserve Area as set forth below, by the establishment of this Covenant running with the land.

2. Restrictions Concerning the Preserve Area. Except for those actions necessary to accomplish preservation, maintenance, repair, fire prevention, or enhancement as has been, or in the future is authorized by the USACE, consistent with the Plan, no person shall engage in any of the following restricted activities in the Preserve Area:

(a) No plowing or cultivation of the Preserve Area or any portion of such area, and no destruction or removal of any natural tree, shrub or other vegetation that exists upon the Preserve Area shall be done or permitted except by the Declarant or its successors and assigns to the Preserve Area, as described in the Plan and in consultation with the USACE, for the purpose of thatch management or the removal/management of newly introduced noxious or dangerous plants as necessary to maintain the Preserve Area;

(b) No materials or debris shall be stored or placed (whether temporarily or permanently) within the Preserve Area or any portion of such area without prior written approval by the USACE;

(c) No discharge of any dredged or fill material shall be done or permitted within the Preserve Area or any portion of such area except as consistent with the terms and conditions of the Plan;

(d) No discharge, dumping, disposal, storage or placement of any trash, refuse, rubbish, grass clippings, cuttings or other waste materials within the Preserve Area or any portion of such area shall be done or permitted;

(e) No leveling, grading or landscaping within the Preserve Area or any portion of such area shall be done or permitted without prior written approval from the USACE;

(f) No destruction or removal of any natural tree, shrub or other vegetation that exists upon the Preserve Area shall be done or permitted except by the Declarant or its successors and assigns to the Preserve Area, for the purposes of thatch management or the removal of noxious or dangerous plants as necessary to maintain the Preserve Area;

(g) No motorized vehicles shall be ridden, brought, used or permitted on any portion of the Preserve Area, except as provided for in (a) and (f) above or with prior written approval by the USACE;

(h) No roads, utility lines, trails, benches, equipment storage, or other structures or activities shall occur within the Preserve Area without prior written approval by the USACE.

(i) No livestock grazing shall occur within the Preserve Area without prior written approval by the USACE.

(j) No alteration of site hydrology (e.g., unnatural flooding or draining) shall occur within the Preserve Area.

3. Not An Offer to Dedicate: No Rights of Public Use. The provisions of this Declaration of Restrictions do not constitute an offer for public use. This Declaration does not constitute an irrevocable offer to dedicate.

4. Successors and Assign Bound. Declarant hereby agrees and acknowledges that the Preserve Area shall be held, sold, conveyed, owned and used subject to the applicable terms, conditions and obligations imposed by this Declaration relating to the use, repair, maintenance and/or improvement of the Preserve Area, and matters incidental thereto. Such terms, conditions and obligations are a burden and restriction on the use of the Preserve Area, as applicable.

The provisions of this Declaration shall (subject to the limitations contained in this Declaration and without modifying the provisions of this Declaration) be enforceable as equitable servitudes and conditions, restrictions and covenants running with the land, and shall be binding on the Declarant and upon each and all of its respective heirs, devisees, successors, and assigns, officers, directors, employees, agents, representatives, executors, trustees, successor trustees, beneficiaries and administrators, and upon future owners of the Preserve Area and each of them.

5. Severability. The provisions of the Declaration are severable and the voiding of any of the provisions of this Declaration by a Court shall not affect any of the other provisions which shall remain in full force and effect.

DECLARANT:

Truckee Donner Land Trust

Date: _____

By: _____

Its _____



STATE OF CALIFORNIA

County of _____

On _____, before me, _____,
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

Personally appeared _____,
Name(s) of Signer(s)

- _____ personally known to me
- _____ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.






Place Notary Seal Above

Signature of Notary Public

EXHIBIT A – LEGAL DESCRIPTION OF “PRESERVE AREA”

EXHIBIT B – MAP OF “PRESERVE AREA”

Key

-  Preserve Parcel (11.86 acres)
-  Rehabilitated Wetland (6.56 acres)
-  Upland Buffer (4.36 acres)
-  Utility Easement (0.78 acre)
-  Stormwater Detention Basin (0.16 acre)

Brockway

Estates

Rehabilitated Wetland
(6.56 acres)

39.3248, -120.1765

39.3252, -120.1711

Truckee Meadows Restoration Project Deed Restriction

Exhibit B. Preserve Map

March 2018



1 inch = 225 feet



Source: USGS Topographic Map
Prepared By: Chris Gurney, NFWF

Kylan Creek

Kinque

Justin Creek

Sara Bear

Marc

Lynn

Chris Course

Jeri

EXHIBIT C – LONG-TERM MANAGEMENT PLAN FOR THE ILF PROJECT

Attachment 5. Title Report

 Guarantee	CLTA Guarantee Form No. 28 - Condition of Title ISSUED BY First American Title Insurance Company GUARANTEE NUMBER 5026900-5500888
---	--

SUBJECT TO THE EXCLUSIONS FROM COVERAGE, THE GUARANTEE CONDITIONS ATTACHED HERETO AND MADE A PART OF THIS GUARANTEE.

FIRST AMERICAN TITLE INSURANCE COMPANY
a Nebraska corporation, herein called the Company

GUARANTEES

against loss or damage not exceeding the Amount of Liability stated in Schedule A sustained by the Assured by reason of any incorrectness in the Assurances set forth in Schedule A

First American Title Insurance Company



Dennis J. Gilmore
President



Jeffrey S. Robinson
Secretary

By:

Authorized Countersignature

This jacket was created electronically and constitutes an original document

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EXCLUSIONS FROM COVERAGE

Except as expressly provided by the assurances in Schedule A, the Company assumes no liability for loss or damage by reason of the following:

- (a) Defects, liens, encumbrances, adverse claims or other matters against the title to any property beyond the lines of the Land.
- (b) Defects, liens, encumbrances, adverse claims or other matters, whether or not shown by the Public Records (1) that are created, suffered, assumed or agreed to by one or more of the Assureds; or, (2) that result in no loss to the Assured.
- (c) Defects, liens, encumbrances, adverse claims or other matters not shown by the Public Records.
- (d) The identity of any party shown or referred to in any of the schedules of this Guarantee.
- (e) The validity, legal effect or priority of any matter shown or referred to in any of the schedules of this Guarantee.
- (f) (1) Taxes or assessments of any taxing authority that levies taxes or assessments on real property; or, (2) proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not the matters excluded under (1) or (2) are shown by the records of the taxing authority or by the Public Records.
- (g) (1) Unpatented mining claims; (2) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (3) water rights, claims or title to water, whether or not the matters excluded under (1), (2) or (3) are shown by the Public Records.

GUARANTEE CONDITIONS

1. Definition of Terms.

The following terms when used in the Guarantee mean:

- a. the "Assured": the party or parties named as the Assured in Schedule A, or on a supplemental writing executed by the Company.
- b. "Land": the Land described or referred to in Schedule A, and improvements affixed thereto which by law constitute real property. The term "Land" does not include any property beyond the lines of the area described or referred to in Schedule A, nor any right, title, interest, estate or easement in abutting streets, roads, avenues, alleys, lanes, ways or waterways.
- c. "Mortgage": mortgage, deed of trust, trust deed, or other security instrument.
- d. "Public Records": those records established under California statutes at Date of Guarantee for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without knowledge.
- e. "Date of Guarantee": the Date of Guarantee set forth in Schedule A.
- f. "Amount of Liability": the Amount of Liability as stated in Schedule A.

2. Notice of Claim to be Given by Assured.

The Assured shall notify the Company promptly in writing in case knowledge shall come to an Assured of any assertion of facts, or claim of title or interest that is contrary to the assurances set forth in Schedule A and that might cause loss or damage for which the Company may be liable under this Guarantee. If prompt notice shall not be given to the Company, then all liability of the Company shall terminate with regard to the matter or matters for which prompt notice is required; provided, however, that failure to notify the Company shall in no case prejudice by the failure and then only to the extent of the prejudice.

3. No Duty to Defend or Prosecute.

The Company shall have no duty to defend or prosecute any action or proceeding to which the Assured is a party, notwithstanding the nature of any allegation in such action or proceeding.

4. Company's Option to Defend or Prosecute Actions; Duty of Assured to Cooperate.

Even though the Company has no duty to defend or prosecute as set forth in Paragraph 3 above:

- a. The Company shall have the right, at its sole option and cost, to institute and prosecute any action or proceeding, interpose a defense, as limited in Paragraph 4 (b), or to do any other act which in its opinion may be necessary or desirable to establish the correctness of the assurances set forth in Schedule A or to prevent or reduce loss or damage to the Assured. The Company may take any appropriate action under the terms of this Guarantee, whether or not it shall be liable hereunder, and shall not thereby concede liability or waive any provision of this Guarantee. If the Company shall exercise its rights under this paragraph, it shall do so diligently.
- b. If the Company elects to exercise its options as stated in Paragraph 4(a) the Company shall have the right to select counsel of its choice (subject to the right of the Assured to object for reasonable cause) to represent the Assured and shall not be liable for and will not pay the fees of any other counsel, nor will the Company pay any fees, costs or expenses incurred by an Assured in the defense of those causes of action which allege matters not covered by this Guarantee.
- c. Whenever the Company shall have brought an action or interposed a defense as permitted by the provisions of this Guarantee, the Company may pursue any litigation to final determination by a court of competent jurisdiction and expressly reserves the right, in its sole discretion, to appeal from an adverse judgment or order.
- d. In all cases where this Guarantee permits the Company to prosecute or provide for the defense of any action or proceeding, the Assured shall secure to the Company the right to so prosecute or provide for the defense of any action or proceeding, and all appeals therein, and permit the Company to use, at its option, the name of such Assured for this purpose. Whenever requested by

the Company, the Assured, at the Company's expense, shall give the Company all reasonable aid in any action or proceeding, securing evidence, obtaining witnesses, prosecuting or defending the action or lawful act which in the opinion of the Company may be necessary or desirable to establish the correctness of the assurances set forth in Schedule A to prevent or reduce loss or damage to the Assured. If the Company is prejudiced by the failure of the Assured to furnish the required cooperation, the Company's obligations to the Assured under the Guarantee shall terminate.

5. Proof of Loss or Damage.

- a. In the event the Company is unable to determine the amount of loss or damage, the Company may, at its option, require as a condition of payment that the Assured furnish a signed proof of loss. The proof of loss must describe the defect, lien, encumbrance, or other matter that constitutes the basis of loss or damage and shall state, to the extent possible, the basis of calculating the amount of the loss or damage.
- b. In addition, the Assured may reasonably be required to submit to examination under oath by any authorized representative of the Company and shall produce for examination, inspection and copying, at such reasonable times and places as may be designated by any authorized representative of the Company, all records, books, ledgers, checks, correspondence and memoranda, whether bearing a date before or after Date of Guarantee, which reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Assured shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect and copy all records, books, ledgers, checks, correspondence and memoranda in the custody or control of a third party, which reasonably pertain to the loss or damage. All information designated as confidential by the Assured provided to the Company pursuant to this paragraph shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the administration of the claim. Failure of the Assured to submit for examination under oath, produce other reasonably requested information or grant permission to secure reasonable necessary information from third parties, as required in the above paragraph, unless prohibited by law or governmental regulation, shall terminate any liability of the Company under this Guarantee to the Assured for that claim.

6. Options to Pay or Otherwise Settle Claims:

Termination of Liability.

In case of a claim under this Guarantee, the Company shall have the following additional options:

- a. To pay or tender payment of the Amount of Liability together with any costs, attorneys' fees, and expenses incurred by the Assured that were authorized by the Company up to the time of payment or tender of payment and that the Company is obligated to pay.

- b. To pay or otherwise settle with the Assured any claim assured against under this Guarantee. In addition, the Company will pay any costs, attorneys' fees, and expenses incurred by the Assured that were authorized by the Company up to the time of payment or tender of payment and that the Company is obligated to pay; or
- c. To pay or otherwise settle with other parties for the loss or damage provided for under this Guarantee, together with any costs, attorneys' fees, and expenses incurred by the Assured that were authorized by the Company up to the time of payment and that the Company is obligated to pay.

Upon the exercise by the Company of either of the options provided for in 6 (a), (b) or (c) of this paragraph the Company's obligations to the Assured under this Guarantee for the claimed loss or damage, other than the payments required to be made, shall terminate, including any duty to continue any and all litigation initiated by the Company pursuant to Paragraph 4.

7. Limitation Liability.

- a. This Guarantee is a contract of Indemnity against actual monetary loss or damage sustained or incurred by the Assured claimant who has suffered loss or damage by reason of reliance upon the assurances set forth in Schedule A and only to the extent herein described, and subject to the Exclusions From Coverage of This Guarantee.
- b. If the Company, or the Assured under the direction of the Company at the Company's expense, removes the alleged defect, lien, or encumbrance or cures any other matter assured against by this Guarantee in a reasonably diligent manner by any method, including litigation and the completion of any appeals therefrom, it shall have fully performed its obligations with respect to that matter and shall not be liable for any loss or damage caused thereby.
- c. In the event of any litigation by the Company or with the Company's consent, the Company shall have no liability for loss or damage until there has been a final determination by a court of competent jurisdiction, and disposition of all appeals therefrom.
- d. The Company shall not be liable for loss or damage to the Assured for liability voluntarily assumed by the Assured in settling any claim or suit without the prior written consent of the Company.

8. Reduction of Liability or Termination of Liability.

All payments under this Guarantee, except payments made for costs, attorneys' fees and expenses pursuant to Paragraph 4 shall reduce the Amount of Liability under this Guarantee pro tanto.

9. Payment of Loss.

- a. No payment shall be made without producing this Guarantee for endorsement of the payment unless the Guarantee has been lost or destroyed, in which case proof of loss or destruction shall be furnished to the satisfaction of the Company.
- b. When liability and the extent of loss or damage has been definitely fixed in accordance with these Conditions, the loss or damage shall be payable within thirty (30) days thereafter.

10. Subrogation Upon Payment or Settlement.

Whenever the Company shall have settled and paid a claim under this Guarantee, all right of subrogation shall vest in the Company unaffected by any act of the Assured claimant.

The Company shall be subrogated to and be entitled to all rights and remedies which the Assured would have had against any person or property in respect to the claim had this Guarantee not been issued. If requested by the Company, the Assured shall transfer to the Company all rights and remedies against any person or property necessary in order to perfect this right of subrogation. The Assured shall permit the Company to sue, compromise or settle in the name of the Assured and to use the name of the Assured in any transaction or litigation involving these rights or remedies.

If a payment on account of a claim does not fully cover the loss of the Assured the Company shall be subrogated to all rights and remedies of the Assured after the Assured shall have recovered its principal, interest, and costs of collection.

11. Arbitration.

Either the Company or the Assured may demand that the claim or controversy shall be submitted to arbitration pursuant to the Title Insurance Arbitration Rules of the American Land Title Association ("Rules"). Except as provided in the Rules, there shall be no joinder or consolidation with claims or controversies of other persons. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Assured arising out of or relating to this Guarantee, any service of the Company in connection with its issuance or the breach of a Guarantee provision, or to any other controversy or claim arising out of the transaction giving rise to this Guarantee. All arbitrable matters when the amount of liability is \$2,000,000 or less shall be arbitrated at the option of either the Company or the Assured. All arbitrable matters when the amount of liability is in excess of \$2,000,000 shall be arbitrated only when agreed to by both the Company and the Assured. Arbitration pursuant to this Guarantee and under the Rules shall be binding upon the parties. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court of competent jurisdiction.

12. Liability Limited to This Guarantee; Guarantee Entire Contract.

- a. This Guarantee together with all endorsements, if any, attached hereto by the Company is the entire Guarantee and contract between the Assured and the Company. In interpreting any provision of this Guarantee, this Guarantee shall be construed as a whole.
- b. Any claim of loss or damage, whether or not based on negligence, or any action asserting such claim, shall be restricted to this Guarantee.
- c. No amendment of or endorsement to this Guarantee can be made except by a writing endorsed hereon or attached hereto signed by either the President, a Vice President, the Secretary, an Assistant Secretary, or validating officer or authorized signatory of the Company.

13. Severability.

In the event any provision of this Guarantee, in whole or in part, is held invalid or unenforceable under applicable law, the Guarantee shall be deemed not to include that provision or such part held to be invalid, but all other provisions shall remain in full force and effect.

14. Choice of Law; Forum.

- a. Choice of Law: The Assured acknowledges the Company has underwritten the risks covered by this Guarantee and determined the premium charged therefor in reliance upon the law affecting interests in real property and applicable to the interpretation, rights, remedies, or enforcement of Guarantees of the jurisdiction where the Land is located. Therefore, the court or an arbitrator shall apply the law of the jurisdiction where the Land is located to determine the validity of claims that are adverse to the Assured and to interpret and enforce the terms of this Guarantee. In neither case shall the court or arbitrator apply its conflicts of law principles to determine the applicable law.
- b. Choice of Forum: Any litigation or other proceeding brought by the Assured against the Company must be filed only in a state or federal court within the United States of America or its territories having appropriate jurisdiction.

15. Notices, Where Sent.

All notices required to be given the Company and any statement in writing required to be furnished the Company shall include the number of this Guarantee and shall be addressed to the Company at **First American Title Insurance Company, Attn: Claims National Intake Center, 5 First American Way, Santa Ana, California 92707. Phone: 888-632-1642 (claims.nic@firstam.com).**

 Schedule A	CLTA Guarantee Form No. 28 - Condition of Title ISSUED BY First American Title Insurance Company GUARANTEE NUMBER 5026900-5500888
--	--

File No.: 5500888

Guarantee No. 5500888

Amount of Liability: \$400

Date of Guarantee: July 07, 2017 at 7:30 A.M.

Fee: \$400

1. Name of Assured:

First American Title Company-Truckee

2. The estate or interest in the Land which is covered by this Guarantee is:

FEE

3. The Land referred to in this Guarantee is described as follows:

Real property in the City of NEVADA, County of Nevada, State of California, described as follows:

PARCEL A, AS SHOWN ON THE MAP ENTITLED, "WINTERCREEK", FILED FOR RECORD 12/27/2004, IN [BOOK 8 OF MAPS, PAGE 131](#), NEVADA COUNTY RECORDS.

APN: 19-810-01

4. ASSURANCES:

According to the Public Records as of the Date of Guarantee,

a. Title to the estate or interest in the Land is vested in:

TRUCKEE DONNER LAND TRUST, A CALIFORNIA TAX EXEMPT NON-PROFIT CORPORATION

b. Title to the estate or interest is subject to defects, liens, or encumbrances shown in Schedule B which are not necessarily shown in the order of their priority.

 Schedule B	CLTA Guarantee Form No. 28 - Condition of Title ISSUED BY First American Title Insurance Company GUARANTEE NUMBER 5026900-5500888
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File No.: 5500888

1. General and special taxes and assessments for the fiscal year 2017-2018, a lien not yet due or payable.
2. All taxes - secured, supplemental, defaulted, escaped and including bonds and assessments are not available at this time. Please verify any/all tax amounts and assessment information with the County Tax Collector prior to the close of the contemplated transaction.
3. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.
4. An easement for ROAD RIGHT OF WAY and incidental purposes in the document recorded April 15, 1937 as [BOOK 36, PAGE 432](#) of Official Records.

The location of the easement cannot be determined from record information.

5. A waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway or roadway, as contained in the document recorded December 03, 1992 as INSTRUMENT NO. [1992-42418](#) of Official Records.
6. A waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway or roadway, as contained in the document recorded December 03, 1992 as INSTRUMENT NO. [1992-42420](#) of Official Records.
7. An easement for public utilities and incidental purposes in the document recorded January 29, 2003 as INSTRUMENT NO. [2003004417](#) of Official Records.
8. The effect of a map purporting to show the land and other property, filed APRIL 09, 2003, IN [BOOK 12, PAGE 412](#) of Record of Surveys.
9. An easement for public utilities and incidental purposes in the document recorded May 13, 2003 as INSTRUMENT NO. [2003024672](#) of Official Records.
10. Any and all offers of dedications, conditions, restrictions, easements, notes and/or provisions shown or disclosed by the filed or recorded map referred to in the legal description including but not limited to: PUBLIC UTILITY and incidental purposes affecting said land.

The location of the easement cannot be determined from record information.

11. An easement for STORM DRAIN DETENTION BASIN and incidental purposes in the document recorded December 27, 2004 as INSTRUMENT. [2004053876](#) of Official Records.

12. Water rights, claims or title to water, whether or not shown by the public records.

13. Rights of the public in and to that portion of the land lying within any Road, Street, Alley or Highway.

Sub 8/31
DW

Map 131

OWNER'S STATEMENT

THE UNDERSIGNED HEREBY STATE THAT THEY ARE THE ONLY PERSONS HAVING ANY RECORD TITLE INTEREST IN THE REAL PROPERTY INCLUDED WITHIN THIS SUBDIVISION, AND DO HEREBY CONSENT TO THE PREPARATION AND FILING OF THIS MAP AND TO THE DESIGNATION OF THE AREAS SHOWN THEREON TO THE PUBLIC, FOR SPECIFIC PURPOSES, THE FOLLOWING:

- 1) PUBLIC UTILITY EASEMENT (PUE) ON, OVER, UNDER AND ACROSS THE LAND DESIGNATED AS AREA 'A', AREA 'U', AND ALL LAND LYING WITHIN THE PRIVATE ROADS DESIGNATED AS AREA 'A', AREA 'B', AREA 'C', AREA 'D', AND ALL AREAS DESIGNATED AS 'PUE', AND SHALL CONSIST OF NON-EXCLUSIVE EASEMENTS FOR THE FOLLOWING PURPOSES:
 - A) FOR THE INSTALLATION AND MAINTENANCE OF WATER, GAS, AND SANITARY UTILITIES, AND ALL APPURTENANCES THEREON;
 - B) FOR UNDERGROUND WRES AND CONDUITS FOR ELECTRIC, TELEVISION, TELEPHONE, TELECOMMUNICATION, AND OTHER COMMUNICATION SERVICES, TOGETHER WITH ANY AND ALL APPURTENANCES THEREON;
 - C) FOR SURFACE DRAINAGE, TOGETHER WITH ANY AND ALL APPURTENANCES THEREON.
- 2) EASEMENT ACCESS EASEMENTS THROUGH AND OVER THE AREAS SHOWN AS WINTER CREEK LOOP, KYLAN CREEK COURT, COLTON CREEK COURT, JUSTIN CREEK COURT, KIMQUE COURT, AND SARA BEAR LANE, FOR USE BY PUBLIC, COUNTY, OR STATE AGENCIES IN RESPONSE TO LAW ENFORCEMENT, FIRE, MEDICAL, OR NATURAL DISASTER CAUSED EMERGENCIES.
- 3) DRAINAGE EASEMENTS FOR DRAINAGE PURPOSES AND INCIDENTALS THERETO, INCLUDING THE CONSTRUCTION AND MAINTENANCE OF STRUCTURAL STORM WATER QUALITY ENHANCEMENT FACILITIES, GRAVITY FLOW, PRESSURE PIPES OR OPEN DRAINAGE CHANNEL, UPON, OVER, UNDER AND ACROSS AREAS 'H', 'I', 'N', 'P', 'Q' AND 'R' AND THOSE AREAS DESIGNATED AS 'DE'.
- 4) PUBLIC ACCESS EASEMENTS OVER PEDESTRIAN PATHS FOR NON-MOTORIZED PUBLIC TRAILS WITHIN THE AREAS DESIGNATED AS AREA 'A', AREA 'B', AREA 'C' AND AREA 'D'.
- 5) SANITARY SEWER EASEMENTS ON, OVER, UNDER AND ACROSS THE AREAS DESIGNATED AS 'SSE' FOR INSTALLATION, MAINTENANCE, AND ALL APPURTENANCES THERETO.

THE UNDERSIGNED HEREBY DEDICATE TO THE WINTERCREEK HOMEOWNERS ASSOCIATION THE FOLLOWING:

- 1) AN EASEMENT ON, OVER, UNDER AND ACROSS AREA 'S' FOR STORM DRAIN DETENTION BASIN INSTALLATION, MAINTENANCE, AND ALL APPURTENANCES THERETO.
- 2) AREAS 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L' AND 'N' FOR THE PURPOSES OF OPEN SPACE, SNOW STORAGE, AND LANDSCAPING.
- 3) AREAS 'X', 'Y' AND 'U' FOR THE PURPOSES OF DRAINAGE, MAINTENANCE, UTILITY, AND FIRE ACCESS AND ALL APPURTENANCES THERETO.
- 4) AN EASEMENT ON, OVER, UNDER AND ACROSS THE LAND DESIGNATED AS AREA 'T' FOR THE PURPOSES OF MAINTENANCE, UTILITY, AND ALL APPURTENANCES THERETO, INCLUDING ACCESS AND ALL APPURTENANCES THERETO, SNOW STORAGE AND STORM DRAIN DETENTION BASIN.
- 5) AREA 'M' THE LOCATION OF A HISTORICAL AND CULTURAL POINT OF INTEREST.
- 6) SLOPE EASEMENTS ON, OVER, UNDER AND ACROSS THE AREAS DESIGNATED AS 'SE' FOR SLOPE CONSTRUCTION, MAINTENANCE ACCESS AND ALL APPURTENANCES THERETO.
- 7) PARCEL 'C' FOR PARK PURPOSES AND SNOW STORAGE AREA.
- 8) COMMON AREAS THROUGH AND OVER THE AREAS SHOWN AS WINTER CREEK LOOP, KYLAN CREEK COURT, COLTON CREEK COURT, JUSTIN CREEK COURT, KIMQUE COURT, AND SARA BEAR LANE.

TRUCKEE PARTNERS, INC., A CALIFORNIA CORPORATION

BY: Thomas W. Gressman President
PRINT NAME AND TITLE

NOTARY ACKNOWLEDGMENT

STATE OF CALIFORNIA } S.S.
COUNTY OF Nevada }
ON Dec 14, 2004, BEFORE ME, T. Lindroth
PERSONALLY APPEARED Thomas W. Gressman

☒ PERSONALLY KNOWN TO ME - OR -
PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/IT/HEY EXECUTED THE SAME IN HIS/HER/ITS AUTHORIZED CAPACITY(IES) AND THAT BY HIS/HER/ITS SIGNATURE(S) ON THE INSTRUMENT, THE PERSON(S) OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

WITNESS MY HAND AND OFFICIAL SEAL
NOTARY PUBLIC, STATE OF CALIFORNIA
T. Lindroth
PRINT NAME AND TITLE

MY COMMISSION NO. 1315230 AND EXPIRES ON: 8/9/05
MY PRINCIPAL PLACE OF BUSINESS: Truckee COUNTY

TRUSTEE'S STATEMENT

TRUST TITLE COMPANY, A CALIFORNIA CORPORATION, TRUSTEE UNDER DEED OF PLASTER RECORDED IN DOCUMENT NO. 2004-0023927 AND 2004-0023926, O.R.N.C.

BY: T. Lindroth BY: _____

T. Lindroth Esq.
PRINT NAME AND TITLE

NOTARY ACKNOWLEDGMENT

STATE OF CALIFORNIA } S.S.
COUNTY OF Nevada }
ON 12-14-04 BEFORE ME, Lori Fallo
PERSONALLY APPEARED T. Lindroth

☒ PERSONALLY KNOWN TO ME - OR -
PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/IT/HEY EXECUTED THE SAME IN HIS/HER/ITS AUTHORIZED CAPACITY(IES) AND THAT BY HIS/HER/ITS SIGNATURE(S) ON THE INSTRUMENT, THE PERSON(S) OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

WITNESS MY HAND AND OFFICIAL SEAL
NOTARY PUBLIC, STATE OF CALIFORNIA
Lori Fallo
PRINT NAME AND TITLE

MY COMMISSION NO. 13166561 AND EXPIRES ON: 7-26-06
MY PRINCIPAL PLACE OF BUSINESS: Nevada COUNTY

TOWN ENGINEER'S STATEMENT

THIS FINAL MAP HAS BEEN EXAMINED BY ME AND THE SUBDIVISION AS SHOWN IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE APPROVED TENTATIVE MAP, AND ANY APPROVED ALTERATIONS THEREOF AND THAT ALL PROVISIONS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCES APPLICABLE AT THE TIME OF APPROVAL OF THE TENTATIVE MAP HAVE BEEN COMPLIED WITH.

DATE: 12-17-04
BY: Daniel P. Wilkins
DANIEL P. WILKINS, TOWN ENGINEER
R.C.E. 56267, RENEWAL DATE: 12-31-04

SURVEYOR'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCES AT THE REQUEST OF BROCKWAY DEVELOPMENT, LLC. I HEREBY STATE THAT THE FINAL MAP SUBSTANTIALLY CONFORMS TO THE FIELD SURVEY AND THAT THE CHARACTER AND OCCUPY THE POSITIONS INDICATED, OR THAT THEY WILL BE SET IN THOSE POSITIONS ON OR BEFORE DECEMBER, 2006 AND THAT THE MONUMENTS ARE, OR WILL BE, SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.



ANDREGG GEOMATICS
Andrew Geomatics
SIGNATURE
JENNIFER JOHNSON, L.S. 6596
RENEWAL DATE: DECEMBER 31, 2005
DATE: 12-13-04

TOWN SURVEYOR'S STATEMENT

THIS FINAL MAP HAS BEEN EXAMINED BY ME AND I AM SATISFIED THAT IT IS TECHNICALLY CORRECT.



John H. Rieltens
JOHN H. RIELTENS, TOWN SURVEYOR
L.S. 4323, RENEWAL DATE: 06-30-06
DATE: 12-23-04

TOWN COUNCIL'S STATEMENT

ON BEHALF OF THE TOWN COUNCIL AND UNDER THE AUTHORITY OF THE TOWN OF TRUCKEE MUNICIPAL CODE, TITLE 18, PER THE APPROVED FILING OF THIS MAP OF "WINTERCREEK SUBDIVISION" CONSISTING OF 13 SHEETS AND HAS ACCEPTED FOR PUBLIC USE OFFERS OF DEDICATION: 1A, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 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774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

DATE: 12-17-04
BY: Daniel P. Wilkins
DANIEL P. WILKINS, TOWN ENGINEER
R.C.E. 56267, RENEWAL DATE: 12-31-04

RECORDER'S STATEMENT

FILED THIS 27th DAY OF December, 2004 AT
11:22 AM IN BOOK 131 OF SUBDIVISIONS
AT THE REQUEST OF ANDREGG GEOMATICS

DOC. NO. 2004-0051878 ~~44-SMTH~~ K. A. SMITH
COUNTY RECORDER

FEES: \$32.00
BY: Angie Dayne
DEPUTY

FINAL MAP NO. 2003-072

WINTERCREEK SUBDIVISION

A PORTION OF
SECTION 14, T.17 N., R.16 E., M.D.M.
TOWN OF TRUCKEE
NEVADA COUNTY, CALIFORNIA
DECEMBER 09, 2004

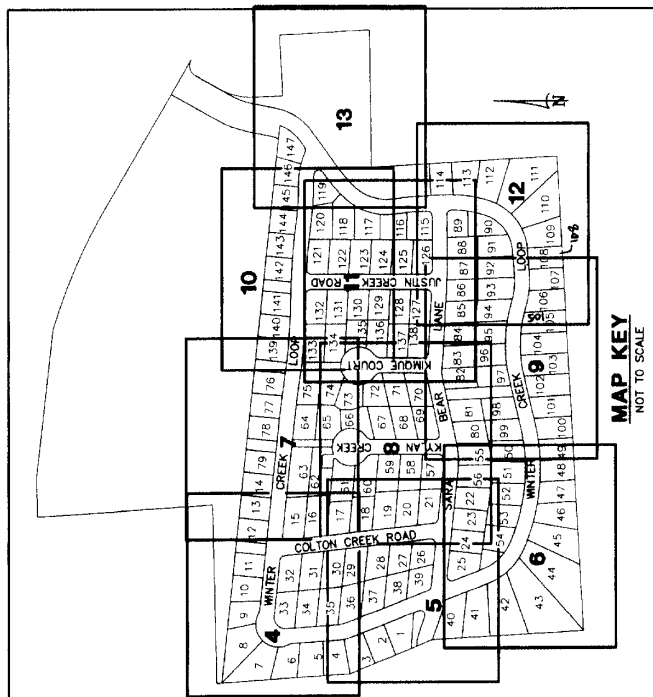
ANDREGG
GEOMATICS
WWW.ANDREGG-GEOMATICS.COM
800-400-7072

SHEET 1 OF 13

TAX COLLECTOR'S STATEMENT

I, E. CHRISTINA DABIS, THE OFFICIAL COMPUTING REDEMPTIONS FOR THE COUNTY OF NEVADA, STATE OF CALIFORNIA, DO HEREBY CERTIFY THAT ACCORDING TO THE RECORDS OF MY OFFICE, THERE ARE NO LIENS FOR UNPAID TAXES, OR SPECIAL ASSESSMENTS COLLECTED AS TAXES AGAINST THE LANDS SUBDIVIDED HEREON, AND THAT THE ASSESSMENTS NOT YET DUE AND PAYABLE, BUT CONSTITUTING A LIEN IS NONE.

DATED: 22 Oct-04 Sharon R. Dabis for
E. CHRISTINA DABIS
NEVADA COUNTY TAX COLLECTOR



FINAL MAP No. 2003-072
WINTERCREEK
SUBDIVISION
A PORTION OF
SECTION 14, T.17 N., R.16 E., M.D.M.
TOWN OF TRUCKEE
NEVADA COUNTY, CALIFORNIA
DECEMBER 09, 2004

ANDREGG
GEOMATICS
www.andregg.com
800-400-7072

SHEET 2 OF 13

Sub 8/131

NOTES

1) THIS SUBDIVISION CONSISTS OF 26.36 ACRES, MORE OR LESS, WITH 147 SINGLE FAMILY RESIDENCE LOTS, LARGE LOT PARCEL 'B' FOR FUTURE DEVELOPMENT, PARCEL 'A' TO BE DEDICATED TO THE TRUCKEE DONNER LAND TRUST FOR METAL PRESERVATION, PARCEL 'C' TO BE DEDICATED TO THE HOMEOWNERS ASSOCIATION AS A RECREATION PARK FACILITY, AREA 'T' TO BE DEDICATED TO THE HOMEOWNERS ASSOCIATION FOR TRUCKEE DONNER LAND TRUST ACCESS, THERE TO, SNOW STORAGE AND CISTERN DRAIN DETENTION BASIN, AND AREAS 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L' AND 'N' TO BE DEDICATED TO THE HOMEOWNERS ASSOCIATION FOR OPEN SPACE, LANDSCAPING, AND SNOW STORAGE.

2) THE VESTING DEED TO THE SUBJECT PROPERTY IS RECORDED IN DOC. NO. 04-0023925, O.R.N.C. (OWNER: TRUCKEE PARTNERS, INC.)

3) COVENANTS, CONDITIONS AND RESTRICTIONS FOR "WINTERCREEK SUBDIVISION" ARE BEING RECORDED CURRENTLY PER DOC. NO. 2004-053377, O.R.N.C.

4) THIS PROPERTY IS AFFECTED BY AN EASEMENT FOR ROAD PURPOSES AND A TELEPHONE LINE AS RECORDED IN BOOK 36 PAGE 432, O.R.N.C. THE LOCATION OF THIS EASEMENT IS NOT DEFINED OF RECORD.

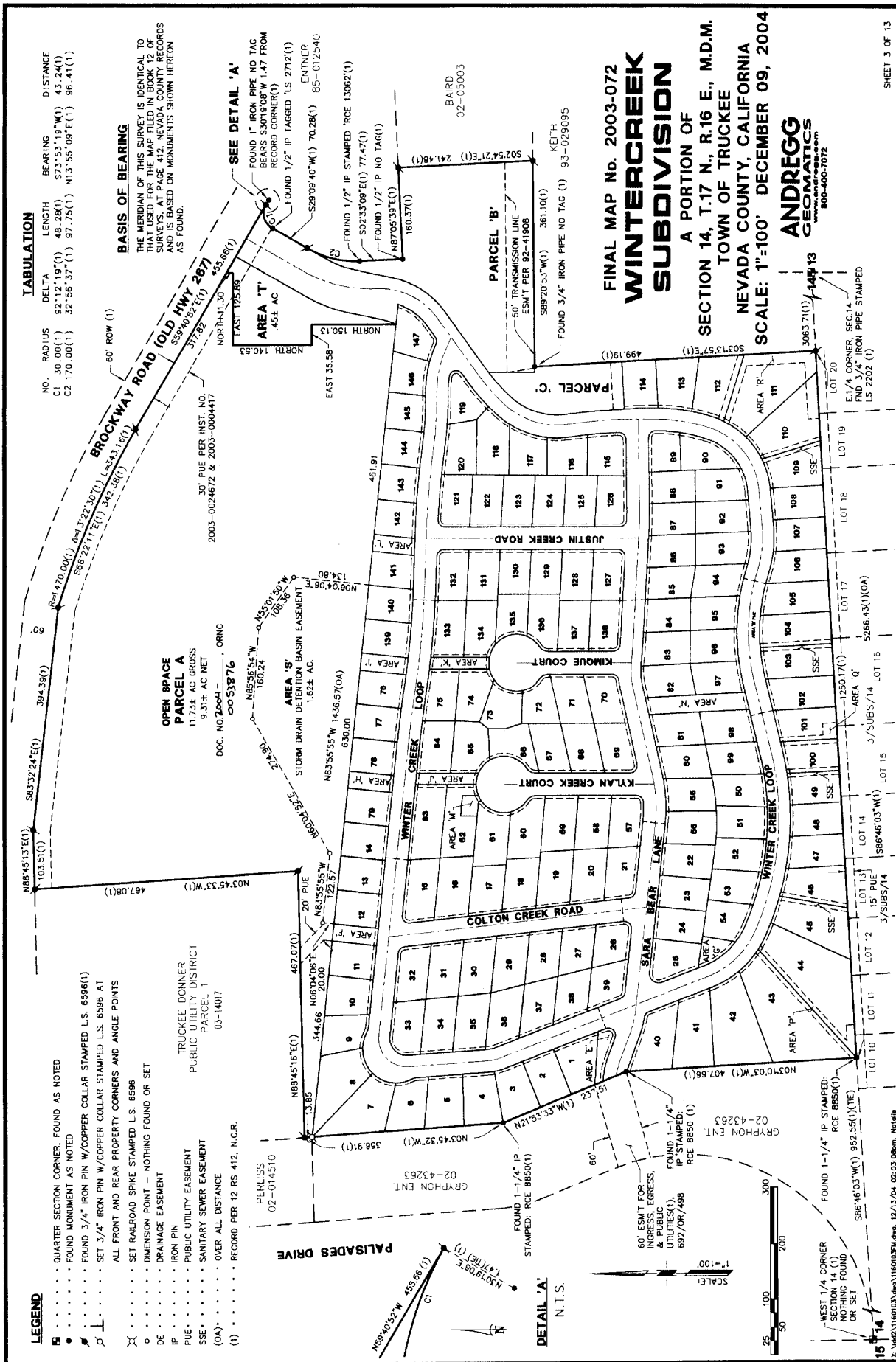
5) THE EASEMENT FOR PUBLIC UTILITIES RECORDED IN BOOK 258 AT PAGE 225, O.R.N.C. LIES ENTIRELY WITHIN THE RIGHT OF WAY OF HIGHWAY 267.

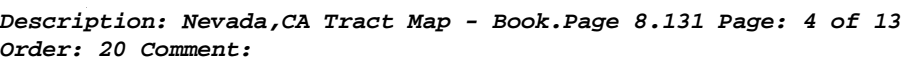
6) PARCEL 'A' TO BE DEDICATED IN FEE AS OPEN SPACE TO THE TRUCKEE DONNER LAND TRUST CONCURRENTLY HERewith IN DOC. NO. 2004-053376, O.R.N.C. RESERVING THEREFROM EASEMENTS TO THE WINTERCREEK HOMEOWNERS ASSOCIATION OVER AREA 'S'.

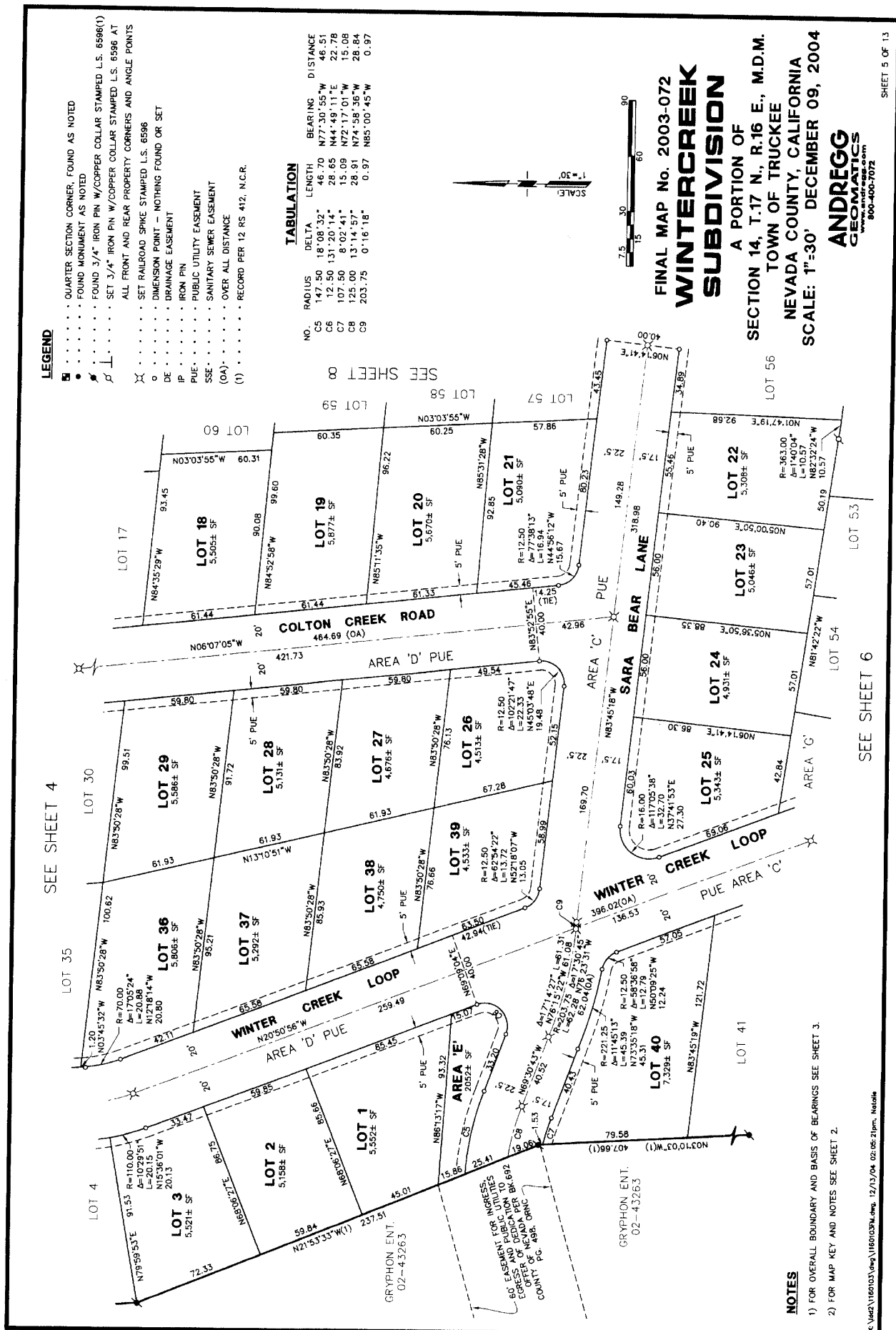
SUPPLEMENTAL NOTES

- 1) SETBACK REQUIREMENTS HAVE BEEN DETERMINED BY THE TOWN OF TRUCKEE PLANNING DEPARTMENT AND ARE AS FOLLOWS:
 - A. SEVEN (7) FOOT SIDE YARD SETBACK
 - B. SEVEN (7) FOOT FRONT YARD SETBACK
 - C. SEVEN (7) FOOT REAR YARD SETBACK
 - D. THREE (3) FOOT REAR YARD SETBACK FOR LOTS 142 THROUGH 147
 - E. THIRTY (30) FOOT REAR YARD 1-7, 40-49 & 100-114
- 2) A ZERO (0) SIDE YARD SETBACK FOR GARAGE STRUCTURES SHALL BE PERMITTED ONLY WHEN TWO CONTIGUOUS LOTS CONSTRUCT A SHARED DRIVEWAY.
- 3) MAXIMUM PERMITTED FLOOR AREA FOR A PRIMARY HOME SHALL BE LIMITED TO 2,406 SQUARE FEET, NOT INCLUDING A STANDARD TWO CAR GARAGE (580 SQUARE FEET) AND SECOND UNITS.
- 4) IF ARTIFACTS, PALEONTOLOGICAL OR CULTURAL OR UNUSUAL AMOUNTS OF STONE, BONE, OR SHELLS ARE UNCOVERED DURING CONSTRUCTIONS ACTIVITY, ALL CONSTRUCTIONS ACTIVITIES SHALL CEASE WITHIN A 200 FOOT RADIUS OF THE FIND. THE TOWN PLANNER SHALL BE NOTIFIED AND AN ARCHAEOLOGIST SHALL BE CONSULTED TO DETERMINE THE SIGNIFICANCE OF THE DISCOVERED MATERIALS. THE ARCHAEOLOGIST SHALL AMEND THE CULTURAL RESOURCES EVALUATION CONDUCTED ON THE SITE TO DETERMINE THE SIGNIFICANCE OF THE DISCOVERED MATERIALS AND TO IDENTIFY MITIGATION MEASURES TO ELIMINATE OR REDUCE ANY SIGNIFICANT ADVERSE EFFECTS OF THE CONSTRUCTION ACTIVITY. THE TOWN PLANNER SHALL RECOMMENDATION OF CONSTRUCTION ACTIVITY.
- 5) MASS GRADING OF THIS SITE IS PROHIBITED.
- 6) WOOD BURNING STOVES ARE PROHIBITED IN THIS DEVELOPMENT.

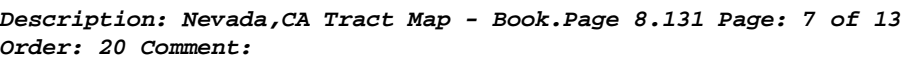
X:\Vaz2\1160103\Wing\1160103PL.dwg, 12/21/04 04:05:08pm, Patrix





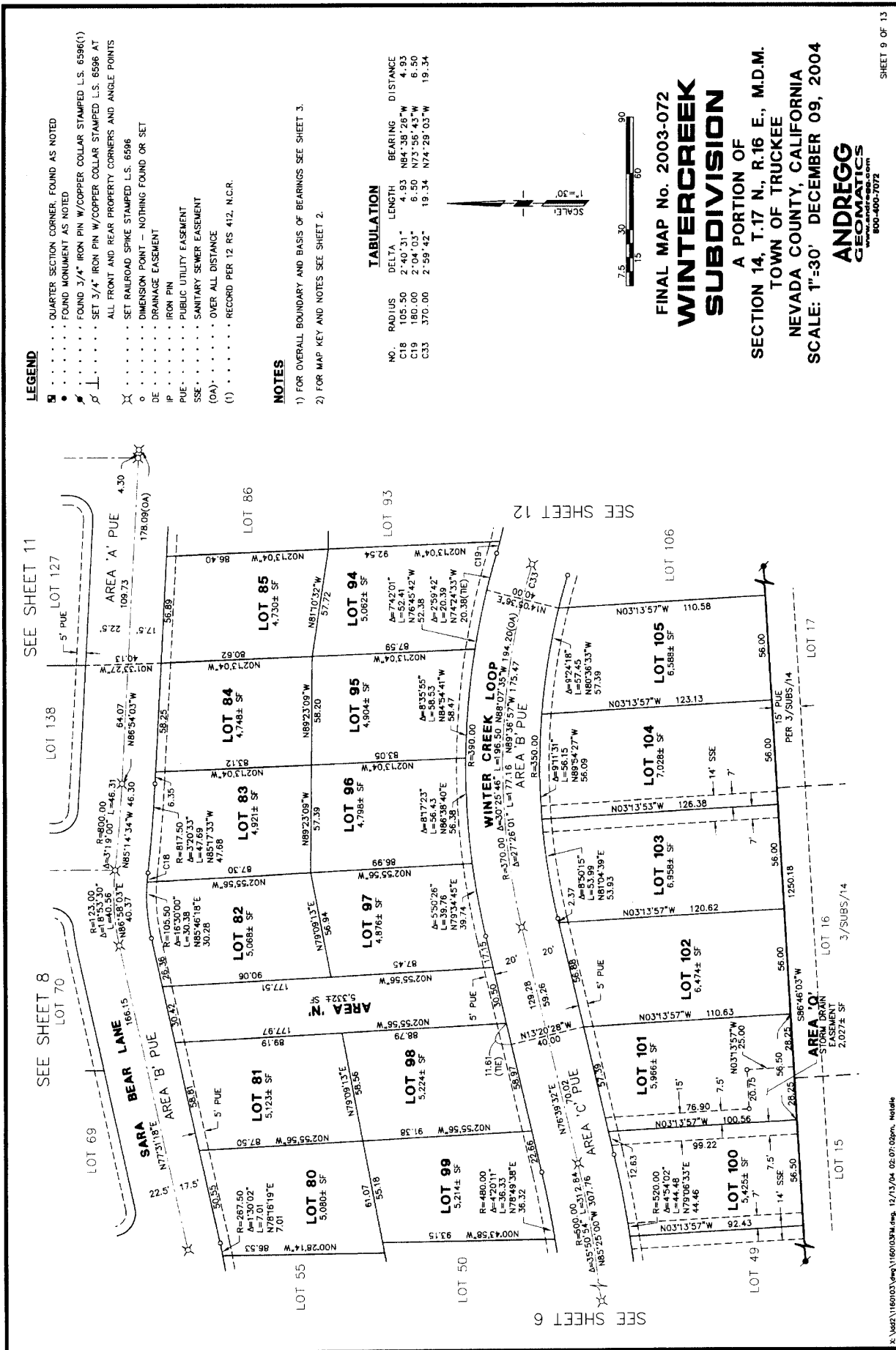


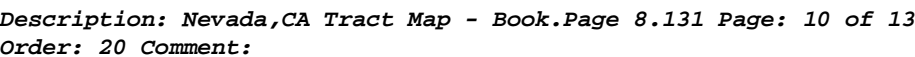
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8/13
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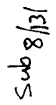




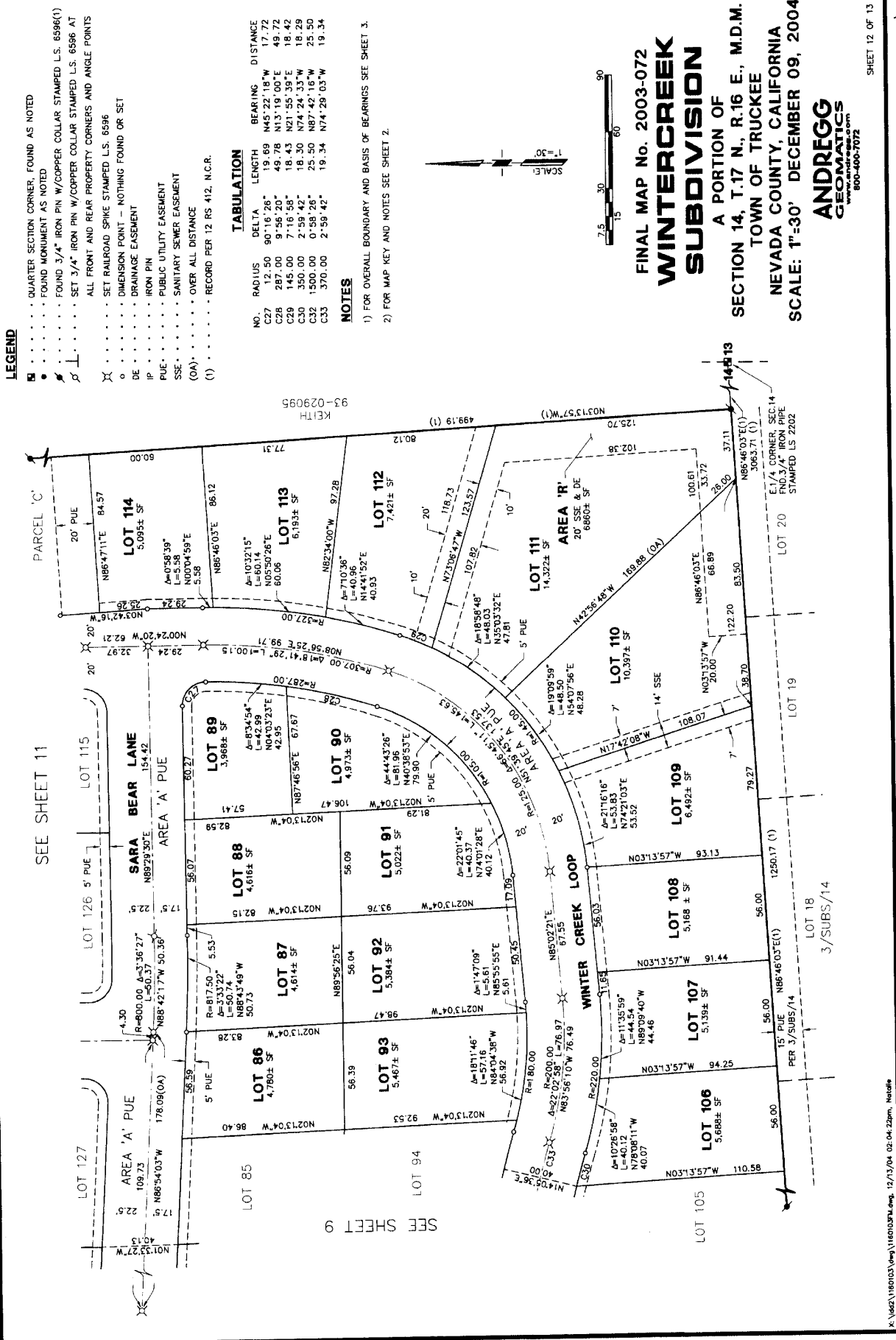
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DPW

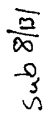






Sub 8/13/2018





432

(Notarial Seal)

Clarence H. Patten, Notary Public in and for the
County of Washoe, State of Nevada.
My commission expires Jan - 6 - 1937.

S-624

Recorded at the Request H. I. Snider Apr 15 1937 at 35 min. past 4 o'clock P. M.

L. J. Blank
Recorder
By *L. J. Blank* Deputy

THE UNION ICE COMPANY

-to-

THE UNITED STATES OF AMERICA

RIGHT-OF-WAY FOR ROAD AND TELEPHONE LINE

THIS INDENTURE, made this 15th day of March, 1937, between
The Union Ice Company, the party of the first part, and

The United States of America, the party of the second part.

WITNESSETH: THAT FOR AND IN CONSIDERATION of the sum of One Dollar (\$1.00) in hand paid,
the receipt whereof is hereby duly acknowledged, and other good and valuable consideration, the
party of the first part, its successors and assigns, do hereby grant, bargain, sell, and convey
unto The United States of America, an easement and right-of-way for a Road and Telephone Line
over the following described land:

The ROAD right-of-way to be forty feet (40 ft.) wide beginning at a point approximately
two thousand two hundred feet (2200 ft.) east of the west one-quarter corner of Section Four-
teen (14), Township Seventeen (17) North, Range Sixteen (16) East, M. D. M., and extending north-
westerly approximately six hundred feet (600 ft.) to a point intersecting the Brockway-Truckee
Road.

The Telephone Line right-of-way to be twelve feet (12 ft.) wide beginning at a point approxi-
mately two thousand seven hundred seventy-five feet (2775 ft.) east of the west one-quarter cor-
ner of Section Fourteen (14), Township Seventeen (17) North, Range Sixteen (16) East, M.D.M., and
extending northwesterly approximately one thousand fifty feet (1050 ft.); thence northeasterly
approximately two thousand forty feet (2040 ft.) across the south one-half of the north east one-
quarter and the north west one-quarter of the said Section Fourteen (14); and from a point approxi-
mately two thousand two hundred and thirty feet (2230 ft.) east of the west one-quarter corner
of said Section Fourteen (14) and extending northwesterly approximately four hundred eighty feet
(480 ft. to a point intersecting the above-described Telephone Line right-of-way in the said
Section Fourteen (14)

SAID RIGHT-OF-WAY hereby granted is for the maintenance and full, free and quiet use and
enjoyment by The United States of America of a road and telephone line traversing the above des-
cribed land.

THIS GRANT shall be effective so long as said easement shall be actually used for the purposes
above specified and all rights hereunder shall revert to the owner of the land as soon as the said
use thereof shall be abandoned and discontinued.

THE GRANTEE shall, at all reasonable times, have the right to enter for the purpose of
constructing and repairing said road and telephone line.

IN WITNESS WHEREOF, we have hereunto set our hands this 15th day of March, Nineteen Hundred
and Thirty-seven.

THE UNION ICE COMPANY

M. H. Robbins, President.

H. A. Coggins, Secretary

STATE OF CALIFORNIA

CITY AND COUNTY OF SAN FRANCISCO

SS.

On this 15th day of March in the year One Thousand Nine Hundred and thirty-seven, before me,
M. V. Collins, a Notary Public in and for said City and County, residing therein, duly commissioned

437

and sworn, personally appeared M. H. Robbins and H. A. Coggins known to me to be the President and Secretary respectively of The Union Ice Company, the Corporation described in and that executed the within instrument and also known to me to be the persons who executed it on behalf of the Corporation therein named, and they acknowledged to me that such Corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the City and County of San Francisco, the day and year in this certificate first above written.

(Notarial Seal)

M. V. Collins, Notary Public in and for the City and County of San Francisco, State of California.

S-625

Recorded at the Request H. I. Snider Apr 15 1937 at 40 min. past 4 o'clock P. M.

J. J. Black
Recorder
By A. C. Tucker Deputy

WILLIAM E. EVE et ux

-to-

WILLIAM E. EVE

THIS INDENTURE, made the twenty first day of January, A. D. 1936, Between William E. Eve and Susie Eve, his wife, the parties of the first part, and William E. Eve, the party of

the second part.

WITNESSETH: That the said parties of the first part, for and in consideration of the love and affection which the said parties of the first part have and bear unto the said party of the second part, as also for the better maintenance, support, protection and livelihood of the said party of the second part, do by these presents give, grant, alien and confirm, unto the said party of the second part, and to his heirs and assigns forever, all that certain lot, piece or parcel of land, situate, lying and being in the City of Grass Valley, County of Nevada, State of California, and bounded and described as follows, to-wit:

That part of Lot Ten (10) of Block Thirty-six (36) described in deed recorded in Book eighty five, (85) of Deeds, page five hundred thirty eight (538), records of Nevada County and also described as follows, to-wit: That part of Lot Ten (10) of Block Thirty-six (36) of the Town (now City) of Grass Valley according to the official map and survey thereof made by S. Bethel in the year 1872, commencing at a point on the North side of Conaway Avenue at the South-east corner of lot formerly owned by Hamill, being two hundred sixty (260) feet westerly on the North line of Conaway Avenue from the Northwest corner of Conaway Avenue and Clark Street; thence running East along Conaway Avenue forty one (41) feet; thence North one hundred nineteen (119) feet to the South line of Lot Thirteen (13) of said Block Thirty Six (36); thence West along the South line of Lot Thirteen (13) Forty one (41) feet; thence South One Hundred Eighteen (118) feet to the point of commencement. Excepting therefrom the mineral rights heretofore sold.

TOGETHER with all and singular the tenements, hereditaments and appurtenances thereunto belonging, or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

TO HAVE AND TO HOLD, all and singular the said premises, together with the appurtenances unto the said party of the second part, and to his heirs and assigns forever.

IN WITNESS WHEREOF, the said parties of the first part have hereunto set their hands and seals, the day and year first above written.

Signed, Sealed and Delivered in the Presence of

William E. Eve (SEAL)
Susie Eve (SEAL)

STATE OF CALIFORNIA
COUNTY OF NEVADA

SS.

On this 21st day of January, A. D. 1936 before me, R. H. McCormack, County Clerk in and for

92 42418

92-42418

OFFICIAL RECORDS
REQUESTED BY...

CALIF LAND TITLE CO MEM

12-33-1992/8:00 AM

BRUCE C. BOLINGER

NEVADA COUNTY RECORDER

RECORDING FEE-33 PAID

30.00

RECORDING REQUESTED BY
DEPARTMENT OF TRANSPORTATION
Then Recorded Mail To
P.O. Box 911
Haystack, California

SPACE ABOVE THIS LINE FOR RECORDERS USE

HIGHWAY EASEMENT DEED

(INDIVIDUAL)

DISTRICT	COUNTY	ROUTE	POST MILE	11/27/90 NUMBER
03	Nev	267	1.3	029755

also known as Truckee Public Utility District

The Truckee Donner Public Utility District, a local public

agency of the State of California, does hereby

Grant, convey and dedicate to the STATE OF CALIFORNIA the right of way and incidents thereto for a public highway,

upon, over and across that certain real property, in the unincorporated area

County of Nevada, State of California, described as:

A portion of that certain real property in the northwest 1/4 of Section 14, T.17N., R.16E., shown as Parcel No. 2 on the map filed October 27, 1973, in Book 8, page 37 of Parcel Maps; Records of Nevada County.

Said portion is that part lying northerly of the following described line:

BEGINNING at a point in the west line of said northwest 1/4 from which the west 1/4 corner of said section bears S 00° 59' 00" E 1499.35 feet; THENCE from said point of beginning N 88° 47' 11" E 400.00 feet; thence S 01° 12' 49" E 3.00 feet; thence N 88° 47' 11" E 150.00 feet; thence S 45° 44' 30" E 74.45 feet to a point in the westerly line of Palisades Drive; thence N 26° 14' 36" E 59.98 feet to a point in the easterly line of said drive; thence northerly along said easterly line 12.35 feet; thence leaving said line N 15° 16' 04" E 26.09 feet; thence N 88° 47' 11" E 772.70 feet; thence S 83° 30' 29" E 387.97 feet to a point from which the east 1/4 corner of said section bears S 71° 27' 11" E 3706.36 feet.

Basis of bearings is the California State Coordinate System Zone 2, distances are grid distances, multiply by 1.00036 to obtain ground distances.

92 42418

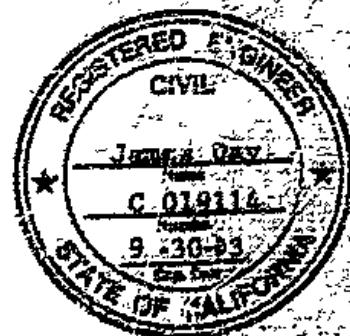
This soil property description has been prepared by me, or under my direction, in conformance with the Professional
Land Surveyors Act.

Signature

James R. Ray
Registered Engineer

Date

11-27-1990



The grantor hereby further grants to grantee all trees, growths (growing or that may hereafter grow), and road building materials within said right of way, including the right to take water, together with the right to use the same in such manner and at such locations as said grantee may deem proper, needful or necessary, in the construction, reconstruction, improvement or maintenance of said highway.

The grantor, for himself, his successors and assigns, hereby waives any claim for any and all damages to grantor's remaining property contiguous to the right of way hereby conveyed by reason of the location, construction, landscaping or maintenance of said highway.

(As used above, the term "grantor" shall include the plural as well as the singular number and the words "himself" and "his" shall include the feminine gender as the case may be.)

Dated this 22nd day of November, 1991

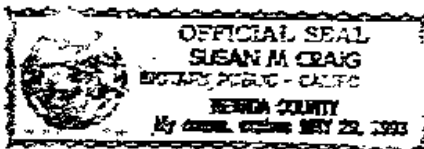
Signed and delivered in the presence of

Julie Colin
JULIE COLIN

Joseph R. Aguera
Joseph R. Aguera, President
Truckee Donner Public Utility District

STATE OF CALIF.
COUNTY OF NEVADA

ss. ON NOVEMBER 22, 1991
before me, the undersigned, a Notary Public in and for said State, personally appeared
JOSEPH R. AGUERA
known to me to be the
PRESIDENT
of the BOARD OF DIRECTORS OF
the Corporation that executed the within instrument, known to me to be the person who
executed the within instrument, on behalf of the Corporation, therein named, and acknowledged
to me that such Corporation executed the same.



WITNESS my hand and official seal.

Susan M. Craig
Notary Public in and for said State.

CORPORATION RECORDING FORM 725 (1-81)

Highway Improvement Bond

NATIONAL NOTARY ASSOCIATION • 23012 Victoria Blvd. • Woodland Hills, CA 91367

Signature _____
Notary Public in and for said County and State

(CERTIFICATE OF ACCEPTANCE, GOVERNMENT CODE, SECTION 27231)

This is To Certify, That the State of California, grantee herein, acting by and through the Department of Transportation, hereby accepts for public purposes the real property, or interest therein, conveyed by the within deed and enters it to the recordation thereof.

In Witness Whereof, I have hereunto set my hand this 16th day of December, 1991

JAMES W. VAN LOREN SELB
Director of Transportation

By B. J. Dancy
and D. Bauer
Deputy District Director
Right of Way Attorney in Fact

92 42418

92-42418

OFFICIAL RECORDS
REQUESTED BY...

CALIF LAND TITLE CO MEM

12-33-1992/8:00 AM

BRUCE C. BOLINGER

NEVADA COUNTY RECORDER

RECORDING FEE-33 PAID

30.00

RECORDING REQUESTED BY
DEPARTMENT OF TRANSPORTATION
Then Recorded Mail To
P.O. Box 911
Haystack, California

SPACE ABOVE THIS LINE FOR RECORDERS USE

HIGHWAY EASEMENT DEED

(INDIVIDUAL)

DISTRICT	COUNTY	ROUTE	POST MILE	NUMBER
03	Nev	267	1.3	029755

also known as Truckee Public Utility District

The Truckee Donner Public Utility District, a local public

agency of the State of California, does hereby

Grant, convey and dedicate to the STATE OF CALIFORNIA the right of way and incidents thereto for a public highway,

upon, over and across that certain real property, in the unincorporated area

County of Nevada, State of California, described as:

A portion of that certain real property in the northwest 1/4 of Section 14, T.17N., R.16E., shown as Parcel No. 2 on the map filed October 27, 1973, in Book 8, page 37 of Parcel Maps; Records of Nevada County.

Said portion is that part lying northerly of the following described line:

BEGINNING at a point in the west line of said northwest 1/4 from which the west 1/4 corner of said section bears S 00° 59' 00" E 1499.35 feet; THENCE from said point of beginning N 88° 47' 11" E 400.00 feet; thence S 01° 12' 49" E 3.00 feet; thence N 88° 47' 11" E 150.00 feet; thence S 45° 44' 30" E 74.45 feet to a point in the westerly line of Palisades Drive; thence N 26° 14' 36" E 59.98 feet to a point in the easterly line of said drive; thence northerly along said easterly line 12.35 feet; thence leaving said line N 15° 16' 04" E 26.09 feet; thence N 88° 47' 11" E 772.70 feet; thence S 83° 30' 29" E 387.97 feet to a point from which the east 1/4 corner of said section bears S 71° 27' 11" E 3706.36 feet.

Basis of bearings is the California State Coordinate System Zone 2, distances are grid distances, multiply by 1.00036 to obtain ground distances.

92 42418

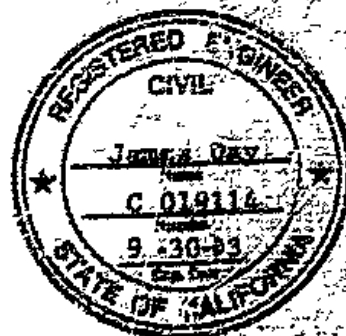
This soil property description has been prepared by me, or under my direction, in conformance with the Professional
Land Surveyors Act.

Signature

James R. Ray
Registered Engineer

Date

11-27-1990



The grantor hereby further grants to grantee all trees, growths (growing or that may hereafter grow), and road building materials within said right of way, including the right to take water, together with the right to use the same in such manner and at such locations as said grantee may deem proper, needful or necessary, in the construction, reconstruction, improvement or maintenance of said highway.

The grantor, for himself, his successors and assigns, hereby waives any claim for any and all damages to grantor's remaining property contiguous to the right of way hereby conveyed by reason of the location, construction, landscaping or maintenance of said highway.

(As used above, the term "grantor" shall include the plural as well as the singular number and the words "himself" and "his" shall include the feminine gender as the case may be.)

Dated this 22nd day of November, 1991

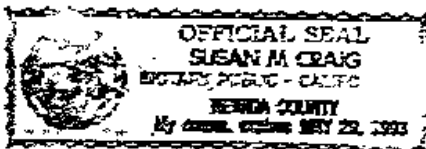
Signed and delivered in the presence of

Julie Colin
JULIE COLIN

Joseph R. Aguera
Joseph R. Aguera, President
Truckee Donner Public Utility District

STATE OF CALIF.
COUNTY OF NEVADA

ss. ON NOVEMBER 22, 1991
before me, the undersigned, a Notary Public in and for said State, personally appeared
JOSEPH R. AGUERA
known to me to be the
PRESIDENT
of the BOARD OF DIRECTORS OF
the Corporation that executed the within instrument, known to me to be the person who
executed the within instrument, on behalf of the Corporation, therein named, and acknowledged
to me that such Corporation executed the same.



WITNESS my hand and official seal.

Susan M. Craig
Notary Public in and for said State.

CORPORATION RECORDING FORM 708-EN

Highway Improvement Bond

NATIONAL NOTARY ASSOCIATION • 23012 Victoria Blvd. • Woodland Hills, CA 91367

Signature _____
Notary Public in and for said County and State

(CERTIFICATE OF ACCEPTANCE, GOVERNMENT CODE, SECTION 27231)

This is To Certify, That the State of California, grantee herein, acting by and through the Department of Transportation, hereby accepts for public purposes the real property, or interest therein, conveyed by the within deed and enters it to the recordation thereof.

In Witness Whereof, I have hereunto set my hand this 16th day of December, 1991

JAMES W. VAN LOREN SELB
Director of Transportation

By B. J. Dacey
and D. Bauer
Deputy District Director
Right of Way Attorney in Fact

RECORDING REQUESTED BY *and*

WHEN RECORDED MAIL TO:

Sara Mayer, Contract Administration Clerk
TRUCKEE DONNER PUBLIC UTILITY DISTRICT
Post Office Box 309
Truckee, CA 96160



Nevada, County Recorder
Jewett-Burdick

DOC- 2003-0004417-00

Wednesday, JAN 29, 2003 10:19:34

NOC \$0.00

Ttl Pd \$0.00

Nbr-0000204361

ALB/AB/1-5

The Undersigned declares
Documentary transfer tax is none
APN 19-450-61

GRANT DEED FOR PUBLIC UTILITY EASEMENT

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, the TRUCKEE DONNER PUBLIC UTILITY DISTRICT, Grantor, does hereby grant to the TRUCKEE DONNER PUBLIC UTILITY DISTRICT, Grantee, a permanent public utility easement over a portion of **APN 19-450-61** located in the Town of Truckee, Nevada County, California, and further described in Exhibit "A" and Exhibit "B" attached hereto.

The easement granted herein includes the right to do all things necessary for the construction, installation, upgrade, operations, repair, and maintenance of water, electric, and communication facilities on this easement including, but not limited to, a right of ingress and egress, a right to temporarily store equipment and materials, to excavate, to drive vehicles over, to place markers on, to survey to inspect and repair and to remove rocks, boulders, trees and plant life in the course of excavation or re-excavation.

Date: 1/28/2003

James A. Maass

James A. Maass, Vice President Board of Directors
TRUCKEE DONNER PUBLIC UTILITY DISTRICT



State of California)

County of Nevada)

On 1/28/03, before me, Sara Mayer, Notary Public, personally appeared James A. Maass, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

Witness my hand and official seal.

Sara Mayer
Notary Public


MAIL TAX STATEMENTS TO:
SAME AS ABOVE

004417

EASEMENT ACCEPTANCE

This is to certify that the interest in the utility easement conveyed by this document to the Truckee Donner Public Utility District, a local public agency of the State of California, is hereby accepted by the undersigned on behalf of the Board of Directors of the Truckee Donner Public Utility District pursuant to authority conferred by Resolution No. 9003 of said Board adopted on January 2, 1990.

Dated 1-28-03


Peter L. Holzmeister, General Manager
TRUCKEE DONNER PUBLIC UTILITY DISTRICT

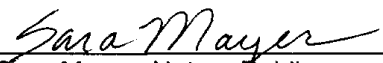
State of California)

County of Nevada)

On 1/28/2003 before me, Sara Mayer, personally appeared PETER L. HOLZMEISTER personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

Capacity claimed by signer: Clerk/Ex-officio Secretary of the Truckee Donner Public Utility District, a local public agency of the State of California.

Witness my hand and official seal.


Sara Mayer, Notary Public



004417

ANDREGG, INC.

SURVEYING • MAPPING • GEOMATICS

January 22, 2003

EXHIBIT 'A'

Truckee Donner Public Utility District Utility Easement

A portion of the tract of land described in the Grant Deed to Truckee Donner Public Utility District recorded in Instrument No. 2000-0038207, Official Records of Nevada County, located in Section 14, Township 17 North, Range 16 East, M.D.M., County of Nevada, California.

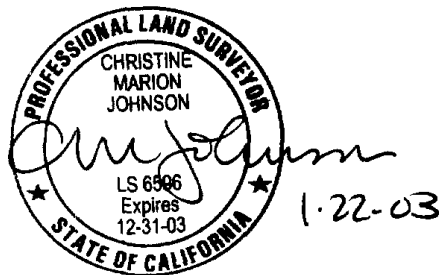
An easement to Truckee Donner Public Utility District for utility purposes on, over, under and across a strip of land having a right angle width of thirty (30) feet described as follows:

Beginning at the Northwest corner of the tract of land to be described hereby, a point on the South right of way line of State Highway 267, and from said point the West one quarter corner of the above described Section 14 bears the following five (5) consecutive courses and distances: 1) South 88° 45' 13" West along said right of way line for a distance of 466.90 feet to the Northwest corner of the above described lands of Truckee Donner Public Utility District (TDPUD); 2) South 03° 45' 33" East along the Westerly line of said lands of TDPUD for a distance of 823.68 feet (cite 821.56 feet); 3) South 21° 53' 33" East along said Westerly line for a distance of 237.42 feet; 4) South 03° 10' 03" East along said Westerly line for a distance of 407.51 feet to the Southwest corner of said lands of TDPUD, a point on the South line of the Northwest one-quarter of said Section 14; and 5) South 86° 46' 03" West along said South line for a distance of 952.21 feet; thence from the POINT OF BEGINNING along the said right of way line the following four (4) courses and distances: 1) North 88° 45' 13" East for a distance of 103.48 feet; 2) South 83° 32' 24" East for a distance of 394.25 feet; 3) along an arc of a non-tangent curve to the right, having a radius of 1469.48 feet, a central angle of 13° 22' 30", a length of 343.04 feet and a chord bearing South 66° 22' 11" East for a distance of 342.26 feet; and 4) South 59° 40' 52" East for a distance of 455.50 feet; thence leaving said right of way line along an arc of a non-tangent curve to the left, having a radius of 29.99 feet, a central angle of 89° 40' 24", a length of 46.94 feet and a chord bearing South 75° 09' 17" West for a distance of 42.29 feet; thence North 59° 40' 52" West for a distance of 425.68 feet; thence along an arc of a tangent curve to the left, having a radius of 1439.49 feet, a central angle of 13° 15' 58", a length of 333.30 feet and a chord bearing North 66° 18' 55" West for a distance of 332.55 feet; thence North 83° 32' 24" West for a distance of 389.46 feet; thence South 88° 45' 27" West for a distance of 100.14 feet; thence North 03° 45' 33" West for a distance of 30.02 feet to the POINT OF BEGINNING.

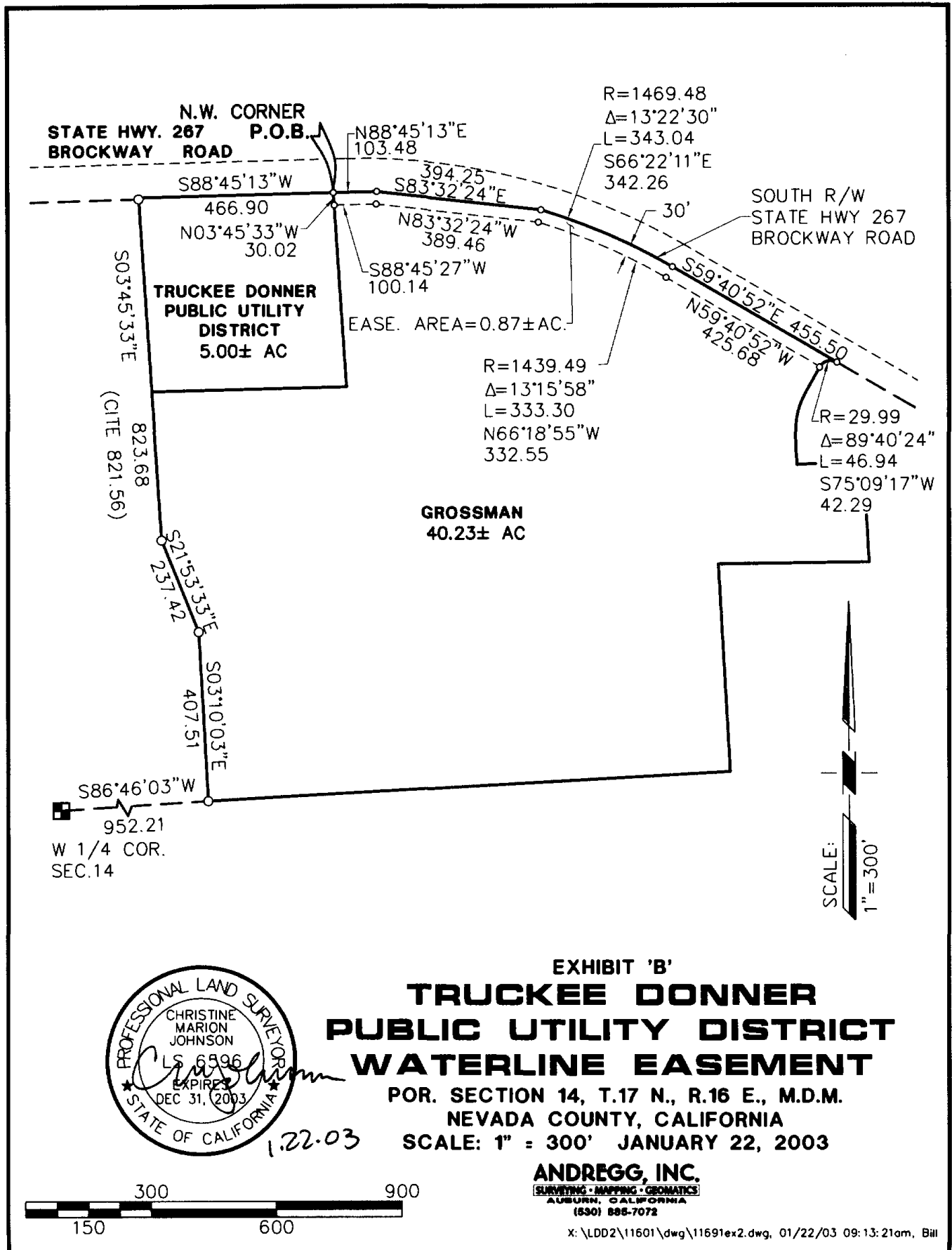
004417

Containing 0.87 acres, more or less.

The meridian of this legal description is based on the California State Plane Coordinate System NAD 83, Zone 2, epoch (1991.35) CA HPGN. The distances shown hereon are grid distances, divide by 0.99964451923019 to obtain ground distances.



004417



END OF DOCUMENT

98 PL-37
PT

SURVEYOR'S STATEMENT

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME, OR UNDER MY DIRECTION, IN CONFORMANCE WITH THE REQUIREMENTS OF THE LAND SURVEYORS ACT AT THE REQUEST OF TRUCKEE DOWNER PUBLIC UTILITY DISTRICT IN OCTOBER 2002.



Christine Marion Johnson
3.31.03
DATE

COUNTY SURVEYOR'S STATEMENT

THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH SECTION 8766 OF THE LAND SURVEYORS ACT THIS 37th DAY OF APRIL 2003.



Thomas P. Martin
DATE

RECORDER'S STATEMENT

FILED THIS 04th DAY OF APRIL 2003 AT 1:00 PM IN BOOK 12 OF SURVEYS AT PAGE 412 AT THE REQUEST OF ANDREGG, INC.

DOC NO. 2003-001861
FEE PAID \$8.00
Lorraine Jewett-Burrook
COUNTY RECORDER

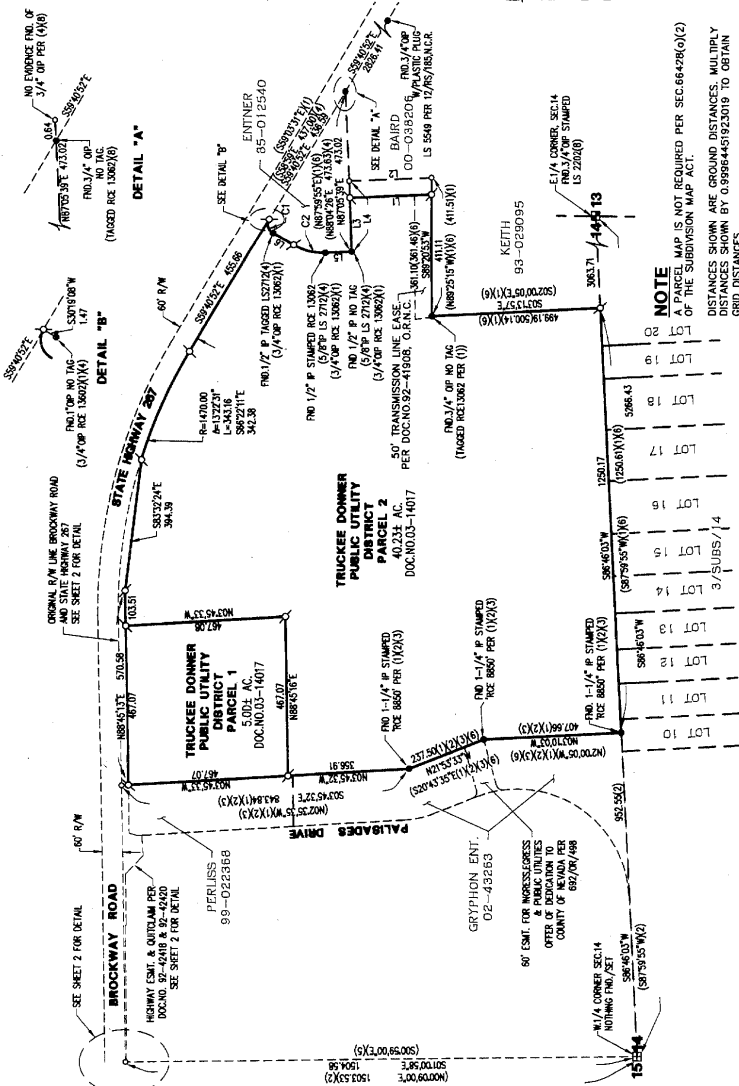
BY: Lorraine Jewett-Burrook
DEPUTY

RECORD OF SURVEY **SOUTHSIDE/BROCKWAY ROAD** **A PORTION OF SECTION 14 T17N-R16E, MDM** **TOWN OF TRUCKEE** **NEVADA COUNTY, CALIFORNIA** **SCALE: 1"=200' MARCH 27, 2003**

ANDREGG, INC.
SURVEYING, MAPPING, & CONSULTING
1800 S. 200th ST.
TULSA, OKLA 74107
SHEET 1 OF 2

X:\002\1160101\002\1160101R05.dwg, 03/27/03 02:02:46pm, Jmartin

A-6178
RS 12412



LINE TABULATION

L1	S02°54'21\"/>
----	---------------

CURVE TABULATION

NO.	RADIUS	DELTA	LENGTH	BEARING	DIST.
1	30.00(1)(4)	92°12'19"	48.28	S73°53'19"W	43.24
2	170.00(1)(4)	(90°00'00")(1)(4)(6) (32°58'37") (30°56'54")(1)(4)(6)	(47.12)(1)(4)(6) 97.74(1)	(4)(6) S13°55'10"W	96.40

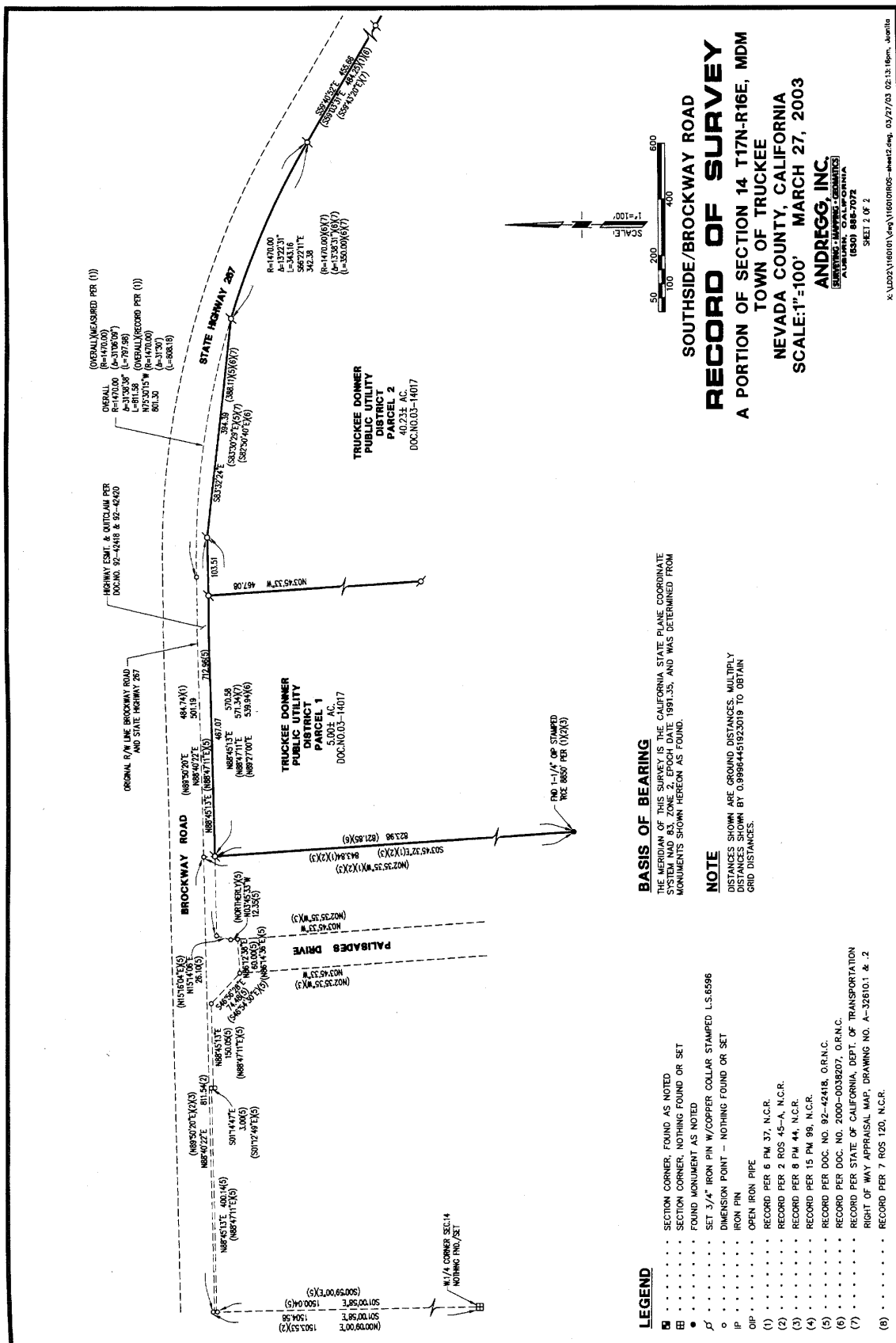
BASIS OF BEARING

THE MERIDIAN OF THIS SURVEY IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM NAD 83, ZONE 2, EPOCH DATE 1981.35, AND WAS DETERMINED FROM MONUMENTS SHOWN HEREON AS FOUND.

LEGEND

- SECTION CORNER, FOUND AS NOTED
- SECTION CORNER, NOTHING FOUND OR SET
- FOUND MONUMENT, AS NOTED
- SET 3/4\"/>

map 412



RS 134712

map 412

RECORDING REQUESTED BY †

WHEN RECORDED MAIL TO:

Sara Mayer, Contract Administration Clerk
TRUCKEE DONNER PUBLIC UTILITY DISTRICT
Post Office Box 309
Truckee, CA 96160



Nevada, County Recorder
Jewett-Burdick

DOC- 2003-0024672-00

Tuesday, MAY 13, 2003 10:13:00
NOC \$0.00

Ttl Pd \$0.00

Nbr-0000229038
ECY/EY/1-5

5
HF

The Undersigned declares
Documentary transfer tax is none
APN 19-450-61

GRANT DEED FOR PUBLIC UTILITY EASEMENT

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, the BROCKWAY DEVELOPMENT, LLC, Grantor, does hereby grant to the TRUCKEE DONNER PUBLIC UTILITY DISTRICT, Grantee, a permanent public utility easement over a portion of **APN 19-450-61** located in the Town of Truckee, Nevada County, California, and further described in Exhibit "A" and Exhibit "B" attached hereto.

The easement granted herein includes the right to do all things necessary for the construction, installation, upgrade, operations, repair and maintenance of water, electric, and communication facilities on this easement including, but not limited to, a right of ingress and egress, a right to temporarily store equipment and materials, to excavate, to drive vehicles over, to place markers on, to survey to inspect and repair and to remove rocks, boulders, trees and plant life in the course of excavation or re-excavation. Grantee shall not place its facilities on, over, under or across the easement so as to block Grantor's access to APN 19-450-61. Grantee shall restore the surface of the easement to the same condition as existed prior to any construction work performed by Grantee on, over, under or across the easement.

Date: April 29, 2003

BROCKWAY DEVELOPMENT, LLC

By: Thomas W. Grossman
Thomas W. Grossman, Managing Member

State of California)

County of Nevada)

On 4/29/03, before me T. Lindroth, Notary Public, personally appeared Thomas W. Grossman, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

Witness my hand and official seal.

T. Lindroth
Notary Public




024672

MAIL TAX STATEMENTS TO:
SAME AS ABOVE

EASEMENT ACCEPTANCE

This is to certify that the interest in the utility easement conveyed by this document to the Truckee Donner Public Utility District, a local public agency of the State of California, is hereby accepted by the undersigned on behalf of the Board of Directors of the Truckee Donner Public Utility District pursuant to authority conferred by Resolution No. 9003 of said Board adopted on January 2, 1990.

Dated May 5, 2003


Peter L. Holzmeister, General Manager
TRUCKEE DONNER PUBLIC UTILITY DISTRICT

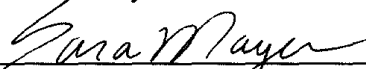
State of California)

County of Nevada)

On May 5th, 2003 before me, Sara Mayer, personally appeared PETER L. HOLZMEISTER personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

Capacity claimed by signer: Clerk/Ex-officio Secretary of the Truckee Donner Public Utility District, a local public agency of the State of California.

Witness my hand and official seal.


Sara Mayer, Notary Public



Mar-13-2003 07:12am From-TRUCKEE DONNER PUD

+5305871189

T-011 P.004/006 F-088

024672

ANDREGG, INC.

SURVEYING • MAPPING • GEOMATICS

January 22, 2003

EXHIBIT 'A'

Truckee Donner Public Utility District Utility Easement

A portion of the tract of land described in the Grant Deed to Truckee Donner Public Utility District recorded in Instrument No. 2000-0038207, Official Records of Nevada County, located in Section 14, Township 17 North, Range 16 East, M.D.M., County of Nevada, California.

An easement to Truckee Donner Public Utility District for utility purposes on, over, under and across a strip of land having a right angle width of thirty (30) feet described as follows:

Beginning at the Northwest corner of the tract of land to be described hereby, a point on the South right of way line of State Highway 267, and from said point the West one quarter corner of the above described Section 14 bears the following five (5) consecutive courses and distances: 1) South 88° 45' 13" West along said right of way line for a distance of 466.90 feet to the Northwest corner of the above described lands of Truckee Donner Public Utility District (TDPUD); 2) South 03° 45' 33" East along the Westerly line of said lands of TDPUD for a distance of 823.68 feet (cite 821.56 feet); 3) South 21° 53' 33" East along said Westerly line for a distance of 237.42 feet; 4) South 03° 10' 03" East along said Westerly line for a distance of 407.51 feet to the Southwest corner of said lands of TDPUD, a point on the South line of the Northwest one-quarter of said Section 14; and 5) South 86° 46' 03" West along said South line for a distance of 952.21 feet; thence from the POINT OF BEGINNING along the said right of way line the following four (4) courses and distances: 1) North 88° 45' 13" East for a distance of 103.48 feet; 2) South 83° 32' 24" East for a distance of 394.25 feet; 3) along an arc of a non-tangent curve to the right, having a radius of 1469.48 feet, a central angle of 13° 22' 30", a length of 343.04 feet and a chord bearing South 66° 22' 11" East for a distance of 342.26 feet; and 4) South 59° 40' 52" East for a distance of 455.50 feet; thence leaving said right of way line along an arc of a non-tangent curve to the left, having a radius of 29.99 feet, a central angle of 89° 40' 24", a length of 46.94 feet and a chord bearing South 75° 09' 17" West for a distance of 42.29 feet; thence North 59° 40' 52" West for a distance of 425.68 feet; thence along an arc of a tangent curve to the left, having a radius of 1439.49 feet, a central angle of 13° 15' 58", a length of 333.30 feet and a chord bearing North 66° 18' 55" West for a distance of 332.55 feet; thence North 83° 32' 24" West for a distance of 389.46 feet; thence South 88° 45' 27" West for a distance of 100.14 feet; thence North 03° 45' 33" West for a distance of 30.02 feet to the POINT OF BEGINNING.

Mar-13-2003 07:13am From-TRUCKEE DONNER PUD

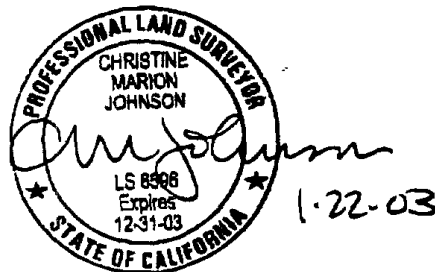
+5305871189

T-011 P.005/006 F-088

024672

Containing 0.87 acres, more or less.

The meridian of this legal description is based on the California State Plane Coordinate System NAD 83, Zone 2, epoch (1991.35) CA HPGN. The distances shown hereon are grid distances, divide by 0.99964451923019 to obtain ground distances.



Mar-13-2003 07:13am From-TRUCKEE DONNER PUD

+5305871189

T-011 P.006/006 F-088

024672

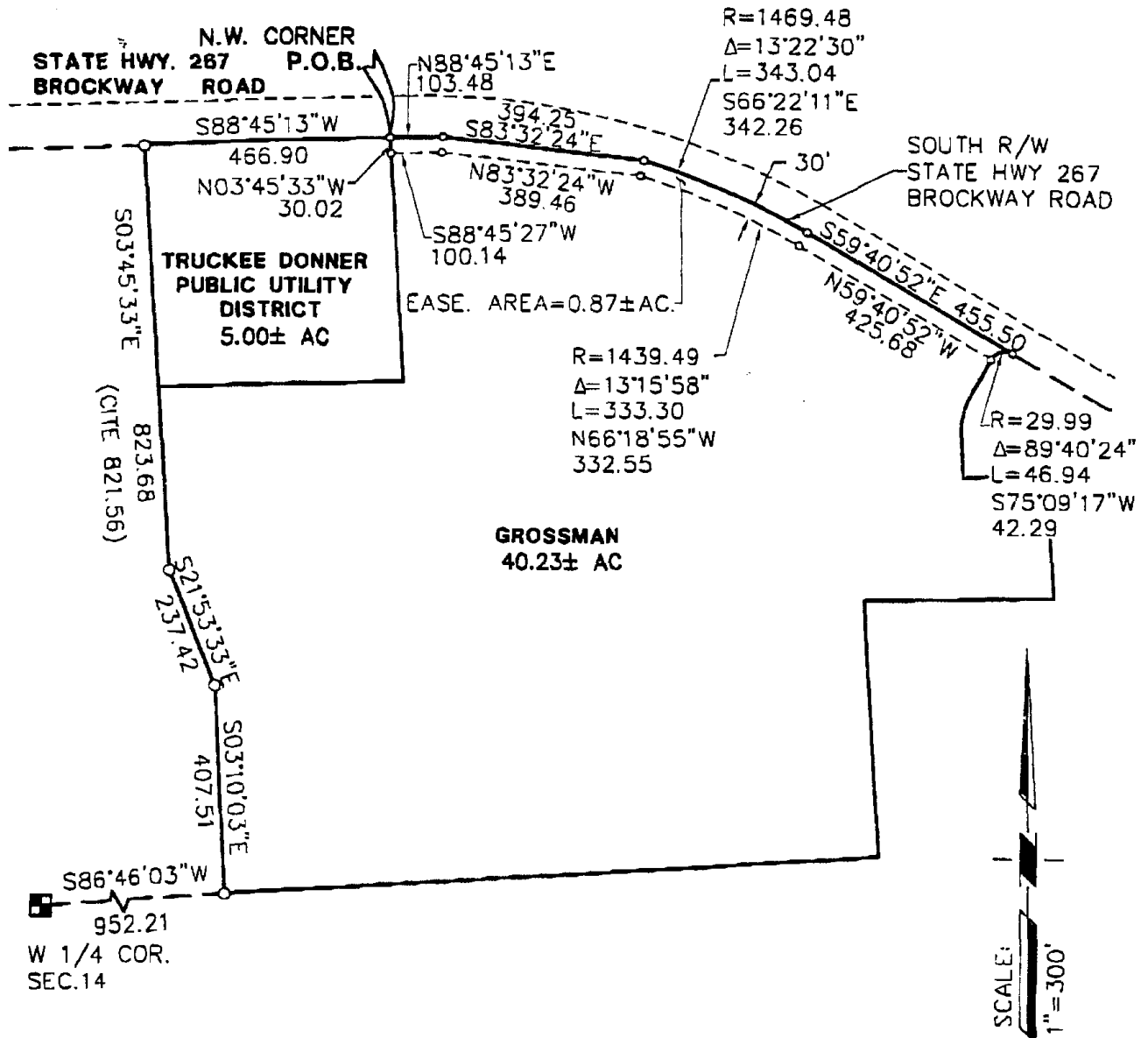


EXHIBIT 'B'
TRUCKEE DONNER
PUBLIC UTILITY DISTRICT
WATERLINE EASEMENT

POR. SECTION 14, T.17 N., R.16 E., M.D.M.
NEVADA COUNTY, CALIFORNIA
SCALE: 1" = 300' JANUARY 22, 2003

ANDREGG, INC.
SURVEYING • MAPPING • GEOMATICS
ALBUQUERQUE, CALIFORNIA
(530) 885-7072



X:\LD02\11601\dwg\11691ex2.dwg, 01/22/03 09:13:21am, BUI

END OF DOCUMENT

3

RECORDING REQUESTED BY

PLACER TITLE COMPANY

WHEN RECORDED MAIL THIS DEED
AND, UNLESS OTHERWISE SHOWN
BELOW, MAIL TAX STATEMENTS TO:

Truckee Partners, Inc.
PO Box 2819
Truckee, CA 96160

Title Order No.
Escrow No.



Nevada, County Recorder
Kathleen Smith

DOC- 2004-0053876-00

Acct 3-Placer Title Company

Monday, DEC 27, 2004 09:22:00

REC \$7.00:SBS \$2.00:MIC \$1.00

AUT \$3.00:

Ttl Pd \$13.00

Nbr-0000350045

ALB/AB/1-3

SPACE ABOVE THIS LINE FOR RECORDER'S USE

The undersigned Grantor declares:

Documentary Transfer Tax: \$0.00

☐ COMPUTED ON FULL VALUE OF PROPERTY CONVEYED

☐ OR COMPUTED ON FULL VALUE LESS LIENS AND
ENCUMBRANCES REMAINING AT TIME OF SALE

The Undersigned

Signature of Declarant or Agent determining tax.

Firm Name

GRANT DEED

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

TRUCKEE PARTNERS, INC., a California corporation

hereby GRANT(S) to

TRUCKEE DONNER LAND TRUST, a California tax exempt non-profit corporation

the following described real property in the Town of Truckee, County of Nevada, State of California:

Subdivision

Parcel A, as shown on the map entitled, "Wintercreek", filed for record 12/27/, 2004, in Book 8 of
Maps, page 131, Nevada County Records.

RESERVING THEREFROM Area "S" for a Storm Drain Detention Basin Easement for the benefit of Wintercreek
Homeowner's Association.

Dated: 12/21/04

TRUCKEE PARTNERS, INC.

Thomas Grossman

Thomas Grossman, President

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SHOWN, MAIL
AS DIRECTED ABOVE

Name

Street Address

City, State & Zip

COS

053876

STATE OF CALIFORNIA)
COUNTY OF NEVADA)

On Dec 21, 2004, before me, the undersigned Notary Public in and for said
County and State, personally appeared _____

Thomas Skorman

personally known to me (or proved to me on the basis of satisfactory evidence) to be the
person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that
he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their
signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s)
acted, executed the instrument.

Witness my hand and official seal.

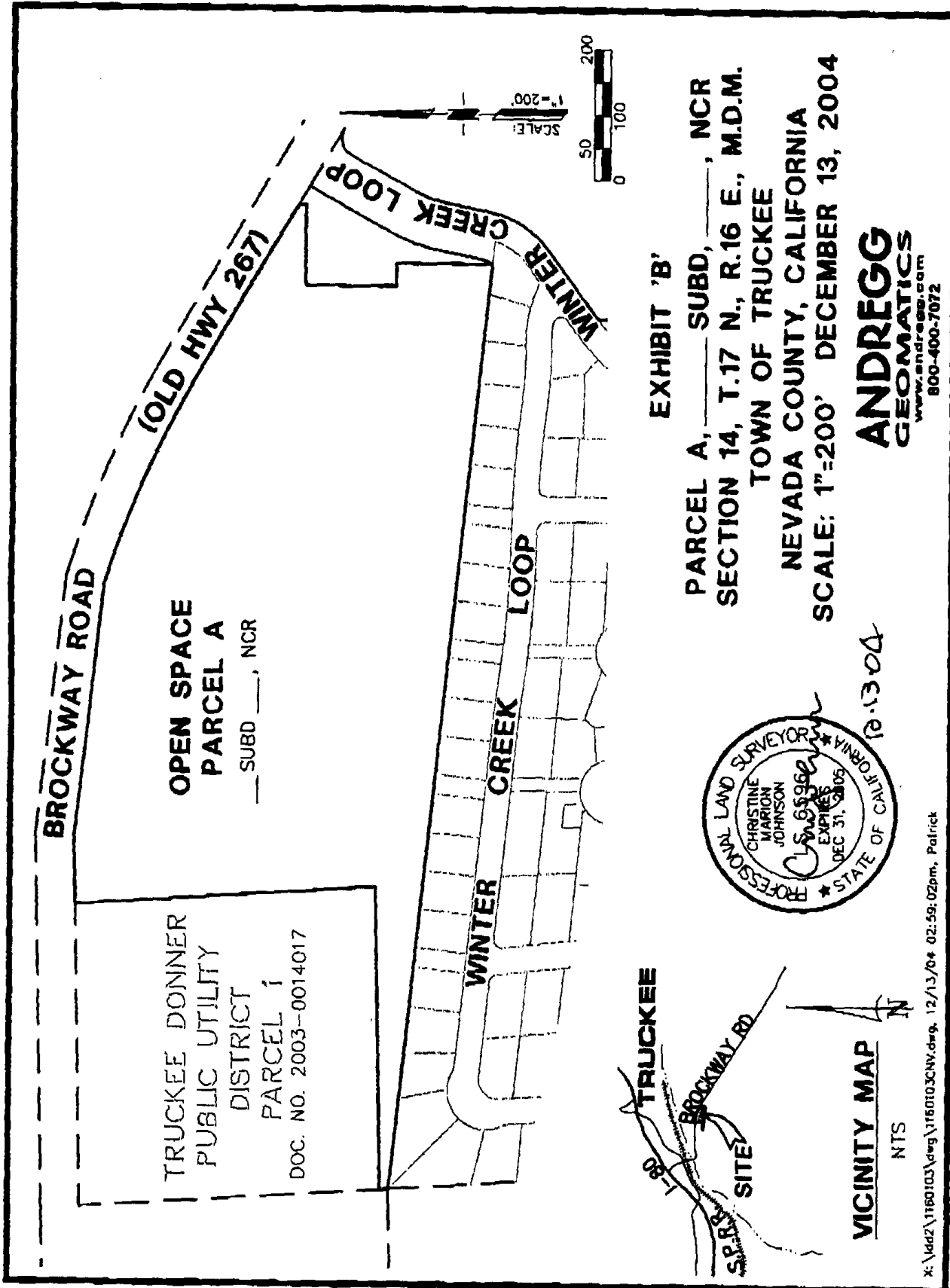
T. Lindroth

Notary Public in and for said County and State



Space above for official notarial area

053876



END OF DOCUMENT

Attachment 6. Wetland Delineation Report (Salix Consulting 2015)

**WETLAND DELINEATION
FOR THE
±55-ACRE TRUCKEE MEADOWS RESTORATION PROJECT
STUDY AREA
TOWN OF TRUCKEE, NEVADA COUNTY, CALIFORNIA**



Prepared for:
TRUCKEE RIVER WATERSHED COUNCIL
P.O. Box 8568
Truckee, CA 96162

Prepared by:

12240 Herdal Drive, Ste. 14
Auburn, California 95603
(530) 888-0130

NOVEMBER 2015

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APPENDICES

Appendix A: Wetland Data Sheets
Appendix B: Plant Species Observed

WETLAND DELINEATION FOR THE ±55-ACRE TRUCKEE MEADOWS RESTORATION PROJECT STUDY AREA

INTRODUCTION

On behalf of the Truckee River Watershed Council (TRWC), Salix Consulting delineated waters of the United States on the approximately ±55-acre Truckee Meadows Restoration Project study area in the town of Truckee, Nevada County, California. The project site is located on an approximately one-mile strip of land from the southwest side of Brockway Road between Winter Creek Loop and Palisades Drive, along Estates drive and to the Truckee River. The location corresponds to Section 14 of Township 17 North and Range 16 East on the 7.5 minute Truckee, California USGS quadrangle (Figure 1). The latitude and longitude of the approximate center of the site is 39° 19' 33.23" North and 120° 10' 09.64" West. The study area is located on a mix of public and private property.

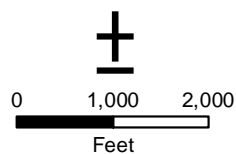
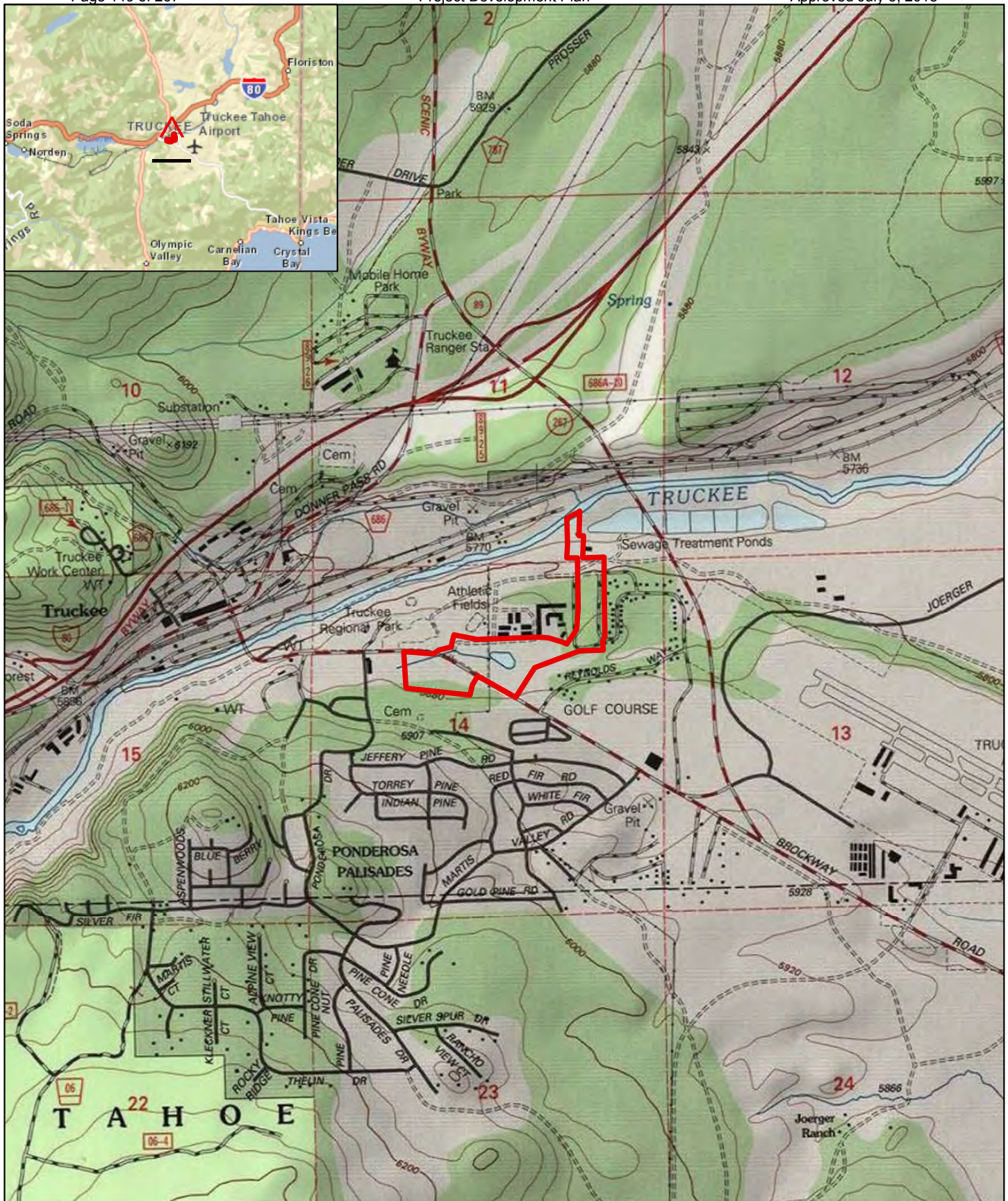
Setting

The study area is located on the east slope of the Sierra Nevada Mountains with an elevational range from approximately 5,890' at the western end of the study area to approximately 5,760' at the northeast edge, along the Truckee River. The site generally drains northeast toward the river, and topography rises steadily from the river to the meadow area at the southern end of the property. The study area includes several meadows north of an existing multi-family housing complex and west of Ponderosa Golf Course. The study area extends north of the golf course to the Truckee River. A recent aerial photo of the study area is shown as Figure 2.

Background

The Truckee River Watershed Council (TRWC) is proposing restoration of portions of the Hilltop-Ponderosa Wetland Complex located along Brockway Road on the south side of the Truckee River. The proposed project is referred to as the Truckee Wetlands (Meadows) Restoration Project (TWRP), and its goals include "increasing attenuation reducing erosion, restoring historic wetlands, protecting existing infrastructure and creating sustainable recreation/interpretive opportunities in the project area." In designing the project, TRWC has referenced numerous geotechnical investigations, CEQA assessments, and wetland delineations that have been conducted on parcels within and near the study area since 2001 for a variety of projects including residential and recreational developments.

The study corridor is composed of several different parcels and land ownerships and we have studied most of these properties over the past 15 years. We have incorporated one delineation conducted by a different firm, JBR Environmental Consultants, into this delineation. These lands, mapped in 2009, include the area between the pond and Brockway Road.



Source Maps: USGO Topographic Map,
Truckee (1992), CA
Quadrangle, 1:24,000

Legend

Project Area
(±51 acres)

Figure 1

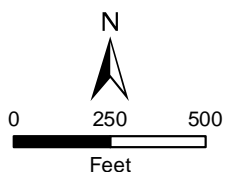
SITE & VICINITY MAP

TRWC Truckee Meadows
Truckee, Nevada County, CA



Google

Imagery ©2015, DigitalGlobe, USDA Farm Service Agency



Legend


 Project Area
(±51 acres)

Figure 2

AERIAL PHOTO

TRWC Truckee Meadows
Truckee, Nevada County, CA

Directions to the Site

The study area is located just east of the Town of Truckee. Take Interstate 80 east to Hwy 267 and head south to Brockway Road. Turn right and travel one mile to Estate Drive and turn right and park along Estate Drive.

CONTACT INFORMATION

Property Representative:
Truckee River Watershed Council
P.O. Box 8568
Truckee, CA 96162
Phone: (530) 550-8760
Contact: Jeannette Halderman

Primary Delineator:
Salix Consulting, Inc.
12240 Herdal Drive, Ste. 14
Auburn, California 95603
Phone: (530) 888-0130
Contact: Jeff Glazner

METHODS

A wetland delineation was conducted by Jeff Glazner in August and September 2015. The delineation was conducted according to the 1987 Corps Manual (Environmental Laboratory 1987) as amended by the Western Mountains, Valleys, and Coast Region Regional Supplement (U.S. Army Corps of Engineers 2010). Information about vegetation, soils, and hydrology was recorded at 8 data point locations. Data sheets are located in Appendix A.

Information on soils was taken from the Soil Survey Geographic (SSURGO) database for Tahoe National Forest Area, California (USDA, NRCS 2007). In the field, a Munsell Color chart was used to determine moist soil colors.

Plants observed on the subject parcel during the field evaluations are provided in Appendix B, along with the scientific name and the wetland indicator status of each species listed. Where a plant species observed has a wetland indicator status (not UPL), plant nomenclature follows Lichvar et.al. (2015). Otherwise, species names are aligned with The Jepson Manual (Baldwin et.al. 2012) or Calflora.

A Trimble GeoXT 6000 GPS unit with submeter accuracy was used to obtain location information about wetland boundaries, data points, and other pertinent features. Topographic information was provided but an aerial photo proved to be a more effective basemap. The wetland delineation map was created using ArcGIS 10.3.

RESULTS

Climate

The National Weather and Climate Center (WWC) weather station positioned closest to the study area is located in the Town of Truckee (WETS Station: Truckee Ranger Station, CA 9043). Data from this station is presented here as a reasonable approximation of climate conditions at the project site.

Truckee has a dry-summer subarctic continental climate with very cold and snowy winters and cool-to-warm and dry summers that feature with occasional periods of intense thunderstorms. Truckee is located near the Sierra Nevada crest, providing conditions for winter storms to commonly deposit nearly a meter of snow in a 24 hour storm event. The National Weather Service reports that Truckee's warmest month is July (average maximum temperature of 82.7°F, average minimum 42.4 F). January is the coldest month with an average maximum temperature of 40.9 F and average minimum temperature of 16.3 F.

Annual average precipitation is 30.2 inches of measurable precipitation with a substantial amount of that falling as snow (an annual average of 204 inches). The growing season is typically between May and October. All of the field surveys were conducted during dry conditions.

Soils





Four soil units have been mapped within the study area (Figure 3):

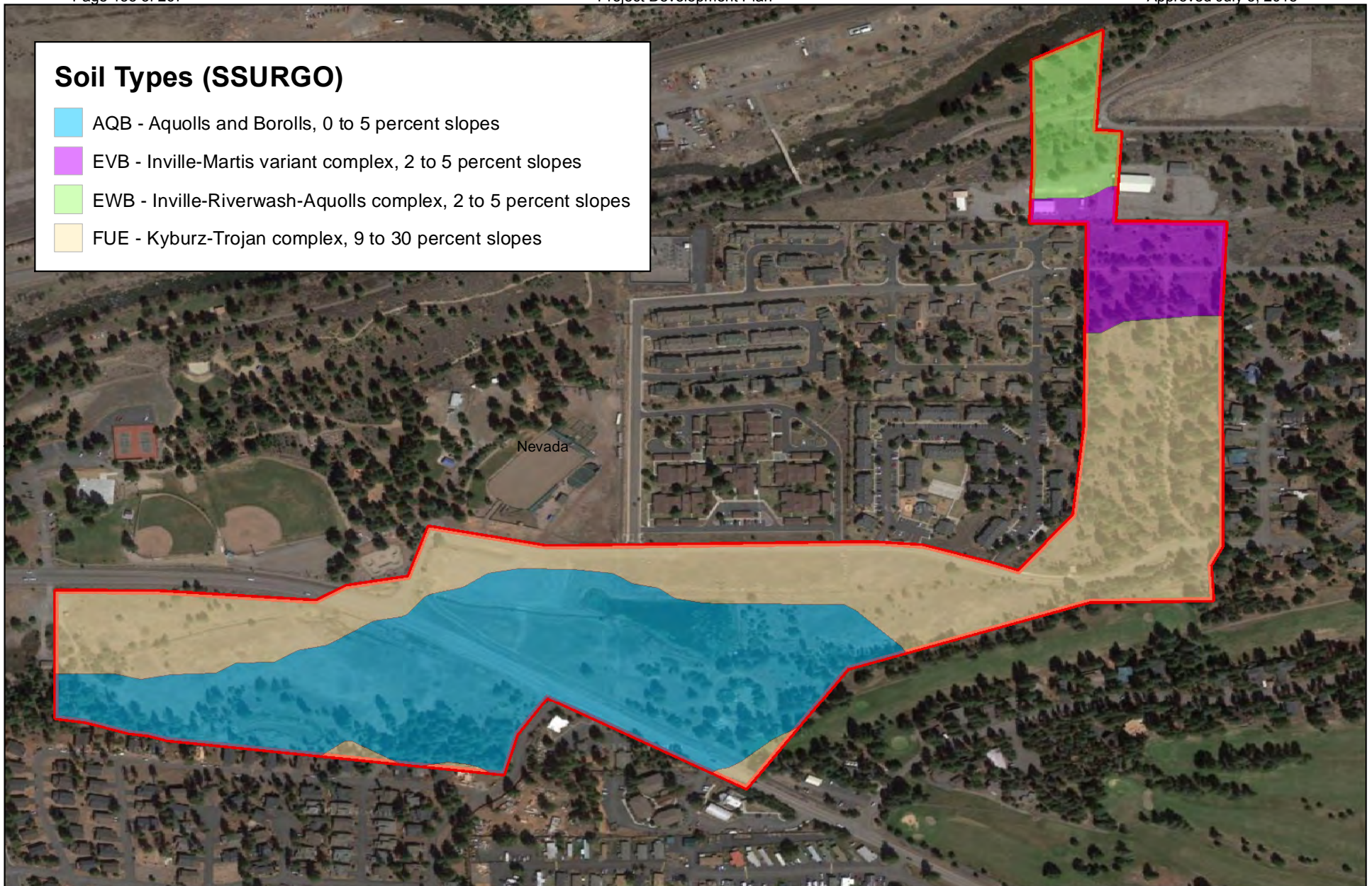
- Aquolls and Borolls, 0 to 5 percent slopes
- Inville-Martis variant complex, 2 to 5 percent slopes
- Inville-Riverwash-Aquolls complex, 2 to 5 percent slopes
- Kyburz-Trojan complex, 9 to 30 percent slopes

Aquolls are Mollisols that are often saturated for much of the year and may develop a histic horizon. These soils generally form in drainage ways and on floors, and have low chromas and distinct mottles. Permeability is variable. Aquolls are common soils in montane meadows, and are usually hydric.

Borolls are more-or-less freely drained Mollisols that are usually found on the edges of wet meadows. These soils often have a thick surface layer of stratified coarse sand and clay. Permeability is variable and mottles are often found in the lower horizons. In the California mounts, Borolls support aspen groves and grassland. Borolls are not necessarily hydric.

Soil Types (SSURGO)

-  AQB - Aquolls and Borolls, 0 to 5 percent slopes
-  EVB - Inville-Martis variant complex, 2 to 5 percent slopes
-  EWB - Inville-Riverwash-Aquolls complex, 2 to 5 percent slopes
-  FUE - Kyburz-Trojan complex, 9 to 30 percent slopes



0 250 500
Feet



Legend

 Project Area (±55 acres)

Figure 3

SOIL MAP

TRWC Truckee Meadows
Nevada County, CA

Inville soils are loamy-skeletal, isotic, frigid Ultic Haploxeralfs. They consist of very deep, well drained soils that formed in mixed alluvium and glacial outwash. Inville soils are on alluvial fans and outwash terraces. Slopes are 2 to 30 percent.

Martis soils are fine-loamy, mixed, superactive, frigid Ultic Haploxeralfs. The series consists of deep, well drained soils formed in glacial till and outwash from mixed sources, mainly volcanic. These soils are on glacial outwash plains and have slopes of 2 to 5 percent.

Kyburz soils are fine-loamy, mixed, active, frigid Ultic Haploxeralfs. The series consists of moderately deep, well drained soils formed in material weathered from basic volcanic rock. Kyburz soils occur on uplands and have slopes of 2 to 50 percent.

Trojan soils are fine-loamy, isotic, frigid Ultic Argixerolls. They consist of deep and very deep, well drained soils that formed in colluviums and residuum derived from volcanic rocks or from schist and argillite. Trojan soils are on hills and mountains.

Hydrology

The study area lies in the Truckee – CA, NV (16050102) HUC (Hydrological Unit Code) unit.

Drainage is generally to the north and east and connects to the nearby Truckee River through a series of overland flow pipes. Interestingly, very little water actually reaches the Truckee River due to relatively low volume flows through this watershed and high percolation rates of the soils. The lands in the upper portion of the study area are much wetter than in the lower study area. This is due to several low volume water sources including groundwater discharge and seepage from the golf course pond.

At the top of the project watershed, the Winter Creek wet meadow was originally mapped by Garcia and Associates in the early 2000's. Winter Creek drains through culverts under Brockway Road into a ditch that flows into the golf course pond. Disturbed meadow areas occur in this area and much of these lands are mapped as wetland. The upper project watershed drains into the golf course pond which had one primary overflow near the pumphouse on the eastern edge and one long seepage area on the north edge. Water flows from the pond to the east and through a couple shallow swales. Much of the water volume above is absorbed into the relatively dry meadows in to the east of the pond. Water collects at a culvert and flows northeast under Brockway Road. The wetland swale continues northwest and is intercepted by a dirt road which has diverted the historic flows into a rocky channel on the west side of the dirt road. Most of the water flowing in this rocky channel flows to a shallow detention basin along Riverview Drive and spills into a drop inlet that carries water to the Truckee River. Essentially, this drop inlet collects the majority of the water flowing through the study area watershed so there are no waters of the U.S. mapped in the study area below this point until the ordinary high water mark of the Truckee River.

Vegetation

The study area is a mix of forest, sagebrush, meadow, and ruderal habitats. Jeffrey pine (*Pinus jeffreyi*) and lodgepole pine (*Pinus contorta*) are common in the forest habitats. Big sagebrush (*Artemisia tridentata*), antelope bush (*Purshia tridentata*), rubber rabbitbrush (*Ericameria nauseosa*), and Follett's monardella (*Monardella follettii*) are common shrubs in the area. Grasses and forbs are abundant in open areas and include yarrow (*Achillea millefolium*), cheat grass (*Bromus tectorum*), tansy mustard (*Descurainia sophia*), squirrel tail grass (*Elymus elymoides*), baltic rush (*Juncus balticus*), mountain tarweed (*Madia glomerata*), Kentucky bluegrass (*Poa pratensis*), and mountain mule's-ears (*Wyethia mollis*).

Waters of the United States

Eight categories of waters of the United States (five wetlands and three other waters) have been mapped on the site for a total of 13.21 acres. Table 1 is an acreage summary of each mapped type. The wetland delineation map is included as Figure 8. Photos depicting the proposed project site are included in Figures 4-7.

Table 1.
Waters of the United States

Type	Acreage
Wetlands	
Seasonal Wetland	0.38
Fringe Wetland	0.21
Wet Meadow	10.23
Wetland Swale	0.80
Drainage Ditch	<u>0.21</u>
Total Wetlands	11.83
Other Waters	
Perennial Stream	0.05
Ephemeral Stream	0.07
Pond	<u>1.26</u>
Total Other Waters	1.38
Total	13.21

Wetlands

Seasonal Wetland

Five seasonal wetlands are mapped in the study area. Three are associated with a wetland swale north of the golf course pond, one is a shallow detention pond, and one is associated with the Brockway Trail Mitigation area. All of the seasonal wetlands are associated with former construction activities. The three that are connected to WS-1 are meadow-like but are called out separately due to their artificial nature. SW-1 and SW-2 are constructed; SW-1 and SW-2 may both be borrow areas. SW-3 is associated with Estate Drive which berms water on its south side. SW-4 is a detention basin that receives nearly all the water flowing through the study area. It is approximately 18"

deep and behaves like a seasonal wetland. It spills into a vertical culvert and is carried away in the storm drain system. Each of these seasonal wetlands supports mostly herbaceous wetland species. SW-5 is a small area of mitigation that was recently constructed in the Brockway Bike Trail wet meadow. This wetland is relatively deep, supporting marsh species such as *Typha latifolia*.

Fringe Wetland

Fringe wetland is located around most of the pond, essentially forming a marsh ring in the shallow water. During the warm months, the pond is kept at a near constant water elevation and just at or below the spillway. This constant creates water availability to support marsh vegetation in water less than a foot deep. *Carex nebrascensis* is the primary species growing around the pond.

Wet Meadow

Three wet meadows are mapped in the study area. The largest is the Winter Creek meadow located south of Brockway Road in the southwest portion of the study area (Figure 4). The Winter Creek wetland meadow is driven by ground water seepage. It flows through a culvert under Brockway Road and into a constructed ditch (DD-1). Sedges (*Carex nebrascensis*) and rushes (*Juncus balticus*) are very common in this meadow.

Wetland Swale

Three wetland swales are mapped in the study area. WS-1 is associated with the golf course pond (Figure 6.1). The pond seeps and water collects in this constructed swale and is carried east. WS-2 carries the spillway water from the golf course pond. WS-1 & WS-2 flow through the same culvert to the north under Estate Drive.

Drainage Ditch

Water from the Winter Creek wetland flows through a culvert under Brockway Road and into a well-defined and steep-sided ditch (DD-1, Figure 4.3). The ditch is considered a wetland because it is vegetated and contains soil. It appears that it is wet for most of the year, but flows are low-volume for most storm events.

Other Waters

Perennial Stream

The northern terminus of the study area is the Truckee River. The Truckee River corridor supports willow and wetland herbaceous species below the ordinary high water mark (Figure 7.3). Currently, a constructed grouted rip rap drainage carries water into the Truckee River. This drainage and its upstream reaches carry very little water as it is diverted into other conveyances.

Ephemeral Stream

One reach of the primary drainage through the study area is mapped as ephemeral stream (Figure 7.1). This feature is not the historic flow path of the drainage but appears to have been installed when a dirt road was constructed. A roadside ditch was

constructed and water is diverted at the road berm into the rocky channel. The channel does not support a riparian corridor and acts solely as a conveyance to the detention basin (SW-4).

Pond

A constructed and managed pond is located just north of the Brockway Bike Trail wet meadow (Figure 5.1 & 6.2). The pond is managed and utilized by the Truckee Donner Park and Recreation District. It is fed primarily by well water but receives local runoff from DD-1. It appears that water management keeps the pond at or just below the spillway and water that does spill is minimal.



4.1 Looking northeast along ditch
through Winter Creek wetlands.
Photo date 8-26-15



4.2 Looking southeast along
Brockway Road and Winter Creek
wet meadow (WM-1).
Photo date 8-26-15



4.3 Looking east along drainage
ditch leading to pond.
Photo date 8-26-15



5.1 Looking toward pond from
northeast.
Photo date 8-26-15

5.2 From new Brockway bike trail,
looking northeast over wet meadow
(WM-2) toward pond.
Photo date 8-26-15



5.3 Looking south over seasonal
wetland toward pond.
Photo date 8-26-15



6.1 Looking west along drainage swale and pond. Swale receives water from pond leakage.
Photo date 8-04-15



6.2 Pond spillway.
Photo date 8-21-15



6.3 Looking southwest over culverts under Estate Drive. Most of upslope study area drains through these culverts.
Photo date 8-11-15

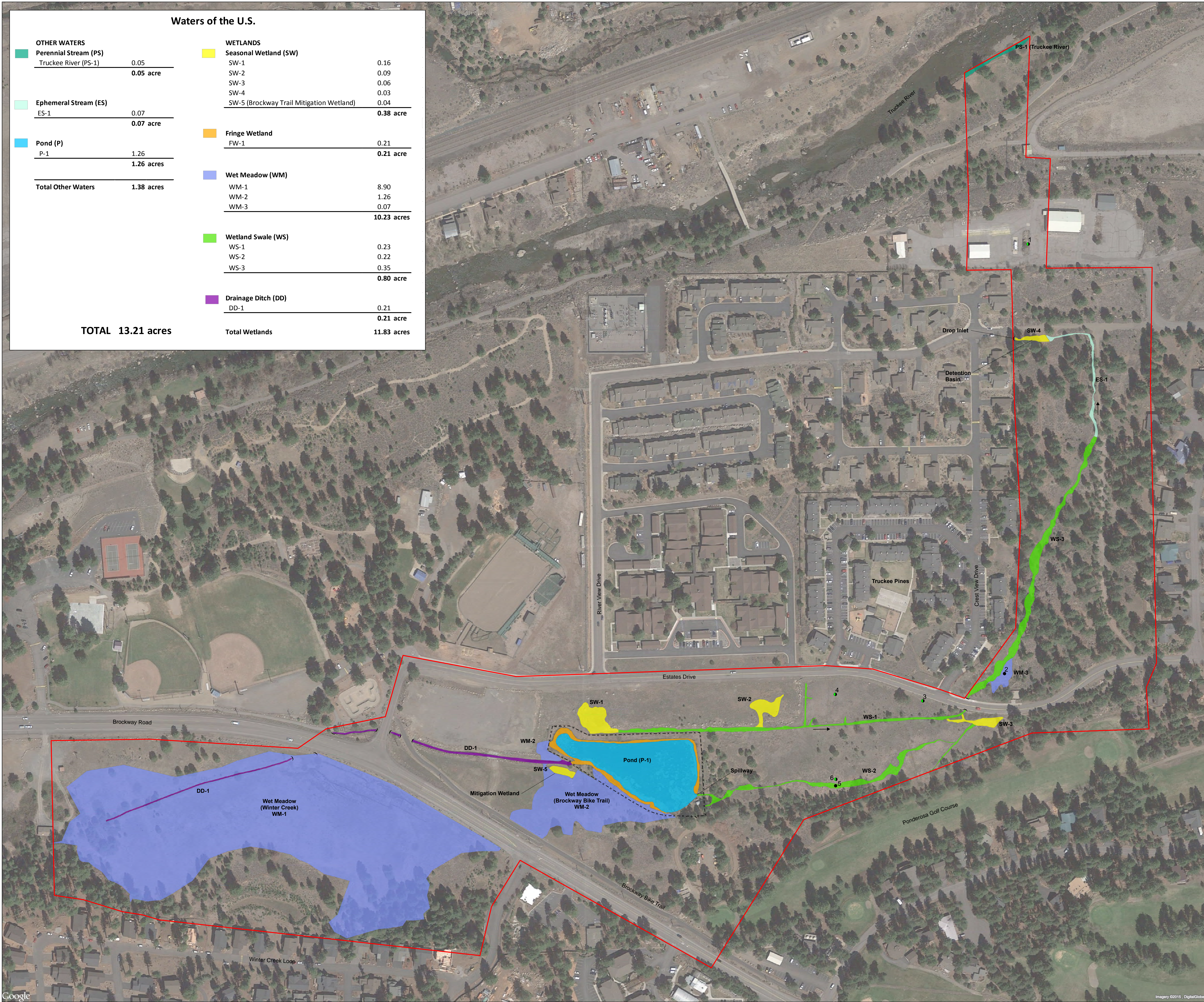


7.1 Looking south along ephemeral stream above Riverview Drive.
Photo date 8-11-15

7.2 Looking east over drop inlet near intersection of Riverview Drive and Crest View Drive. Shallow detention basin in background.
Photo date 8-11-15



7.3 Looking southwest along Truckee River near outfall location.
Photo date 8-21-15



REFERENCES AND OTHER SOURCES

- Baldwin, Bruce G. (ed.). 2012. The Jepson Manual - Vascular Plants of California, Second Edition. University of California Press. Berkeley, CA.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1.
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- Saucedo, G.J., 2005, Geologic map of the Lake Tahoe basin, California and Nevada, 1:100,000 scale: California Geological Survey, Regional Geologic Map No. 4, scale 1:100000. http://ngmdb.usgs.gov/ngmdb/ILView.pl?sid=71051_1.sid&vtype=b&sfact=1.5. Accessed: January 2012.
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- USDA/NRCS. Web Soil Survey, Tahoe National Forest Area, California, <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed: September, 2015.

Appendix A

Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Truckee Meadows Restoration Project City/County: Truckee/Nevada Sampling Date: 8/21/15
 Applicant/Owner: Truckee River Watershet Council State: CA Sampling Point: 01
 Investigator(s): Jeff Glazner Section, Township, Range: Sec 14, T17N, R16E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): MLRA 22A Lat: 39.3300092 N Long: 120.165469 W Datum: _____
 Soil Map Unit Name: Inville-Martis variant complex, 2 to 5 percent slopes (EVB) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Drainage ditch doesn't support wetland vegetation or carry regular scouring flows. Carries local runoff.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Pinus jeffreyi</u>	<u>10</u>	<u>no</u>	<u>UPL</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>10</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. <u>Ericameria nauseosa</u>	<u>20</u>	<u>yes</u>	<u>UPL</u>	
2. <u>Artemisia tridentata</u>	<u>2</u>	<u>no</u>	<u>UPL</u>	Total % Cover of: _____ Multiply by: _____
3. <u>Purshia tridentata</u>	<u>1</u>	<u>no</u>	<u>UPL</u>	OBL species <u>0</u> x1 = <u>0</u>
4. _____	_____	_____	_____	FACW species <u>0</u> x2 = <u>0</u>
5. _____	_____	_____	_____	FAC species <u>0</u> x3 = <u>0</u>
50% = _____, 20% = _____	<u>23</u>	= Total Cover		FACU species <u>0</u> x4 = <u>0</u>
Herb Stratum (Plot size: _____)				UPL species <u>0</u> x5 = <u>0</u>
1. <u>Bromus tectorum</u>	<u>25</u>	<u>yes</u>	<u>UPL</u>	Column Totals: <u>0</u> (A) <u>0</u> (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>0</u>
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>25</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>30</u>				

Remarks: Upland flora in constructed ditch.

Project Site: Truckee Meadows Restoration Project**SOIL**Sampling Point: 01**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	_____	_____	_____	_____	_____	_____	_____	<u>gravel</u>
1-10	<u>10YR4/3</u>	<u>100</u>	_____	_____	_____	_____	_____	<u>gravely loam</u>
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: Unconsolidated material in ditch.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
(except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stresses Plants (D1) (**LRR A**)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9)
(MLRA 1, 2, 4A, and 4B)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)
☐ Raised Ant Mounds (D6) (**LRR A**)
☐ Frost-Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present?
(includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?** Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Constructed drainage ditch within corporation yard, among asphalt. Likely carries flood events.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Truckee Meadows Restoration Project City/County: Truckee/Nevada Sampling Date: 8/21/15
 Applicant/Owner: Truckee River Watershet Council State: CA Sampling Point: 02
 Investigator(s): Jeff Glazner Section, Township, Range: Sec 14, T17N, R16E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): MLRA 22A Lat: 39.326575 N Long: 120.165803 W Datum: _____
 Soil Map Unit Name: Kyburz-Trojan complex, 9 to 30 percent slopes (FUE) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Meadow adjacent to drainage. Dominated by <i>Juncus balticus</i>. Weak wetland hydrology but strongly hydrophytic plant community and inferred wetland hydrology.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																					
1. _____	_____	_____	_____																						
2. _____	_____	_____	_____																						
3. _____	_____	_____	_____																						
4. _____	_____	_____	_____																						
50% = _____, 20% = _____	_____	= Total Cover																							
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet: <table border="0"> <tr> <td colspan="2"><u>Total % Cover of:</u></td> <td><u>Multiply by:</u></td> </tr> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td><u>105</u></td> <td>x2 = <u>210</u></td> </tr> <tr> <td>FAC species</td> <td><u>10</u></td> <td>x3 = <u>30</u></td> </tr> <tr> <td>FACU species</td> <td><u>5</u></td> <td>x4 = <u>20</u></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>120</u> (A)</td> <td><u>260</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.2</u>	<u>Total % Cover of:</u>		<u>Multiply by:</u>	OBL species	<u>0</u>	x1 = <u>0</u>	FACW species	<u>105</u>	x2 = <u>210</u>	FAC species	<u>10</u>	x3 = <u>30</u>	FACU species	<u>5</u>	x4 = <u>20</u>	UPL species	<u>0</u>	x5 = <u>0</u>	Column Totals:	<u>120</u> (A)	<u>260</u> (B)
<u>Total % Cover of:</u>		<u>Multiply by:</u>																							
OBL species	<u>0</u>	x1 = <u>0</u>																							
FACW species	<u>105</u>	x2 = <u>210</u>																							
FAC species	<u>10</u>	x3 = <u>30</u>																							
FACU species	<u>5</u>	x4 = <u>20</u>																							
UPL species	<u>0</u>	x5 = <u>0</u>																							
Column Totals:	<u>120</u> (A)	<u>260</u> (B)																							
1. _____	_____	_____	_____																						
2. _____	_____	_____	_____																						
3. _____	_____	_____	_____																						
4. _____	_____	_____	_____																						
5. _____	_____	_____	_____																						
50% = _____, 20% = _____	_____	= Total Cover																							
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																					
1. <u><i>Juncus balticus</i></u>	<u>65</u>	<u>yes</u>	<u>FACW</u>																						
2. <u><i>Achillea millefolium</i></u>	<u>5</u>	<u>no</u>	<u>FACU</u>																						
3. <u><i>Carex sp.</i></u>	<u>15</u>	<u>no</u>	<u>FACW</u>																						
4. <u><i>Hordeum brachyantherum</i></u>	<u>5</u>	<u>no</u>	<u>FACW</u>																						
5. <u><i>Arnica chamissonis</i></u>	<u>20</u>	<u>yes</u>	<u>FACW</u>																						
6. <u><i>Symphotrichum spathulatum</i></u>	<u>10</u>	<u>no</u>	<u>FAC</u>																						
7. _____	_____	_____	_____																						
8. _____	_____	_____	_____																						
9. _____	_____	_____	_____																						
10. _____	_____	_____	_____																						
11. _____	_____	_____	_____																						
50% = _____, 20% = _____	<u>120</u>	= Total Cover																							
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																					
1. _____	_____	_____	_____																						
2. _____	_____	_____	_____																						
50% = _____, 20% = _____	_____	= Total Cover																							
% Bare Ground in Herb Stratum <u>2</u>																									
Remarks: <u>Dense area of <i>Juncus balticus</i>.</u>																									

Project Site: Truckee Meadows Restoration Project**SOIL**Sampling Point: 02**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR2/1	100	_____	_____	_____	_____	_____	organic loam
3-12	10YR3/1	100	_____	_____	_____	_____	_____	rocky loam
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☒ No ☐

Remarks: Rocky loam with evidence of prolonged saturation during growing season.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
(except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stresses Plants (D1) **(LRR A)**
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9)
(MLRA 1, 2, 4A, and 4B)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)
☐ Raised Ant Mounds (D6) **(LRR A)**
☐ Frost-Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present?
(includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Weak wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Truckee Meadows Restoration Project City/County: Truckee/Nevada Sampling Date: 8/21/15
 Applicant/Owner: Truckee River Watershed Council State: CA Sampling Point: 03
 Investigator(s): Jeff Glazner Section, Township, Range: Sec 14, T17N, R16E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1-2
 Subregion (LRR): MLRA 22A Lat: 39.326322 N Long: 120.166639 W Datum: _____
 Soil Map Unit Name: Kyburz-Trojan complex, 9 to 30 percent slopes (FUE) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Suspect area. Depressional but water flows out to east and area functions as a dry meadow with scattered sagebrush.		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. <u>Artemisia tridentata</u>	<u>20</u>	<u>yes</u>	<u>UPL</u>	
2. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
3. _____	_____	_____	_____	OBL species <u>0</u> x1 = <u>0</u>
4. _____	_____	_____	_____	FACW species <u>20</u> x2 = <u>40</u>
5. _____	_____	_____	_____	FAC species <u>10</u> x3 = <u>30</u>
50% = _____, 20% = _____	<u>20</u>	= Total Cover		FACU species <u>15</u> x4 = <u>60</u>
Herb Stratum (Plot size: _____)				UPL species <u>20</u> x5 = <u>100</u>
1. <u>Hordeum brachyantherum</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	Column Totals: <u>65</u> (A) <u>230</u> (B)
2. <u>Juncus balticus</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	Prevalence Index = B/A = <u>3.5</u>
3. <u>Poa secunda</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. <u>Symphotrichum spathulatum</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	
5. <u>Elymus trachycaulus</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>45</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>40</u>				
Remarks: <u>Sagebrush/grass community.</u>				

Project Site: Truckee Meadows Restoration Project**SOIL**Sampling Point: 03**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR3/2	100	_____	_____	_____	_____	_____	rocky loam
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: Adjacent to road toe slope. Contains mixed soil.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
(except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stresses Plants (D1) **(LRR A)**
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9)
(MLRA 1, 2, 4A, and 4B)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)
☐ Raised Ant Mounds (D6) **(LRR A)**
☐ Frost-Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present?
(includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?** Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Depressional area adjacent to toe slope but lacks evidence of prolonged saturation.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Truckee Meadows Restoration Project City/County: Truckee/Nevada Sampling Date: 8/21/15
 Applicant/Owner: Truckee River Watershed Council State: CA Sampling Point: 04
 Investigator(s): Jeff Glazner Section, Township, Range: Sec 14, T17N, R16E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): MLRA 22A Lat: 39.326431 N Long: 120.167414 W Datum: _____
 Soil Map Unit Name: Kyburz-Trojan complex, 9 to 30 percent slopes (FUE) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Suspect area. Dry meadow dominated by <i>Juncus balticus</i> but lacking soil and hydrologic indicators.		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	OBL species <u>0</u> x1 = <u>0</u>
3. _____	_____	_____	_____	FACW species <u>80</u> x2 = <u>160</u>
4. _____	_____	_____	_____	FAC species <u>5</u> x3 = <u>15</u>
5. _____	_____	_____	_____	FACU species <u>10</u> x4 = <u>40</u>
50% = _____, 20% = _____	_____	= Total Cover		UPL species <u>25</u> x5 = <u>125</u>
Herb Stratum (Plot size: _____)				Column Totals: <u>120</u> (A) <u>340</u> (B)
1. <u><i>Juncus balticus</i></u>	<u>75</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index = B/A = <u>2.8</u>
2. <u><i>Hordeum brachyantherum</i></u>	<u>5</u>	<u>no</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u><i>Penstemon rydbergii</i></u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
4. <u><i>Lactuca serriola</i></u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
5. <u><i>Epilobium brachycarpum</i></u>	<u>5</u>	<u>no</u>	<u>UPL</u>	
6. <u><i>Symphyotrichum spathulatum</i></u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
7. <u><i>Sisymbrium irio</i></u>	<u>20</u>	<u>yes</u>	<u>UPL</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>120</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>2</u>				

Remarks: Juncus balticus dominated area with abundant *Sisymbrium irio*.

Project Site: Truckee Meadows Restoration Project**SOIL**Sampling Point: 04**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR2/2	100	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: Rock refusal at 6", no redox in upper part.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
(except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stresses Plants (D1) **(LRR A)**
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9)
(MLRA 1, 2, 4A, and 4B)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)
☐ Raised Ant Mounds (D6) **(LRR A)**
☐ Frost-Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present?
(includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?** Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Lacks evidence of prolonged saturation.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Truckee Meadows Restoration Project City/County: Truckee/Nevada Sampling Date: 8/21/15
 Applicant/Owner: Truckee River Watershed Council State: CA Sampling Point: 05
 Investigator(s): Jeff Glazner Section, Township, Range: Sec 14, T17N, R16E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1-2
 Subregion (LRR): MLRA 22A Lat: 39.325744 N Long: 120.167789 W Datum: _____
 Soil Map Unit Name: Aquolls and Borolls, 0 to 5 percent slopes (AQB) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Upper end of shallow drainage swale. Strong hydrophytic vegetation indicators.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	OBL species <u>80</u> x1 = <u>80</u>
3. _____	_____	_____	_____	FACW species <u>30</u> x2 = <u>60</u>
4. _____	_____	_____	_____	FAC species <u>5</u> x3 = <u>15</u>
5. _____	_____	_____	_____	FACU species <u>0</u> x4 = <u>0</u>
50% = _____, 20% = _____	_____	= Total Cover		UPL species <u>5</u> x5 = <u>25</u>
Herb Stratum (Plot size: _____)				Column Totals: <u>120</u> (A) <u>180</u> (B)
1. <u>Carex nebrascensis</u>	<u>80</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u>1.5</u>
2. <u>Epilobium ciliatum</u>	<u>25</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Sidalcea oregana</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
4. <u>Epilobium brachycarpum</u>	<u>5</u>	<u>no</u>	<u>UPL</u>	
5. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>120</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
50% = _____, 20% = _____	_____	= Total Cover		<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
% Bare Ground in Herb Stratum <u>2</u>				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Remarks: Dense area of Carex in swale.				<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Project Site: Truckee Meadows Restoration Project**SOIL**Sampling Point: 05**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR3/1	95	5YR4/6	5	C	M		gravely loam
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☒ No ☐

Remarks: Dense root zone to 5", gravely loam below. Abundant redox.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input checked="" type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (2 or more required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) |
| (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) |

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present?
(includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No water present in dry summer conditions. Wetland hydrology inferred from soils and vegetation.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Truckee Meadows Restoration Project City/County: Truckee/Nevada Sampling Date: 8/21/15
Applicant/Owner: Truckee River Watershed Council State: CA Sampling Point: 06
Investigator(s): Jeff Glazner Section, Township, Range: Sec 14, T17N, R16E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1-2
Subregion (LRR): MLRA 22A Lat: 39.325789 N Long: 120.167772 W Datum: _____
Soil Map Unit Name: Aquolls and Borolls, 0 to 5 percent slopes (AQB) NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Area just lateral to wetland swale. Upland comparison to 05.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of:
2. _____	_____	_____	_____	OBL species <u>0</u>
3. _____	_____	_____	_____	FACW species <u>85</u>
4. _____	_____	_____	_____	FAC species <u>20</u>
5. _____	_____	_____	_____	FACU species <u>5</u>
50% = _____, 20% = _____	_____	= Total Cover		UPL species <u>10</u>
Herb Stratum (Plot size: _____)				Column Totals: <u>120</u> (A)
1. <u>Carex sp.</u>	<u>75</u>	<u>yes</u>	<u>FACW</u>	<u>300</u> (B)
2. <u>Hordeum brachyantherum</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	Prevalence Index = B/A = <u>2.5</u>
3. <u>Drymocalis glandulosa</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	
4. <u>Achillea millefolium</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:
5. <u>Sisymbrium irio</u>	<u>10</u>	<u>no</u>	<u>UPL</u>	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation
6. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
7. _____	_____	_____	_____	<input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$
8. _____	_____	_____	_____	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9. _____	_____	_____	_____	<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
10. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
11. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% = _____, 20% = _____	<u>120</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present?
2. _____	_____	_____	_____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>2</u>				
Remarks: <u>Carex transition area.</u>				

Project Site: Truckee Meadows Restoration Project**SOIL**Sampling Point: 06**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR3/2	100	_____	_____	_____	_____	_____	gravely loam
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks:

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
(except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stresses Plants (D1) **(LRR A)**
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9)
(MLRA 1, 2, 4A, and 4B)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)
☐ Raised Ant Mounds (D6) **(LRR A)**
☐ Frost-Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present?
(includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Outside swale.

Appendix B

Wetland Status of Plant Species Observed

Appendix B- Truckee Meadows Plants Observed

Taxon	Common Name	Wetland Status
<i>Abies concolor</i>	White fir	UPL
<i>Achillea millefolium</i>	Common yarrow	FACU
<i>Agropyron cristatum</i>	Crested wheatgrass	UPL
<i>Alnus incana</i> subsp. <i>tenuifolia</i>	Mountain alder	FACW
<i>Amelanchier utahensis</i>	Utah serviceberry	FACU
<i>Arctostaphylos patula</i>	Greenleaf manzanita	UPL
<i>Arnica chamissonis</i>	Leafy arnica	FACW
<i>Artemisia arbuscula</i>	Low sagebrush	UPL
<i>Artemisia tridentata</i>	Big sagebrush	UPL
<i>Bistorta bistortoides</i>	Western bistort	FACW
<i>Boechera pinetorum</i>	Woodland rockcress	FACU
<i>Bromus inermis</i>	Smooth brome	FACU
<i>Bromus tectorum</i>	Cheat grass	UPL
<i>Carex aquatilis</i>	Water sedge	OBL
<i>Carex nebrascensis</i>	Nebraska sedge	OBL
<i>Carex</i> sp.	Sedge	VARIES
<i>Carex utriculata</i>	Southern beaked sedge	OBL
<i>Castilleja</i> sp.	Paintbrush	VARIES
<i>Ceanothus cordulatus</i>	Mountain whitethorn	UPL
<i>Ceanothus prostratus</i>	Mahala mat	UPL
<i>Ceanothus velutinus</i>	Tobacco brush	UPL
<i>Chaenactis douglasii</i>	Dusty maidens	UPL
<i>Chamerion angustifolium</i>	Narrow-leaf fireweed	FACU
<i>Chenopodium album</i>	White pigweed	FACU
<i>Cirsium andersonii</i>	Rose thistle	UPL
<i>Cirsium scariosum</i>	Elk thistle	FAC
<i>Collinsia parviflora</i>	Blue-eyed Mary	UP
<i>Collomia grandiflora</i>	Large-flowered collomia	UPL
<i>Conium maculatum</i>	Poison hemlock	FACW
<i>Deschampsia danthonioides</i>	Annual hairgrass	FACW
<i>Descurainia sophia</i>	Tansy mustard	UPL
<i>Drymocallis glandulosa</i>	Glandular cinquefoil	FAC
<i>Elymus elymoides</i>	Squirreltail	FACU
<i>Elymus glaucus</i>	Blue wildrye	FACU
<i>Elymus trachycaulus</i>	Slender wheatgrass	FACU
<i>Epilobium brachycarpum</i>	Summer cottonweed	UPL
<i>Epilobium ciliatum</i>	Hairy willow-herb	FACW
<i>Ericameria nauseosa</i>	Rubber rabbitbrush	UPL

Taxon	Common Name	Wetland Status
<i>Eriogonum douglasii</i>	Southern wild buckwheat	UPL
<i>Eriogonum nudum</i>	Naked wild buckwheat	UPL
<i>Erythranthe primuloides</i>	Primrose monkeyflower	FACW
<i>Geum macrophyllum</i>	Large-leaved avens	FACW
<i>Gnaphalium palustre</i>	Western marsh cudweed	FACW
<i>Hordeum brachyantherum</i>	Meadow barley	FACW
<i>Juncus balticus</i>	Baltic rush	FACW
<i>Lactuca serriola</i>	Prickly lettuce	FACU
<i>Lepidium campestre</i>	Field pepperweed	UPL
<i>Linum lewisii</i>	Prairie flax	UPL
<i>Madia glomerata</i>	Mountain tarweed	FACU
<i>Melilotus albus</i>	White sweetcover	UPL
<i>Monardella follettii</i>	Follett's monardella	UPL
<i>Monardella odoratissima</i>	Alpine mountainbalm	FACU
<i>Muhlenbergia filiformis</i>	Pull-up muhly	FACW
<i>Penstemon rydbergii</i>	Rydberg's beardtongue	FACU
<i>Perideridia parishii</i>	Parish's yampah	FAC
<i>Phacelia hastata</i>	Silverleaf phacelia	UPL
<i>Phleum pratense</i>	Common timothy	FACU
<i>Pinus contorta</i>	Shore pine	FAC
<i>Pinus jeffreyi</i>	Jeffrey pine	UPL
<i>Poa pratensis</i>	Kentucky bluegrass	FAC
<i>Poa secunda</i>	Secund bluegrass	FACU
<i>Populus trichocarpa</i>	Black cottonwood	FAC
<i>Purshia tridentata</i>	Antelope bush	UPL
<i>Rumex crispus</i>	Curly dock	FAC
<i>Salix exigua</i>	Narrow-leaved willow	FACW
<i>Salix lasiandra</i>	Pacific willow	FACW
<i>Sidalcea oregana</i>	Oregon checker-mallow	FACW
<i>Sisymbrium altissimum</i>	Tumble mustard	FACU
<i>Sisymbrium irio</i>	London rocket	UPL
<i>Symphyotrichum spathulatum</i>	Western mountain aster	FAC
<i>Taraxacum officinale</i>	Common dandelion	FACU
<i>Tragopogon pratensis</i>	Meadow salsify	UPL
<i>Trifolium longiipes</i>	Long-stalked clover	FACW
<i>Trifolium repens</i>	White clover	FACU
<i>Urtica dioica</i>	Stinging nettle	FAC
<i>Verbascum thapsus</i>	Woolly mullein	FACU
<i>Wyethia mollis</i>	Mountain mule's-ears	UPL

Attachment 7. Long-Term Management Plan

**Long-Term Management Plan
For The
Truckee Meadows Restoration ILF Project Site**

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ATTACHMENTS

Attachment A. ILF Project Plans
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Attachment C. Long-Term Funding Agreement

Long-Term Management Plan

I. Introduction

A. Purpose of Establishment

The Truckee Meadows Restoration ILF Project Site (“ILF Project Site”) was established under the Sacramento District California In-Lieu Fee Program (“ILF Program”) Enabling Instrument (“Enabling Instrument”) to compensate for unavoidable impacts to, and to conserve and to protect waters of the United States, including wetlands. The ILF Project Site (or “Preserve Area” as referred to in the deed restriction) is located on an 11.86-acre parcel in the ILF Program’s Tahoe Service Area and includes 6.56 acres of rehabilitated waters of the United States. Credits would be provided for rehabilitated wetlands at a 2.5:1 ratio, for a total of 2.33 aquatic resource credits after accounting for the proportion of total funding (approximately 89.0%) provided by the ILF Program.

B. Purpose of this Long-Term Management Plan

The purpose of this Long-Term Management Plan (“LTMP”) is to ensure the ILF Project Site is managed, monitored, and maintained in perpetuity. This management plan establishes objectives, priorities and tasks to monitor, manage, maintain and report on the waters of the United States. This management plan is a binding and enforceable instrument.

C. Land Manager and Responsibilities

The land manager is Truckee Donner Land Trust (TDLT). The land manager shall manage, monitor, and protect the ILF Project Site in perpetuity to preserve its habitat and conservation values in accordance with the long-term management plan and the deed restriction. Long-term management and monitoring tasks, and protection of the ILF Project Site through the maintenance of a conservation defense liability insurance policy covering the ILF Project Site, shall be funded with the Endowment Amount provided to TDLT to establish the “Endowment Fund” (as defined in Section VI below) for these purposes in accordance the terms and conditions set forth in Section VI below. The land manager shall be responsible for providing an annual report to the IRT¹ detailing the time period covered, an itemized account of the management tasks and total amount expended. Any subsequent grading, or alteration of the site’s hydrology and/or topography by the land manager or its representatives must be approved by the IRT and the necessary permits, such

¹ “IRT” for the purposes of this LTMP means the Signatory Agencies to the ILF Program Instrument that approved the Project Development Plan for the Truckee Meadows Restoration Project and are identified in Section V.D.

as a Section 404 permit, must be obtained if required.

II. Property Description

A. Setting and Location

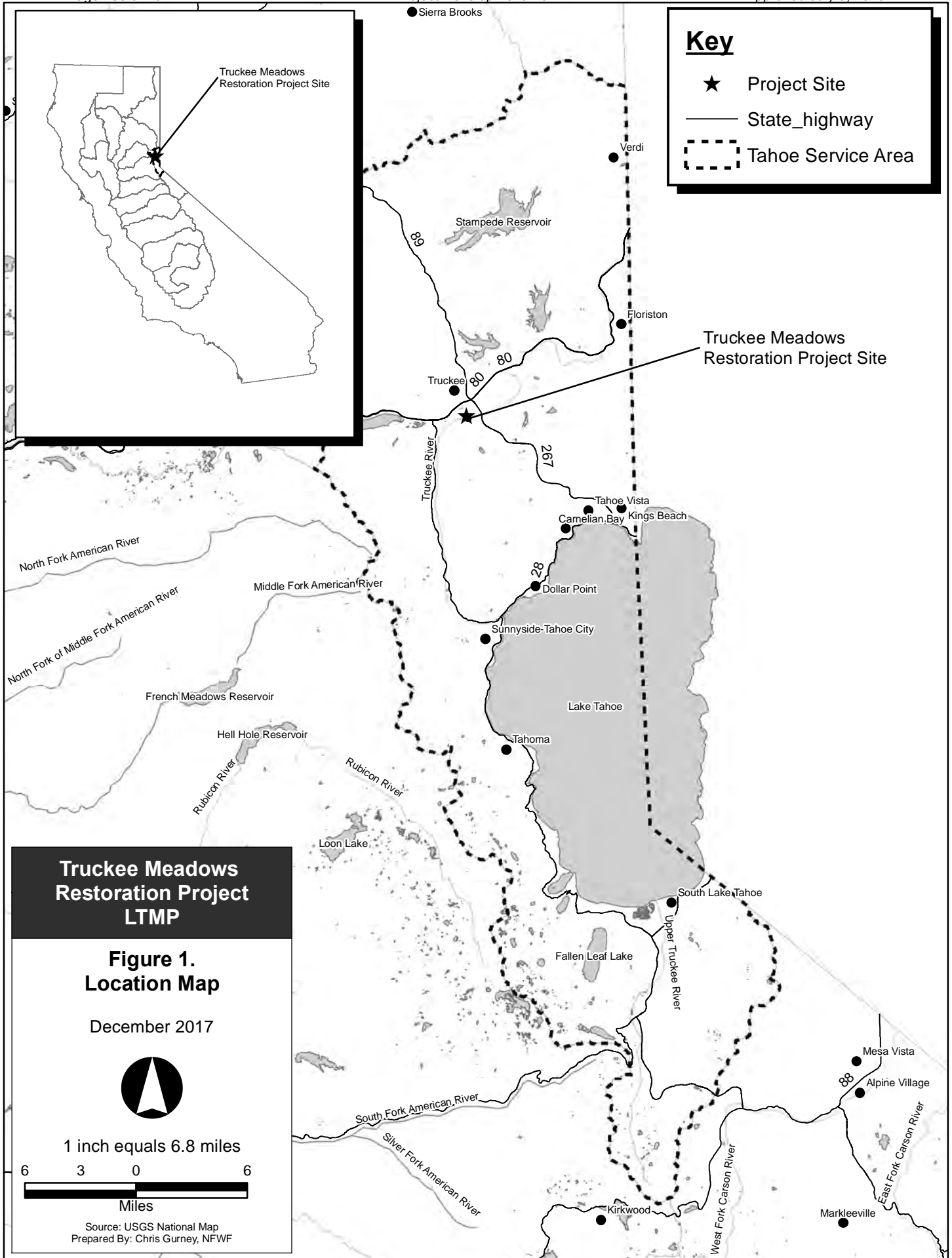
The ILF Project Site is located in the ILF Program's Tahoe Service Area, on the south side of Brockway Road, near the intersection with Estate Drive in the City of Truckee, Nevada County, California. It is located on designated Nevada County Assessor's Parcel Number 19-810-01. The Property is shown on the general vicinity map (Figure 1) and the ILF Project Site map (Figure 2). The general vicinity map shows the ILF Project Site location in relation to cities, towns, or major roads, and other distinguishable landmarks. The ILF Project Site map shows the ILF Project Site property boundaries in relation to local roadways.

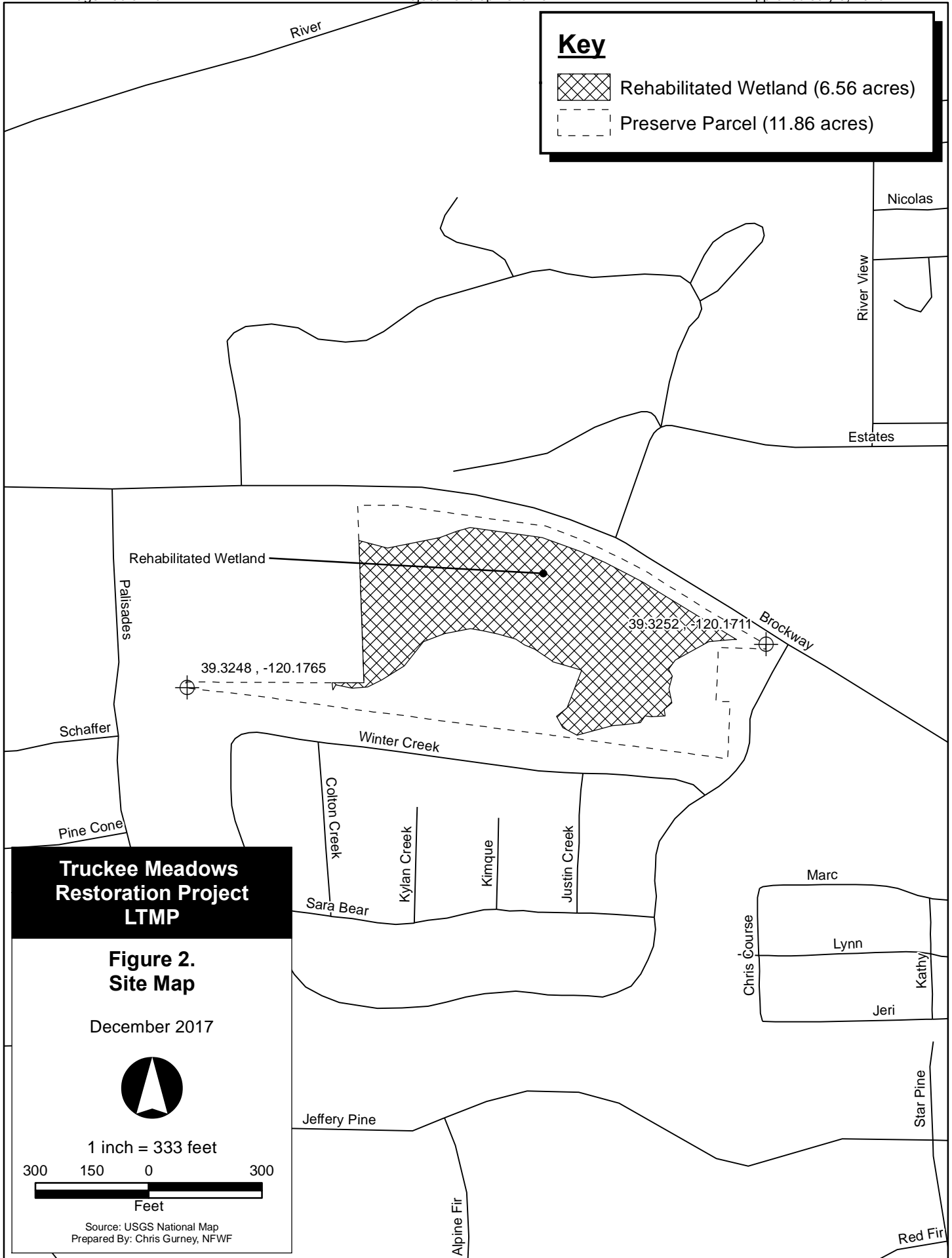
B. History and Land Use

Starting in the mid-1800s, the Washoe inhabited the site. A Hoka-speaking hunting and gathering group, the Washoe inhabited the chain of valleys along the eastern slope of the Sierra Nevada, from Honey Lake to Antelope Valley. The Pine Nut Mountains and the Virginia Range formed the eastern boundary of Washoe territory, while the western boundary extended several miles beyond the Sierra crest. The immediate ILF Project Site was occupied by the Washoe who came from the northern portion of Washoe territory.

Washoe land use within the Lake Tahoe and Truckee Basins changed radically after the 1850s. The development of transportation corridors, intensive logging, recreational uses, and commercial fishing all affected the resource base on which the Washoe had depended. With the decline or demise of their traditional food sources, the Washoe became increasingly dependent upon European resources and means of procurement.

Settlement within the Truckee area began in 1863 with the arrival of Joseph Gray and the construction of a stage station near present-day downtown. The station quickly grew into a small settlement that accommodated emigrants, stagecoach travelers and freight wagons heading west to the California gold field and east toward the Comstock Lode in Nevada. By 1868, the Central Pacific Railroad was constructed through the region and several industries including transportation, lumbering, ice, agriculture, dairying, and tourism reaped the benefits of the new railway.





The Town of Truckee quickly became an economic center in the region. By the 1920s, the community switched its economic focus to tourism due to changing railway infrastructure and a depletion of timber supplies in the region. Completion of the highway over Donner Pass and the development of the Hilltop ski area brought an influx of tourists to the area.

More specific to the ILF Project Site, the segment of Brockway Road that bisects the meadow to the south ties into the historical “Old Brockway Road” located outside the project area. This “new” Brockway Road appears on the 1955 USGS Quad map, but wasn’t paved until 1963, improving travel between the Tahoe and Truckee basins (Lindstrom 2005). Shortly thereafter in 1966, the new route became incorporated into the highway system as part of State Route 267. In 2002, the California Department of Transportation transferred jurisdiction of Brockway Road back to the Town of Truckee after construction of the Highway 267 Bypass, otherwise known as the Glenn Carlson Memorial Bypass.

The Old Brockway Road is depicted on historical maps as far back as 1865. Historical records indicate the route was established in 1869 by William Campbell and George Schaffer, owners of Truckee stage stops and lumber mills (Scott 1957:319). The route was a major historic turnpike that started from Truckee’s transcontinental railroad stop and went eastward across the Truckee River into Martis Valley and over Brockway Summit to Lake Tahoe. Much of the historical alignment, located parallel to and south of the currently alignment, has been destroyed and/or incorporated into streets in the Hilltop, Winter Creek, and the Sierra Meadows subdivisions (Lindstrom 2005).

Much of the area surrounding the site has been developed more recently including a pump house and associated pipes located near the intersection of Palisades Drive and Winter Creek Loop; residential homes on the north side of Winter Creek Loop; and constructed ditches through the meadow that direct flows to an irrigation pond. The site is now owned and managed by TDLT for its conservation values.

C. Cultural Resources

An archaeologic inventory of the ILF Project Site identified two prehistoric sites that were originally recorded in 2003. One of which, a previously described bedrock milling feature, could not be relocated in the field. The second, bedrock milling feature, was relocated in the field but was determined to be a natural feature. The U.S. Army Corps of Engineers determined through consultation that the project would have no adverse effect on historic properties.

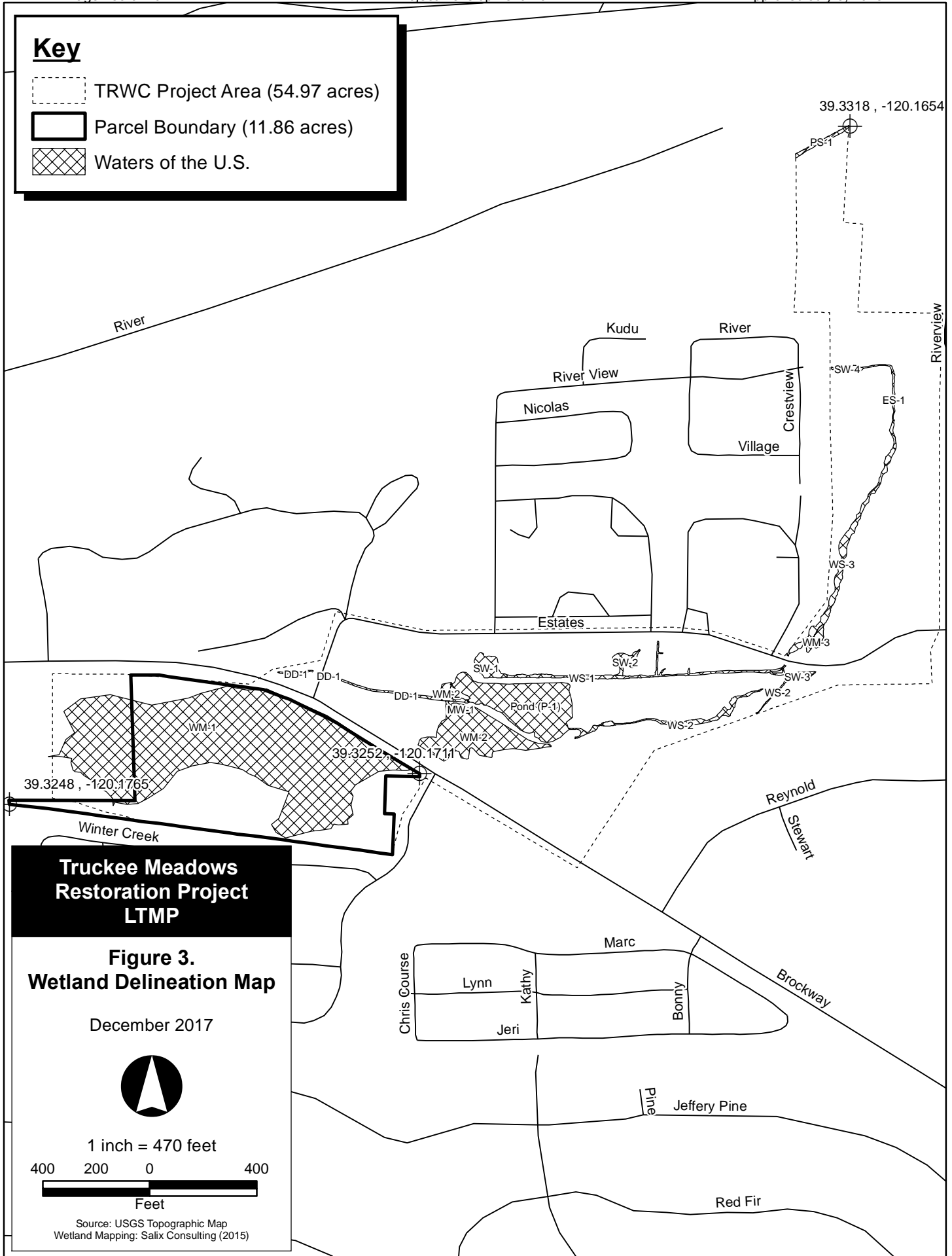
D. Hydrology and Topography

The hydrology of the ILF Project Site is driven by groundwater seepage and surface waters from developed springs, hillslope seeps, and precipitation. There are numerous seeps and springs that emanate from the adjacent hillslope to the south. Several of those on the parcel to the west have been developed, one of which is operated as a production well for the Truckee Donner Public Utilities District. Surface waters flow from west to east across the sloping meadow terrace.

Several culverts convey water under Brockway Road and Estates Drive to another wet meadow on the north side of Brockway Road, which is also being restored as part of a larger project being undertaken by Truckee River Watershed Council. Several of these culverts are undersized and may have negative slopes, so water seasonally collects on the lower portions of the project site (Balance Hydrologics 2014).

Mean annual precipitation is approximately 30 to 34 inches at this site, as recorded at the U.S. Forest Service Truckee Ranger Station in Truckee and NRCS SNOTEL Station “Truckee #2” near Bald Mountain. As is typical of the region, most precipitation falls during the winter months as snow and rain, with occasional summer thunderstorms.

A 2015 wetland delineation (Figure 3) identified the majority (7.05 acres of 11.86 acres) of the parcel, including the entire ILF Project Site, as jurisdictional wetland (montane wet meadow habitat).



E. Soils

The ILF Project Site occupies a terrace mapped as old glacial outwash and described as poorly sorted boulder and cobble gravel, sand and silt (USFS 1993; Saucedo 2005). These deposits sit on the Prosser Creek alluvium and olivine-latitude volcanic flow bedrock that forms the hills immediately to the south (Balance Hydrologics 2014). It is possible that the numerous seeps and springs on the toe of those hills emanate from the alluvium or volcanics (Balance Hydrologics 2014).

According to the regional soil survey one continuous wetland soil unit of Aquolls-Borolls extends from across much of the terrace (USFS 1993). These soil units are poorly drained and form in valleys, swales, and drainages. These are typically associated with wetland vegetation that can tolerate high groundwater conditions. The soil stratigraphy in the wetland consists of historical silty loam hydric soils overlying clays. Artificial fill is present in portions of the site adjacent to the meadow outflow (Balance Hydrologics 2014).

F. Existing Easements

The complete Title Report dated July 7, 2017, for the parcel is included in the Project Development Plan. A summary of each exception to the title report is provided below and each exception is depicted in Figure 4.

From Schedule B, Exceptions to Title:

- 1-3) General and special taxes and assessments (no effect on ILF Project).
- 4) An agreement between the Union Ice Company and the United States of America for a 40-foot road right-of-way and a 12-foot telephone line right-of-way. This agreement is dated April 15, 1937 and predates the construction of Brockway Road. As such, it is believed to be associated with Brockway Road. Brockway Road is located outside of the Project area and would not affect Project implementation or site protection. Additionally, the portion of the Project site within a 30-foot buffer of Brockway Road has been excluded from the credit calculations.
- 5-6) Two agreements between Truckee Donner Public Utility District and the State of California for a “a waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway or





roadway, as contained in the document.” This highway easement is associated with Brockway Road/State Highway 267, which is located outside of the Project area and would not affect Project implementation or site protection. Additionally, the portion of the Project site within a 30-foot buffer of Brockway Road has been excluded from the credit calculations.

- 7) An easement to Truckee Donner Public Utility District for utility purposes on, over, under and across a strip of land having a right angle width of thirty (30) feet. This easement area is depicted on Figure 3 and has been excluded from the credit calculations.
- 8) A map depicting the same easement described in exception 7. This has no additional effect on Project implementation or site protection.
- 9) A map depicting the same easement described in exception 7. This has no additional effect on Project implementation or site protection.
- 10) “Any and all offers of dedications, conditions, restrictions, easements, notes and/or provision shown or disclosed by the filed or recorded map referred to in the legal description.” This has no additional effect on Project implementation or site protection.
- 11) An agreement between TDLT and Truckee Partners, Inc. for a storm drain detention basin easement for the benefit of Wintercreek Homeowner’s Association. The approximate boundaries of this easement are depicted on Figure 3. The storm water detention basin is located outside of the proposed wetland rehabilitation area and would not affect Project implementation or site protection.

G. Adjacent Land Uses

The site is surrounded by residential development to the south, commercial development to the west, and roadways to the north and east. Across Brockway Road there is an urban park and an additional wet meadow complex.

Key

-  Preserve Parcel (11.86 acres)
-  Rehabilitated Wetland (6.56 acres)
-  Utility Easement (0.78 acre)
-  Stormwater Detention Basin (0.16 acre)

Exception #s 4-6: Brockway Road Right of Way

Brockway

Exception #s 7-9: Public Utility Easement
(30-foot-wide adjacent to Brockway Road)

Estates

Rehabilitated Wetland
(6.56 acres excluding easement area)

39.3252, -120.1711

39.3248, -120.1765

Exception #11: Stormwater Detention Basin

Truckee Meadows Restoration Project LTMP

Figure 4. Easement Map

December 2017



1 inch = 225 feet



Source: USGS Topographic Map
Prepared By: Chris Gurney, NFWF

Kylan Creek

Kimque

Justin Creek

Sara Bear

Chris Course
Lynh

Marc

Jeri

III. Habitat and Species Descriptions

A. Biological Resources Survey of ILF Project Site

The ILF Project Site is montane wet meadow habitat with a narrow upland buffer around the perimeter. The wet meadow is dominated by herbaceous perennial species. Graminoid species (grasses, sedges, rushes) account for roughly 48% of vegetative cover and hydrophytic (OBL/FACW) plant species account for roughly 42% of cover. Key species include Baltic rush (*Juncus balticus*), Kentucky bluegrass (*Poa pratensis*), northwest cinquefoil (*Potentilla gracilis*), and Rydberg's penstemon (*Penstemon rydbergii*). Hydrophytic plant cover is visibly lower in those areas significantly impacted by disturbances (e.g., areas adjacent to the primary ditch and with artificial fill). There are small inclusions of willow (*Salix* sp.), especially near the meadow outflow, and conifers such as lodgepole pine (*Pinus contorta* ssp. *murrayana*) are encroaching from the surrounding forest matrix.

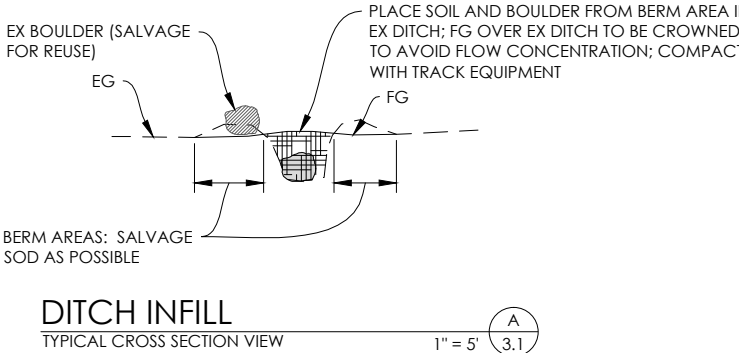
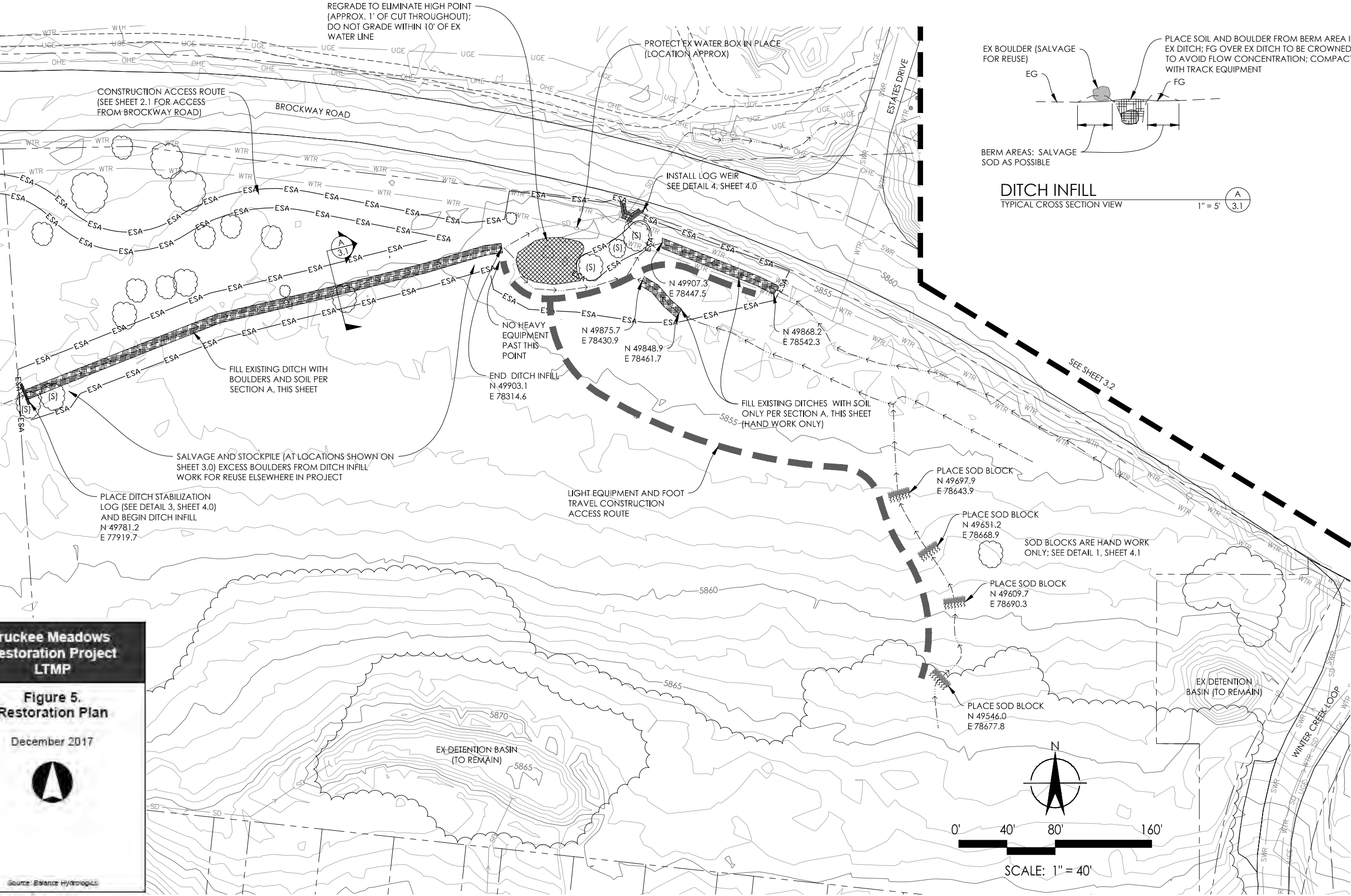
The development of springs, constructed ditches, and historical and modern land uses have substantially altered the hydrology of the site. However, despite these alterations the meadow still functions at a moderate level based on the results of functional and conditional assessments. The primary impediments to the meadow's function are the constructed ditches, artificial fill, and the culvert system that drains the project site.

B. Summary of ILF Site Development Plan

The Project's design was developed to minimize potential impacts to the existing meadow functions and services while reversing, to the extent possible, the alterations to the site. The primary objective of the design is to re-establish surface water connections to the meadow to provide functional uplift to the meadow. The design maintains the connection to the existing sources of surface water (i.e., developed springs to the west and hillslope seepage) as well to as the downstream wetlands and drainage (restored under a separate funding source).

Restoration plans are included as Attachment A and the basic design is shown in Figure 5. The key design elements are:

- Filling and/or blocking the drainage ditches;
- installing a stabilizing log feature;
- installing a log-weir at the meadow outflow;
- installing bio-engineered "sod blocks";



- NOTES:
1. TRIMMING OF BRANCHES ON TREES MARKED TO BE SAVED IS ALLOWABLE UPON APPROVAL BY THE ENGINEER'S REPRESENTATIVE.
 2. REFER TO SHEET 5.1 FOR PLANTING PLAN.
 3. REFER TO SHEET 2.1 FOR LIGHT EQUIPMENT DEFINITION.

PREPARED BY

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IN CHARGE

P KULCHAWIK

DATE

6-23-17

SUBMITTALS / REVISIONS

DATE	BY	REVISIONS
3-11-15	DS	30% PLANS
11-25-15	PK	60% PLANS
5-13-16	PK	95% PLANS
4-26-17	PK	100% PLANS
6-23-17	PK	100% PLANS (REVISED)

REGISTERED PROFESSIONAL ENGINEER

TDLT PARCEL

RESTORATION PLAN

TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA

TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER

214128

SCALE

1" = 40'

SHEET

3.1

- removal of 150 cubic yards of artificial fill; and
- revegetation.

The primary drainage ditch and two secondary constructed ditches will be blocked with boulders and native soil left on-site during prior construction activities (Attachment A, sheet 3.1). The filled drainage ditches will be slightly crowned and will match existing grade to prevent surface flow concentration.

A ditch stabilization log (18 feet by 12-18 inches in diameter) will be installed at the top of the ditch blockage at the western (upstream) edge of the Project site. The log will be nearly fully embedded in the meadow surface and set 3 feet into the adjacent meadow for stability (Attachment A, sheet 4.0, detail 3).

A log weir structure will be installed in front of the inflow to the culvert under Brockway Road (i.e., at the outlet of the meadow; Attachment A, sheets 3.0 and 4.0). This feature will promote slight ponding and increase inundation periods on the meadow surface. Complete restoration to a “pre-settlement” condition is not feasible in this case. However, the weir will passively improve the hydrologic conditions within the constraints of the existing infrastructure.

A series of four sod blocks will be installed across a secondary (i.e., smaller) drainage ditch from the east. This drainage ditch is not as significant as the primary ditch and does not warrant full blockage. Installation of the sod blocks will consist of installing a hand-compacted soil core across the drainage ditch (Attachment A, sheet 4.1). Sod will be salvaged from earthwork locations and installed over the soil core and secured with two willow cuttings. The surrounding areas will be seeded with two native meadow seed mixes.

Approximately 950 square feet of the ILF Project Site will be regraded near the inflow under Brockway Road to remove artificial fill in the meadow. The cut ranges from one to two feet and is a mix of soil and rock rip/rap materials. Following removal of the fill material, the area will be fine-graded to match existing topography and provide appropriate infiltration. Existing vegetation will be preserved to the maximum extent practicable.

Following all earthwork and construction activities the site will be revegetated through several methods (Attachment A, sheet 5.1). First, salvaged sod will be installed across all ditch infill areas. Other construction areas will be broadcast seeded with two native meadow seed mixes (wet and moist). Wet meadow seed mixes will employ *Submerseed*—a clay/organic aggregate used to

establish vegetation in inundated or near inundated conditions. Native willow cuttings will be installed in the area immediately surrounding the meadow outflow.

All construction shall be completed with a combination of machine and hand work to minimize impacts to the existing wetlands. Work limits are tightly constrained around restoration features and site access will be across construction protection mats to prevent soil compaction. Construction will be completed during the driest months (August to October) so that flows will be minimal. Any surface waters in the drainage ditch will be pumped and sprayed across the surrounding meadow surface. All construction activities will be completed under the Project's Stormwater Pollution Prevention Plan (SWPPP) which details required Best Management Practices (BMPs). In general, however, the Project will employ linear erosion control features (e.g., fiber rolls, pine needle wattles, silt fencing) to control sediment movement during construction. Furthermore, the meadow outlet at the culvert under Brockway Road will be blocked with temporary gravel bags to prevent the movement of sediment.

The control of non-native, invasive plant species is included in several facets of the Project. First, the contractors are required to employ the BMPs on all vehicles, equipment, and materials entering the site. Furthermore, construction and maintenance crews are required to complete trainings to recognize the non-native invasive plant species that are likely to be at the site. Prior to any soil or revegetation work, the contractor will treat all non-native invasive plant species per the recommendations of the California Invasive Plant Council. Lastly, the Project's performance standards allow less than 10 percent cover by non-native invasive plant species.

C. Endangered and Threatened Species

No threatened or endangered species are known to occur on the ILF Project Site.

D. Rare Species and Species of Special Concern

No rare species or species of special concern are known to occur on the ILF Project Site. However, *Plumas ivesia* (*Ivesia sericoleuca*), a California Rare Plant Rank 1B.2 species is known to occur in the meadow located directly across Brockway Road.

IV. Management and Monitoring

The overall goal of long-term management is to foster the long term viability of the ILF Project Site's waters of the United States. Routine monitoring and minor maintenance tasks are intended to assure the viability of the ILF Project Site in perpetuity.

A. Biological Resources

The approach to the long-term management of the ILF Project Site's biological resources is to conduct annual site examinations and monitoring of selected characteristics to determine stability and ongoing trends of the rehabilitated and preserved waters of the United States, including wetlands. Annual monitoring will assess the ILF Project Site's condition, degree of erosion, invasion of exotic or deleterious (e.g., thatch producing) species, water quality, fire hazard, and/or other aspects that may warrant management actions. While it is not anticipated that major management actions will be needed, an objective of this long-term management plan is to conduct monitoring to identify any issues that arise, and using adaptive management to determine what actions might be appropriate. Those chosen to accomplish monitoring responsibilities will have the knowledge, training, and experience to accomplish monitoring responsibilities.

Adaptive management means an approach to natural resource management which incorporates changes to management practices, including corrective actions as determined to be appropriate by the IRT in discussion with the land manager. Adaptive management includes those activities necessary to address the effects of climate change, fire, flood, or other natural events, force majeure, etc. Before considering any adaptive management changes to the long-term management plan, the IRT will consider whether such actions will help ensure the continued viability of ILF Project Site's biological resources.

The land manager for the ILF Project Site shall implement the following:

Element A.1 Waters of the United States, including wetlands

Objective: Monitor, conserve and maintain the ILF Project Site's waters of the United States, including wetlands. Limit any impacts to waters of the United States from vehicular travel or other adverse impacts.

Task: At least one annual walk-through survey will be conducted to qualitatively monitor the general condition of these habitats. General topographic conditions, hydrology, general vegetation cover and composition, invasive species, erosion, will be noted, evaluated and mapped during a site examination in the spring. Notes to be made will include observations of species encountered, water quality, general extent of wetlands, and any occurrences of erosion, and weed invasion.

Task: Establish reference sites for photographs and prepare a site map showing the reference sites for the ILF Project Site file. Alternatively, utilize photographic reference sites, if any, developed during the interim management period. Reference photographs will be taken of the overall wetland mosaic at least every five years from the beginning of the long-term management, with selected reference photos taken on the ground more frequently, up to once per year.

Element A.2 Non-native Invasive Species

Invasive species threaten the diversity or abundance of native species through competition for resources, predation, parasitism, interbreeding with native populations, transmitting diseases, or causing physical or chemical changes to the invaded habitat.

Objective: Monitor and maintain control over non-native invasive species, including but not limited to noxious weeds that diminish site quality for which the ILF Project Site was established. The land manager shall consult the California Invasive Plant Council's (Cal-IPC's) Invasive Plant Inventory Database for guidance on what species may threaten the site and on management of those species. The focus of invasive plant monitoring and management shall be on those species rated as having "moderate" or "high" ecological impact according to the Cal-IPC database.

Task: Mapping of non-native invasive species cover or presence shall occur during the first five years of ILF Project Site management, to establish a baseline. Mapping shall be accomplished through use of available technologies, such as GIS and/or aerial photography.

Task: Each year's annual walk-through survey (or a supplemental survey) will include a qualitative assessment (e.g., visual estimate of cover) of potential or observed noxious weeds or other non-native species invasions, primarily in or around the wetlands. Additional actions to control invasive species will be evaluated and prioritized.

Element A.3 Vegetation Management

Objective: Analyze effects of mowing on habitat quality. If determined appropriate, develop and implement specific mowing actions in coordination with management

at other local conservation sites to maintain habitat quality.

Objective: Adaptively manage vegetation based on site conditions and data acquired through monitoring to maintain biological values.

Objective: Adaptively manage wildfire fuel loads, hazard trees, and forest health based on site conditions and monitoring data to maintain habitat quality and reduce risk of wildfire and property damage.

Task: Implement vegetation management techniques, if determined beneficial and as funding allows, to maintain vegetation height and composition similar to baseline conditions or as determined likely to maintain seasonal wetland function. Implementation of vegetation management techniques must be approved by the IRT.

Task: Implement forest management techniques, if determined beneficial or necessary, to maintain fuel loads and forest health as well as protect life and property. Maintain conditions in the surrounding forest matrix similar to local reference sites or based upon forester and ecologist recommendations. Implementation of forest management techniques, other than required upland fuels management, must be approved by the IRT.

B. Security, Safety, and Public Access

No fencing is proposed for this project because trespass has not historically been a problem at this site and severe weather in the area would necessitate regular maintenance of any fencing. However, signs indicating the ecological sensitivity will be posted and the ILF Project Site shall have no general public access, nor any regular public or private use. Research and/or other educational programs or efforts may be allowed on the ILF Project Site as deemed appropriate by the IRT, but are not specifically funded or a part of this long-term management plan.

Potential mosquito abatement issues will be addressed through the development of a plan by the land manager and the mosquito and vector control district in coordination with and approved by the IRT.

Potential wildfire fuels will be reduced as needed by mowing in areas approved by the IRT.

Element B.1 Trash and trespass

Objective: Monitor sources of trash and trespass.

Objective: Collect and remove trash, repair vandalized structures, and rectify trespass impacts.

Task: During each site visit, record occurrences of trash and/or trespass. Record type, location, and management mitigation recommendations to avoid, minimize, or rectify a trash and/or trespass impact.

Task: At least once yearly collect and remove trash and repair and rectify vandalism and trespass impacts.

Element B.2 Fire Hazard Reduction

Objective: Maintain the site as required for fire control while limiting impacts to biological values.

Task: Mow, graze, or otherwise reduce vegetation in areas required by authority agency(ies), and as approved by the IRT, for fire control.

C. Reporting and Administration

Element C.1 Annual Report

Objective: Provide annual report on all management tasks conducted and general site conditions to IRT and any other appropriate parties.

Task: Prepare annual report and any other additional documentation. Include a summary. Complete and circulate to the IRT and other parties by December 31 of each year. Submit annual report electronically via email and upload to RIBITS.

Task: Make recommendations with regard to (1) any habitat enhancement measures deemed to be warranted, (2) any problems that need near short and long-term attention (e.g., weed removal, fence repair, erosion control), and (3) any changes in the monitoring or management program that appear to be warranted based on monitoring results to date.

V. Transfer, Replacement, Amendments, and Notices

A. Transfer

Any subsequent transfer of responsibilities under this long-term management plan to a different land manager shall be requested by the land manager in writing to the IRT, shall require written approval by the IRT, and shall be incorporated into this long-term management plan by amendment. Any subsequent property owner is subject to the deed restriction, and assumes land manager responsibilities described in this long-term management plan, unless the land management plan is otherwise amended in writing by the IRT.

B. Replacement

If the land manager fails to implement the tasks described in this long-term management plan and is notified of such failure in writing by any of the IRT, land manager shall have 90 days to cure such failure. If failure is not cured within 90 days, land manager may request a meeting with the IRT to resolve the failure. Such meeting shall occur within 30 days or a longer period if approved by the IRT. Based on the outcome of the meeting, or if no meeting is requested, the IRT may designate a replacement land manager in writing by amendment of this long-term management plan. If land manager fails to designate a replacement land manager, then such public or private land or resource management organization acceptable to and as directed by the IRT may enter onto the ILF Project Site in order to fulfill the purposes of this long-term management plan.

C. Amendments

The land manager, property owner, and the IRT may meet and confer from time to time, upon the request of any one of them, to revise the long-term management plan to better meet management objectives and preserve the habitat and conservation values of the ILF Project Site. Any proposed changes to the long-term management plan shall be discussed with the IRT and the land manager. Any proposed changes will be designed with input from all parties. Amendments to the long-term management plan shall be approved by the IRT in writing shall be required management components and shall be implemented by the land manager.

If the IRT, in consultation with CDFW or USFWS determines, in writing, that continued implementation of the long-term management plan would jeopardize the continued existence of a state or federally listed species, any written amendment to this long-term management plan, determined by the IRT, as applicable, as necessary to avoid jeopardy, shall be a required management component and shall be implemented by the land manager.

D. Notices

Any notices regarding this long-term management plan shall be directed as follows:

Land Manager & Property Owner

Truckee Donner Land Trust
10069 W River Street
Truckee, CA 96161
Telephone: 530-582-4711
Fax: 530-582-5528

IRT Members:

United States Army Corps of Engineers
Sacramento District
1325 J Street, Sacramento, CA 95814
Attn: Chief, Regulatory Branch
Telephone: 916-557-5250
Fax: 916-557-7803

United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105
Attn: Director, Water Division
Telephone: 415-947-8707
Fax: 415-947-3549

State Water Resources Control Board
1001 I Street
Sacramento, CA 95814
Attn: Executive Director, Water Quality
Telephone: 916-341-5455
Fax: 916-341-5620

Lahontan Regional Water Quality Control Board
Region 6
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150
Attn: Executive Officer
Telephone: 530-542-5400
Fax: 530-544-2271

VI. Funding and Task Prioritization

A. Funding

The Nature Conservancy's Long Term Stewardship Calculator was used to estimate the anticipated costs of long-term management and protection of the ILF Project Site. The long-term management costs include estimates of time and funding needed to conduct the monitoring site visits and reporting, weed removal, and trash removal in accordance with the long-term management plan. The site protection costs are the costs of maintaining a conservation defense liability insurance policy covering the ILF Project Site. The total annual funding need for long-term management and protection of the ILF Project Site is approximately **\$1,021.01**. Therefore, using a capitalization rate of 3.25%, the total long-term funding amount required to establish a long-term management and maintenance fund (the "Endowment Fund") is **\$31,415.70** (the "Endowment Amount").

TDLT shall hold the "Endowment Fund" in trust for the benefit of the ILF Project Site as required by applicable law and pursuant to the Long-Term Funding Agreement that is attached hereto as Attachment C. If the ILF Project Site is sold to, acquired by, or otherwise transferred to another entity, the Endowment Fund shall be transferred to another entity approved by the IRT in accordance such terms required by the IRT. The funds in the Endowment Fund shall be invested in a fully-diversified portfolio in accordance with an investment policy statement approved by the IRT that has a reasonable probability of achieving average annual real returns of 3.25% (i.e., net

of any applicable investment and/or management fees and inflation) over long periods of time. These funds will pay for the long-term management and monitoring and protection of the ILF Project Site in accordance with the LTMP. The Endowment Amount will be paid to TDLT upon the satisfaction of the following conditions precedent: 1) delivery to NFWF of a copy of TDLT's conservation defense liability insurance policy covering the ILF Project Site; 2) execution of the Long-Term Funding Agreement.

B. Task Prioritization

Due to unforeseen circumstances, prioritization of tasks, including tasks resulting from new requirements, may be necessary if insufficient funding is available to accomplish all tasks. The land manager and the IRT shall discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks are prioritized in this order: 1) required by a local, state, or federal agency; 2) tasks necessary to maintain or remediate habitat quality; and 3) tasks that monitor resources, particularly if past monitoring has not shown downward trends. Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined in consultation with the IRT and as authorized by the IRT in writing.

REFERENCES

Balance Hydrologics. 2014. Truckee Wetlands Restoration Partnership Conceptual Design Basis Report. Prepared for the Truckee River Watershed Council. 18 pages.

Lindstrom. 2005, Brockway Transmission Water Pipeline Project Heritage Resource Inventory, Truckee, California, Nevada County: consulting report prepared for Inland Ecosystems.

Saucedo, G.J. 2005, Geologic Map of the Lake Tahoe Basin, California and Nevada, California Department of Conservation California Geological Survey Regional Geologic Map Series, Map No. 4, 1:100,000 scale.

(TRWC) Truckee River Watershed Council. 2004. Coordinated Watershed Management Strategy for the Middle Truckee River.

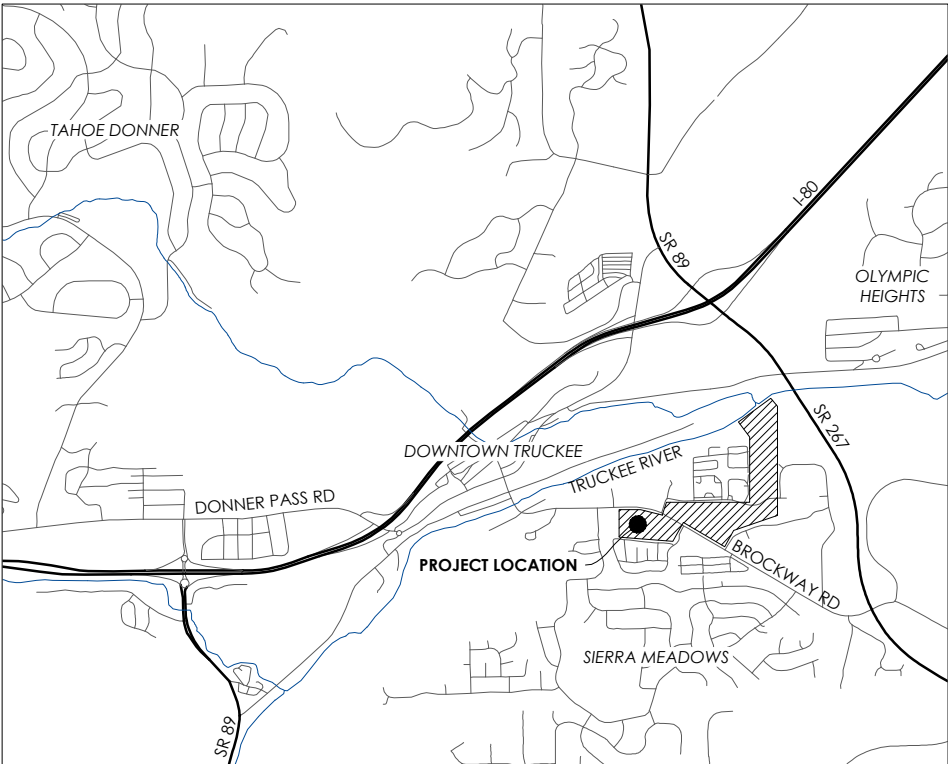
(USFS) U.S. Forest Service. 1993, Soil Survey of the Tahoe National Forest Area, California, downloaded from <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm> on March 4, 2009

Attachment A. ILF Project Plans

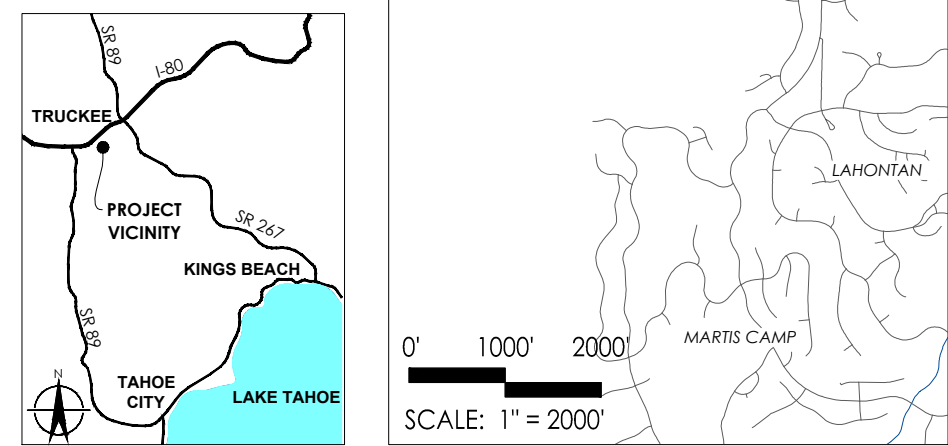
TRUCKEE MEADOWS RESTORATION

TOWN OF TRUCKEE, NEVADA COUNTY, CALIFORNIA

LOCATION MAP



VICINITY MAP



SHEET INDEX

SHEET 1.0: COVER SHEET	SHEET 5.0: PLANTING MATRIX AND NOTES
SHEET 2.0: SYMBOLS AND GENERAL NOTES	SHEET 5.1: TDLT PARCEL PLANTING PLAN
SHEET 2.1: KEY MAP, SITE PREPARATION, AND ACCESS/STAGING PLAN	SHEET 5.2: TDRPD POND PLANTING PLAN
SHEET 3.0: DEMOLITION AND SOD HARVEST PLAN	SHEET 5.3: TDRPD POND TO ESTATES DRIVE PLANTING PLAN
SHEET 3.1: TDLT PARCEL RESTORATION PLAN	SHEET 5.4: TTAD ACCESS ROAD PLANTING PLAN
SHEET 3.2: TDRPD POND RESTORATION PLAN	SHEET 5.5: TOT OLD CORP YARD PLANTING PLAN
SHEET 3.3: TDRPD POND TO ESTATES DRIVE RESTORATION PLAN	SHEET 5.6: PLANTING DETAILS
SHEET 3.4: TTAD ACCESS ROAD RESTORATION PLAN	
SHEET 3.5: TOT OLD CORP YARD RESTORATION PLAN	
SHEET 3.6: CULVERT OVERFLOW	
SHEET 4.0: WETLAND DETAILS 1	
SHEET 4.1: WETLAND DETAILS 2	
SHEET 4.2: TRAIL DETAILS	
SHEET 4.3: TTAD ACCESS ROAD DETAILS	
SHEET 4.4: TDRPD POND CROSS SECTIONS	

PROJECT TEAM

CLIENT
TRUCKEE RIVER WATERSHED COUNCIL
MATT FRIETAS
P.O. BOX 8568
TRUCKEE, CALIFORNIA 96162
TEL. (530) 550-8760 X.6

GEOMORPHOLOGIST/
SITE CIVIL ENGINEER
BALANCE HYDROLOGICS
DAVID SHAW, P.G.
PETER KULCHAWIK, P.E.
12020 DONNER PASS ROAD, SUITE B1
TRUCKEE, CALIFORNIA 96161
TEL. (530) 550-9776

SOILS/DRAINAGE SPECIALIST
**INTEGRATED ENVIRONMENTAL
RESTORATION SERVICES**
KEVIN DRAKE, CPESC, QSD/QSP
2780 LAKE FOREST ROAD
TAHOE CITY, CALIFORNIA 96145
TEL. (530) 581-0359

REVEGETATION SPECIALIST
TRUCKEE RIVER WATERSHED COUNCIL
MATT FRIETAS
P.O. BOX 8568
TRUCKEE, CALIFORNIA 96162
TEL. (530) 550-8760 X.6



DESIGNED BY	DATE	BY	SUBMITTALS / REVISIONS
D SHAW	3-11-15	DS	30% PLANS
P KULCHAWIK	11-25-15	PK	60% PLANS
CHECKED BY	5-13-16	PK	95% PLANS
E BALLMAN	4-26-17	PK	100% PLANS
IN CHARGE	6-23-17	PK	100% PLANS (REVISED)
P KULCHAWIK	6-23-17		
DATE	6-23-17		



COVER SHEET

TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER 214128
SCALE -
SHEET

1.0

Y:_PROJECTS\2141281 TRUCKEE WETLANDS DESIGN\214128 CAD\214128 SHEETS\314128-0200-NOTES.DWG

LEGEND:

EXISTING MAJOR CONTOUR - 5 FT	
EXISTING MINOR CONTOUR - 1 FT	
EXISTING CHANNEL/FLOWPATH	
EXISTING OVERHEAD ELECTRIC LINE AND POWERPOLE	
EXISTING UNDERGROUND ELECTRIC LINE	
EXISTING UNDERGROUND COMMUNICATION LINE	
EXISTING GAS LINE	
EXISTING WATER LINE	
EXISTING SEWER LINE	
EXISTING STORM DRAIN	
EXISTING CULVERT	
EXISTING FENCE	
EXISTING EDGE OF GRAVEL AREA	
EXISTING TRAIL	
EXISTING WETLAND LIMIT	
EXISTING PROPERTY LINE	
EXISTING TREE/SHRUB LIMIT	
PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
PROPOSED FENCE	
GRADE BREAK	
GRADING LIMIT	
PRESERVATION FENCING	
TEMPORARY PINE NEEDLE WATTLE	
TEMPORARY DIVERSION PIPE	
PROPOSED FINISHED GRADE ELEVATION	
PROPOSED FINISHED GRADE SLOPE	
PROPOSED SURFACE FLOW DIRECTION	
PROPOSED EMBANKMENT SLOPE (3:1 UNLESS NOTED OTHERWISE)	
PRESERVE (SAVE) EXISTING TREE	
REMOVE EXISTING TREE	
EXISTING BOULDERS	
PROPOSED BOULDERS	
PROPOSED SOD BLOCK	
TEMPORARY GRAVEL BAG CHECK DAMS	
FILL EXISTING DITCH	
SCRAPE TO REMOVE HIGH POINT AND MATCH ADJACENT EG	
PLACE SURFACE AGGREGATE	
EXISTING RIP RAP/ROCK PILE	

SEE SHEET 5.0 FOR PLANTING SYMBOLS

ABBREVIATIONS:

'	FEET
"	INCH
#	NUMBER
AB	AGGREGATE BASE
APPROX	APPROXIMATE
CBF	CHANNEL BED FILL
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
DBH	DIAMETER AT BREAST HEIGHT (4' FROM GROUND)
DG	DECOMPOSED GRANITE
DIA, Ø	DIAMETER
E	EASTING
EG	EXISTING GRADE
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
ESA	ENVIRONMENTALLY SENSITIVE AREA
EX	EXISTING
FES	FLARED END SECTION
FG	FINISH GRADE
FT	FEET
GALV	GALVANIZED
H	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
IE	INVERT ELEVATION
IN	INCH
INV	INVERT
LT	LEFT
LWM	LARGE WOODY MATERIAL
MAX	MAXIMUM
MIN	MINIMUM
N	NORTHING
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
PC	POLE CUTTING
PROP	PROPOSED
Q10	10-YEAR STREAMFLOW
Q100	100-YEAR STREAMFLOW
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RSP	ROCK SLOPE PROTECTION
STA	STATION
STR	STRUCTURE
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
T-TSA	TAHOE-TRUCKEE SANITATION AGENCY
TDLT	TRUCKEE DONNER LAND TRUST
TDPUID	TRUCKEE DONNER PUBLIC UTILITY DISTRICT
TDRPD	TRUCKEE-DONNER RECREATION & PARK DISTRICT
TOT	TOWN OF TRUCKEE
TSD	TRUCKEE SANITARY DISTRICT
TTAD	TRUCKEE TAHOE AIRPORT DISTRICT
TYP	TYPICAL
V	VERTICAL
W/I	WITHIN
WSE	WATER SURFACE ELEVATION
YR	YEAR
Z	ELEVATION

SEE SHEET 5.0 FOR PLANTING ABBREVIATIONS

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE PROJECT SITE TO VERIFY SITE CONDITIONS AND FOR COMPLETELY UNDERSTANDING THE REQUIRED SCOPE OF WORK SHOWN ON THESE DRAWINGS AND CONTAINED IN THE PROJECT SPECIFICATIONS.
2. ALL PARTS OF THIS PROJECT - INCLUDING SOIL PREPARATION, EARTHWORK, AND PLANTING - ARE SUBJECT TO FIELD DESIGN BY THE ENGINEER'S REPRESENTATIVE. AT ANY TIME, THE CONTRACTOR'S OPERATIONS AND CONSTRUCTION MAY BE SUBJECT TO OBSERVATION BY THE ENGINEER'S REPRESENTATIVE. WHEN REQUESTING THE PRESENCE OF THE ENGINEER'S REPRESENTATIVE AT THE PROJECT SITE FOR DESIGN CLARIFICATION, STAGE ACCEPTANCE, OR OTHER APPROVALS, THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCE NOTICE DIRECTLY TO THE ENGINEER'S REPRESENTATIVE.
3. UTILITY LOCATIONS DEPICTED HEREIN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES BEFORE THE START OF ANY CONSTRUCTION OPERATIONS, INCLUDING AND NOT LIMITED TO EXCAVATION OR TRENCHING. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (USA) AT 811/1-800-227-2600. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS ADVANCE NOTICE FOR LOCATING UTILITIES.
4. THE CONTRACTOR SHALL INSTALL PRESERVATION FENCING, STAKE AND FLAG THE LIMITS OF GRADING, AND INSTALL EXCLUSION FENCING AS PRESCRIBED IN THE SPECIFICATIONS AT LOCATIONS SHOWN ON THE DRAWINGS BEFORE THE START OF ANY OTHER SITE WORK INCLUDING DEMOLITION, CLEARING AND GRUBBING, AND EARTHWORK. REFER TO THE SPECIFICATIONS FOR ADDITIONAL PRESERVATION REQUIREMENTS AND INFORMATION.
5. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S REPRESENTATIVE IMMEDIATELY UPON FINDING ANY FIELD CONDITIONS THAT WOULD CONFLICT WITH THE INFORMATION INDICATED ON THESE DRAWINGS OR THE PROJECT SPECIFICATIONS. ALL FIELD ADJUSTMENTS MUST BE APPROVED BY THE ENGINEER'S REPRESENTATIVE BEFORE CONSTRUCTION OF SAID ADJUSTMENTS; FAILURE TO DO SO SHALL RESULT IN THE CONTRACTOR ASSUMING FULL RESPONSIBILITY FOR ANY REQUIRED REVISIONS OR FIELD MODIFICATIONS, AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE, AT NO ADDITIONAL COST.
6. CONFORM TO EXISTING GRADES AND CONDITIONS WHENEVER POSSIBLE. ANY ADJACENT OR OFFSET AREAS DISTURBED BY THE CONTRACTOR'S OPERATION MUST BE RESTORED BY THE CONTRACTOR TO THE PRE-DISTURBANCE CONDITIONS TO THE SATISFACTION OF THE ENGINEER'S REPRESENTATIVE.
7. ALL LUBRICATION, REFUELING, OR MAINTENANCE OF CONSTRUCTION VEHICLES SHALL BE CONDUCTED WITHIN APPROVED CONSTRUCTION STAGING AREAS AND BE A MINIMUM OF 100 FEET AWAY FROM EXISTING CHANNELS
8. STAGING AREAS MUST BE CONTAINED BY MEANS DESCRIBED IN THE SWPPP TO CONFINE THE AREA AND PREVENT CONTAMINANTS FROM ENTERING NEARBY CHANNELS AND WATER BODIES.
9. SEE SHEET 5.0 FOR ADDITIONAL REVEGETATION NOTES
10. ELEVATIONS ARE RELATIVE TO THE NAVD88 DATUM.
11. ADD 2,200,000 TO ALL NORTHINGS AND 7,000,000 TO ALL EASTINGS TO OBTAIN GRID COORDINATES IN CALIFORNIA STATE PLANE NAD83 ZONE II.
12. PRIOR TO ANY STAKING, THE CONTRACTOR SHALL VERIFY THAT A STAFF PLATE READING OF 3.50 FEET ON THE STAFF PLATE LOCATED AT THE SOUTHWEST END OF THE PONDEROSA GOLF COURSE IRRIGATION POND IS EQUIVALENT TO AN ELEVATION OF 5850.00 (NAVD88) WITHIN A TOLERANCE OF +/- 0.05 FEET. IF THE CONTRACTOR'S ESTIMATION OF THE ELEVATION CORRESPONDING TO 3.50 FEET ON THE STAFF PLATE IS NOT WITHIN THIS TOLERANCE, DO NOT PROCEED WITH STAKING WORK AND CONSULT WITH THE ENGINEER'S REPRESENTATIVE IMMEDIATELY.
13. WHERE NO WORK LIMIT IS SHOWN, THE PRESERVATION FENCING SHALL BE THE WORK LIMIT.
14. PRESERVE TREES AND VEGETATION OUTSIDE OF THE LIMITS OF WORK. ANY TREES OR VEGETATION DISTURBED OUTSIDE OF THE LIMITS OF WORK SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PREPARED BY

Balance Hydrologics, Inc.
P.O. Box 1077
12020 Donner Pass Road
Truckee, CA 96161
Tel: (530) 550-1576
www.balancehydro.com

SUBMITTALS / REVISIONS		BY		DATE		DESIGNED BY	
						D SHAW	
						DRAWN BY	
						P KULCHAWIK	
						CHECKED BY	
						E BALLMAN	
						IN CHARGE	
						P KULCHAWIK	
						DATE	
							6-23-17

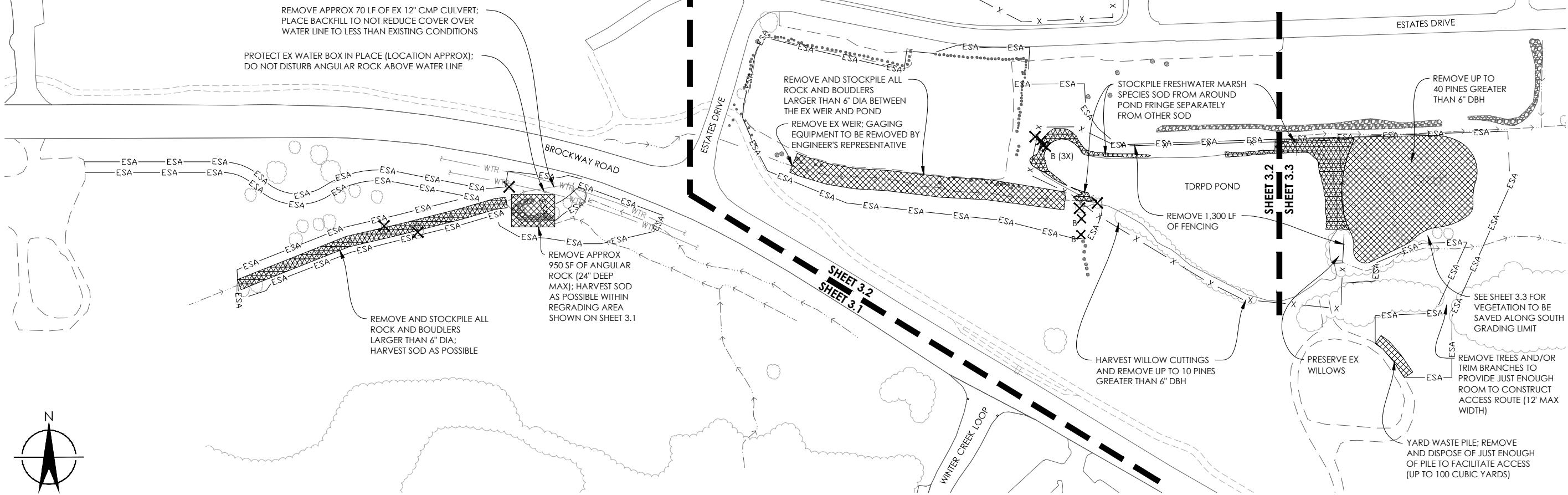


SYMBOLS AND GENERAL NOTES

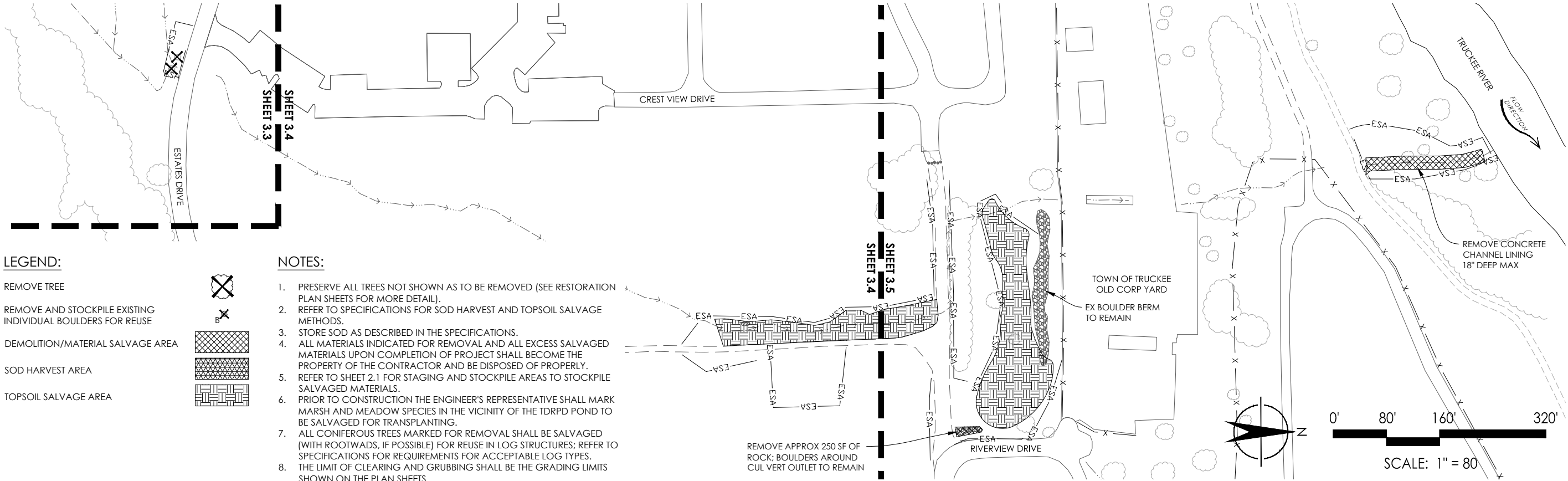
TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER 214128
SCALE -
SHEET 2.0



AREAS RELATIVE TO SHEETS 3.1, 3.2, AND 3.3
1" = 80'



LEGEND:

- REMOVE TREE
- REMOVE AND STOCKPILE EXISTING INDIVIDUAL BOULDERS FOR REUSE
- DEMOLITION/MATERIAL SALVAGE AREA
- SOD HARVEST AREA
- TOPSOIL SALVAGE AREA

- NOTES:**
- PRESERVE ALL TREES NOT SHOWN AS TO BE REMOVED (SEE RESTORATION PLAN SHEETS FOR MORE DETAIL).
 - REFER TO SPECIFICATIONS FOR SOD HARVEST AND TOPSOIL SALVAGE METHODS.
 - STORE SOD AS DESCRIBED IN THE SPECIFICATIONS.
 - ALL MATERIALS INDICATED FOR REMOVAL AND ALL EXCESS SALVAGED MATERIALS UPON COMPLETION OF PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF PROPERLY.
 - REFER TO SHEET 2.1 FOR STAGING AND STOCKPILE AREAS TO STOCKPILE SALVAGED MATERIALS.
 - PRIOR TO CONSTRUCTION THE ENGINEER'S REPRESENTATIVE SHALL MARK MARSH AND MEADOW SPECIES IN THE VICINITY OF THE TDRPD POND TO BE SALVAGED FOR TRANSPLANTING.
 - ALL CONIFEROUS TREES MARKED FOR REMOVAL SHALL BE SALVAGED (WITH ROOTWADS, IF POSSIBLE) FOR REUSE IN LOG STRUCTURES; REFER TO SPECIFICATIONS FOR REQUIREMENTS FOR ACCEPTABLE LOG TYPES.
 - THE LIMIT OF CLEARING AND GRUBBING SHALL BE THE GRADING LIMITS SHOWN ON THE PLAN SHEETS.
 - NOT ALL UTILITIES ARE SHOWN, REFER TO RESTORATION PLAN SHEETS FOR APPROXIMATE UTILITY LOCATIONS.

AREAS RELATIVE TO SHEETS 3.3, 3.4, AND 3.5
1" = 80'

PREPARED BY

Balance Hydrologics, Inc.

P.O. Box 1077
12020 Donner Pass Road
Truckee, CA 96161
tel: (530) 550-5576
www.balancehydro.com

SUBMITTALS / REVISIONS	
DESIGNED BY	DATE
D SHAW	3-11-15
DRAWN BY	DS
P KULCHAWIK	11-25-15
CHECKED BY	PK
E BALLMAN	5-13-16
IN CHARGE	4-26-17
P KULCHAWIK	6-23-17
DATE	6-23-17

REGISTERED PROFESSIONAL ENGINEER

PEER V. KULCHAWIK

No. C83042

Exp. 09-30-18

STATE OF CALIFORNIA

DEMOLITION AND SOD HARVEST PLAN

TRUCKEE MEADOWS RESTORATION

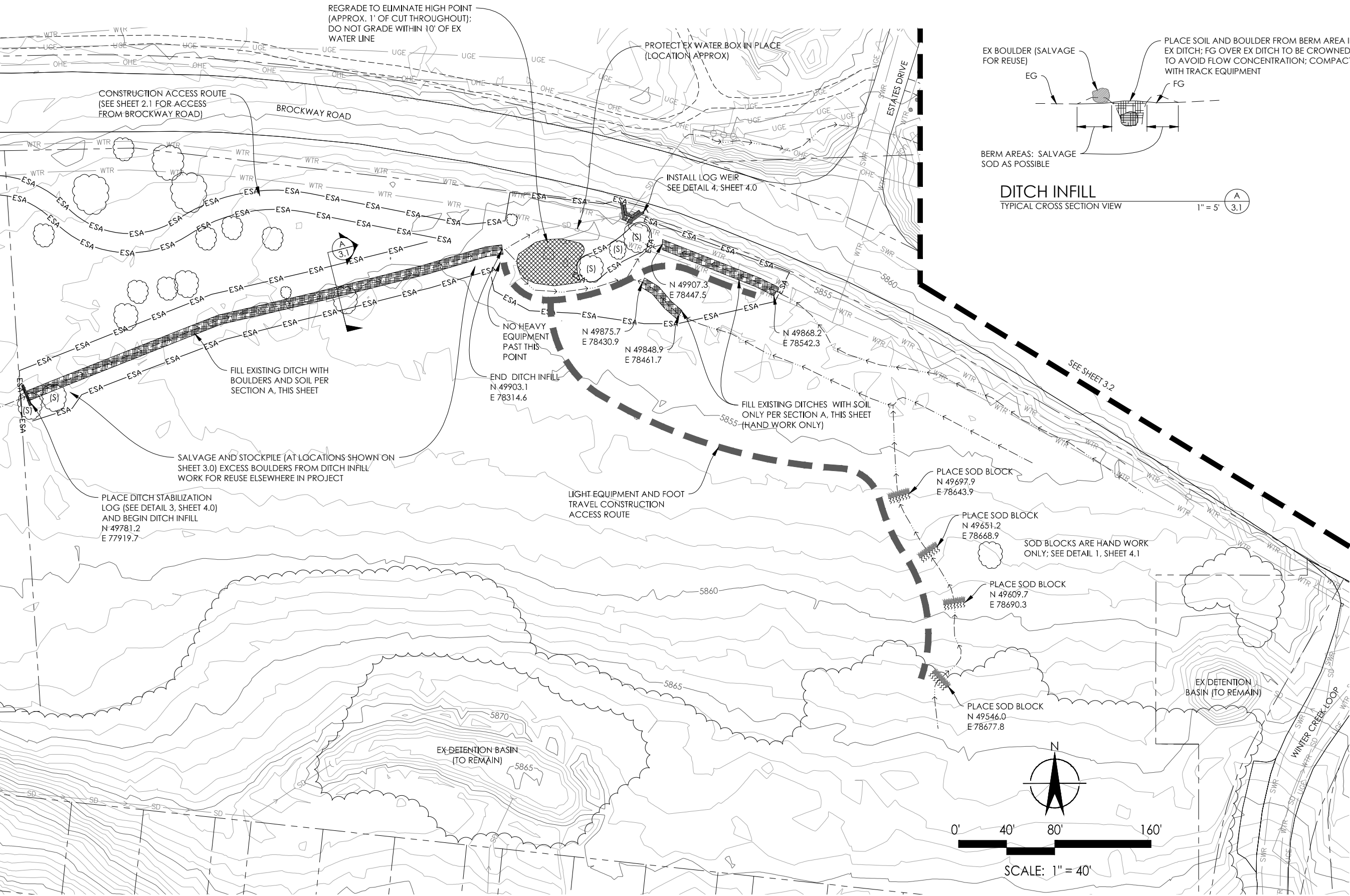
NEVADA COUNTY, CALIFORNIA

TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER
214128

SCALE
1" = 80'

SHEET
3.0



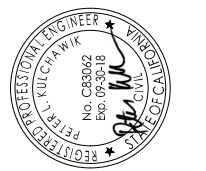
- NOTES:
1. TRIMMING OF BRANCHES ON TREES MARKED TO BE SAVED IS ALLOWABLE UPON APPROVAL BY THE ENGINEER'S REPRESENTATIVE.
 2. REFER TO SHEET 5.1 FOR PLANTING PLAN.
 3. REFER TO SHEET 2.1 FOR LIGHT EQUIPMENT DEFINITION.

PREPARED BY

Balance Hydrologics, Inc.

P.O. Box 1077
12020 Donner Pass Road
Truckee, CA 96161
tel (530) 550-5500 fax (530) 550-5506
www.balancehydro.com

DESIGNED BY	DATE	BY	SUBMITTALS / REVISIONS
D SHAW	3-11-15	DS	30% PLANS
P KULCHAWIK	11-25-15	PK	60% PLANS
CHECKED BY	5-13-16	PK	95% PLANS
E BALLMAN	4-26-17	PK	100% PLANS
IN CHARGE	6-23-17	PK	100% PLANS (REVISED)
P KULCHAWIK	6-23-17		
DATE	6-23-17		

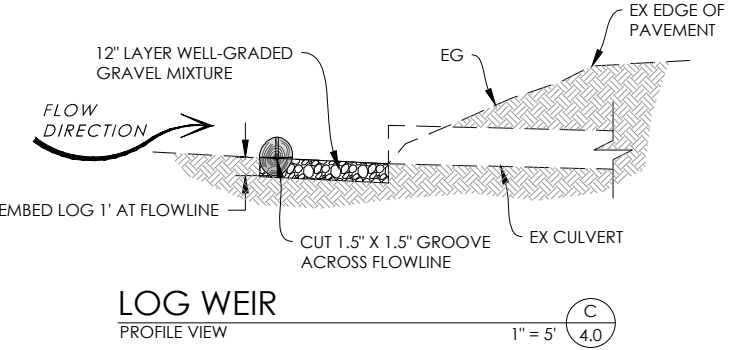
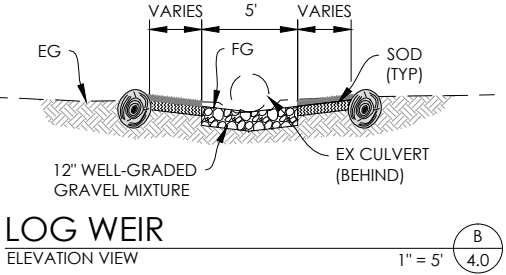
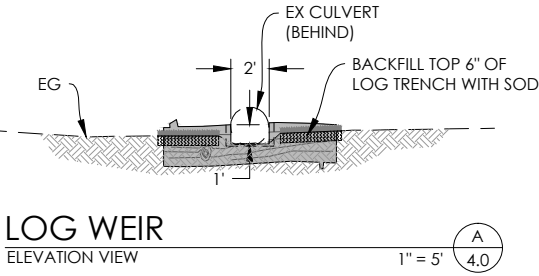
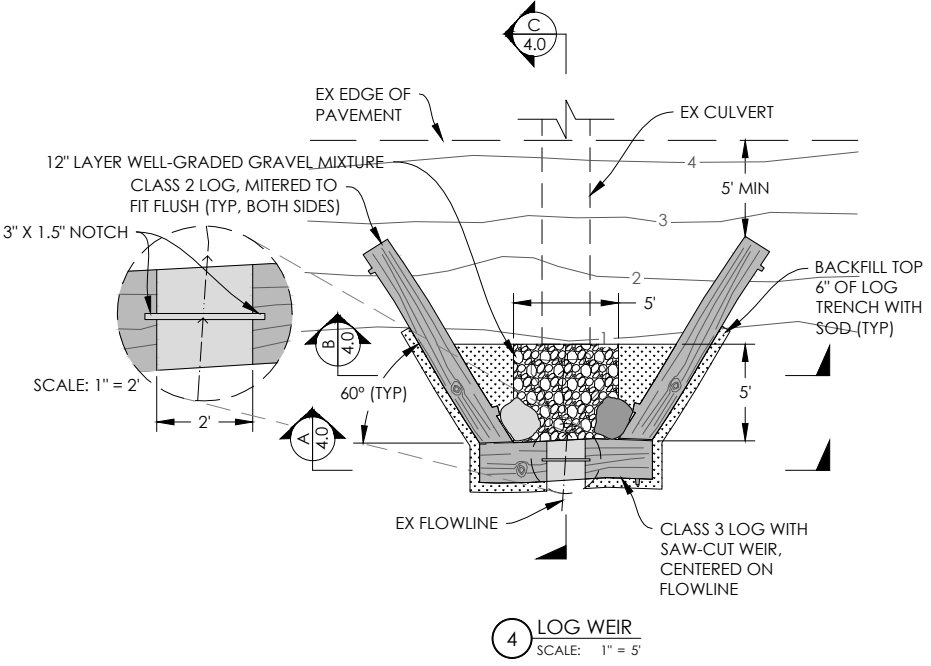
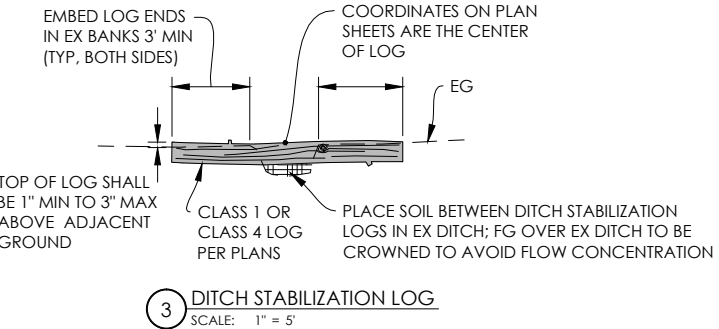
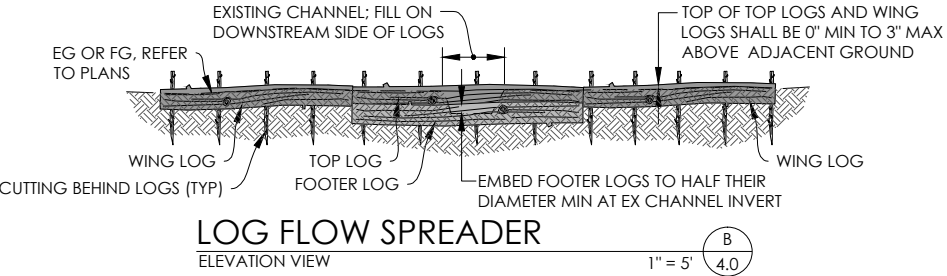
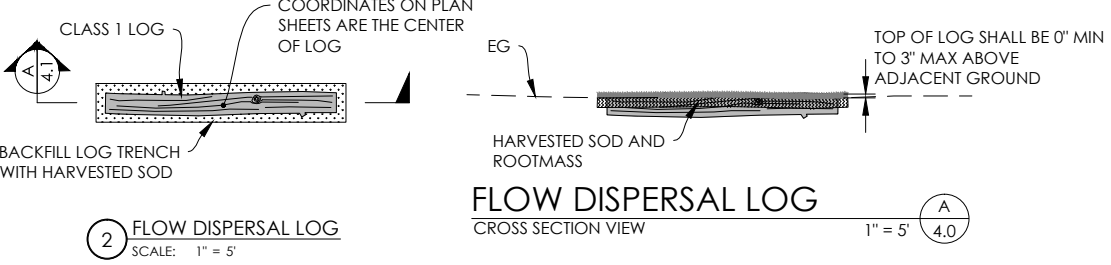
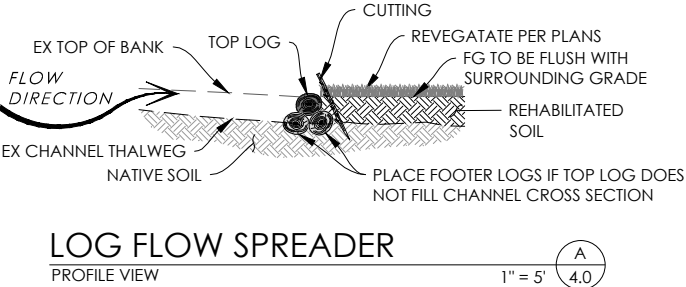
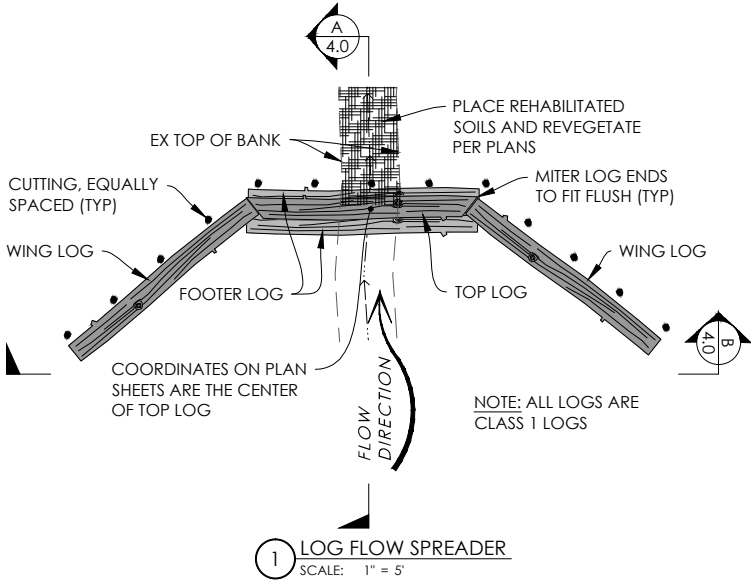


**TDLT PARCEL
RESTORATION PLAN**

TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER
214128
SCALE
1" = 40'
SHEET

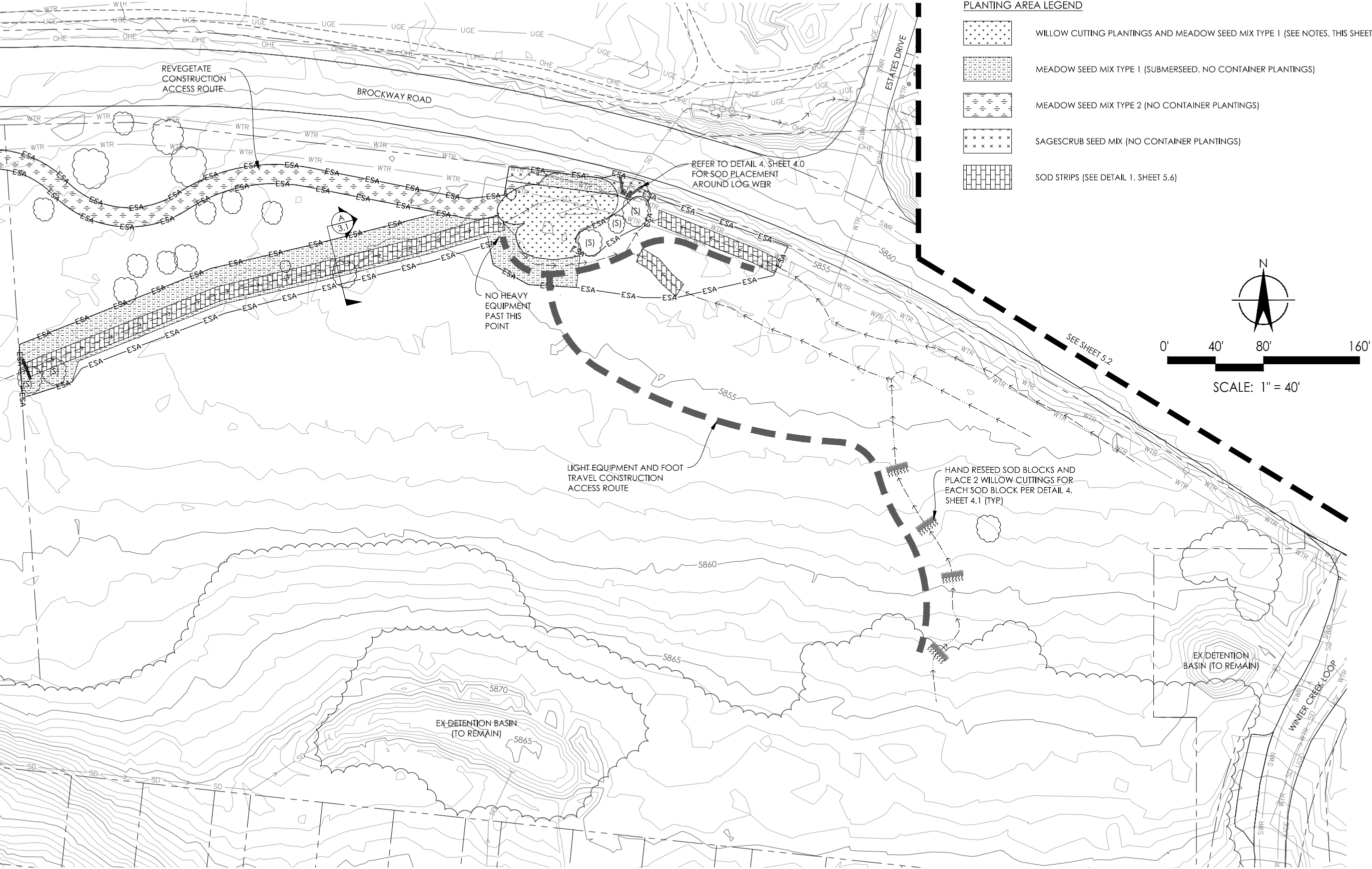


WETLAND DETAILS 1
TRUCKEE MEADOWS RESTORATION
NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

PROJECT NUMBER
214128
SCALE
AS SHOWN
SHEET

4.0

Y:\PROJECTS\214128\TRUCKEE WETLANDS DESIGN\214128 CAD\214128 SHEETS\214128-040-DETAIL00.DWG



PLANTING AREA LEGEND

- WILLOW CUTTING PLANTINGS AND MEADOW SEED MIX TYPE 1 (SEE NOTES, THIS SHEET)
- MEADOW SEED MIX TYPE 1 (SUBMERSEED, NO CONTAINER PLANTINGS)
- MEADOW SEED MIX TYPE 2 (NO CONTAINER PLANTINGS)
- SAGESCRUB SEED MIX (NO CONTAINER PLANTINGS)
- SOD STRIPS (SEE DETAIL 1, SHEET 5.6)

- NOTES:**
- SEE SHEET 3.1 FOR RESTORATION PLAN
 - INSTALL WILLOW CUTTINGS 3'-0" ON CENTER WHERE SPECIFIED

PREPARED BY

Balance Hydrologics, Inc.
 P.O. Box 1077
 12020 Donner Pass Road
 Truckee, CA 96161
 Tel: (530) 550-5576
 www.balancehydro.com

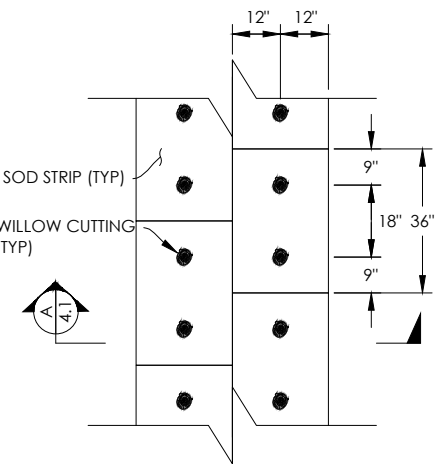
DESIGNED BY		DATE		BY		SUBMITTALS / REVISIONS	
J. HALDERMAN	3-11-15	DS				30% PLANS	
P. KULCHAWIK	11-25-15	PK				60% PLANS	
CHECKED BY	5-13-16	PK				95% PLANS	
E. BALLMAN	4-26-17	PK				100% PLANS	
IN CHARGE	6-23-17	PK				100% PLANS (REVISED)	
P. KULCHAWIK	6-23-17						
DATE		6-23-17					

**TDLT PARCEL
PLANTING PLAN**

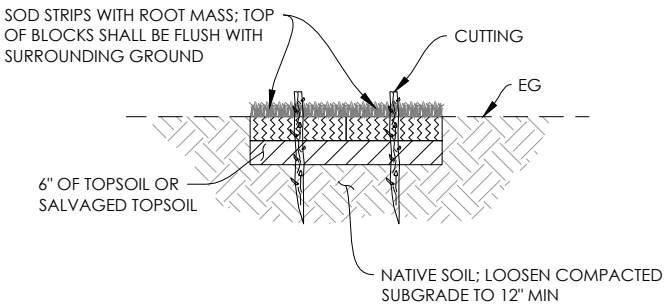
TRUCKEE MEADOWS RESTORATION

NEVADA COUNTY, CALIFORNIA
TRUCKEE RIVER WATERSHED COUNCIL

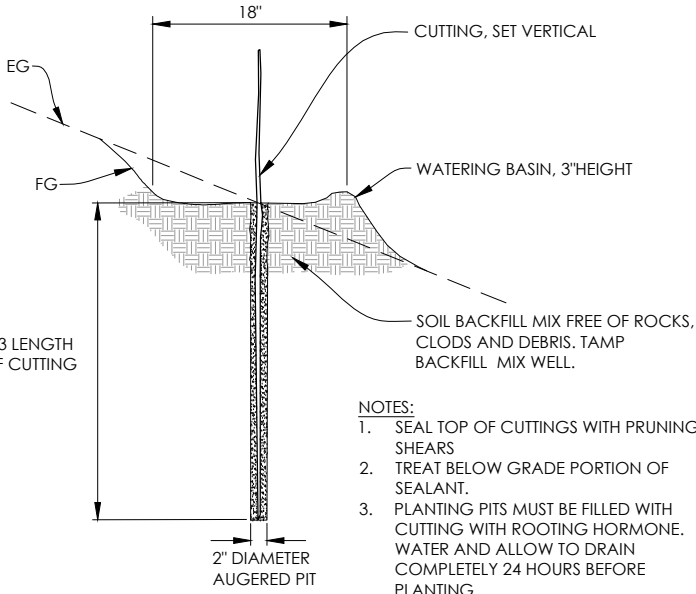
PROJECT NUMBER	214128
SCALE	1" = 40'
SHEET	5.1



1 SOD STRIP LAYOUT
SCALE: 1" = 2'

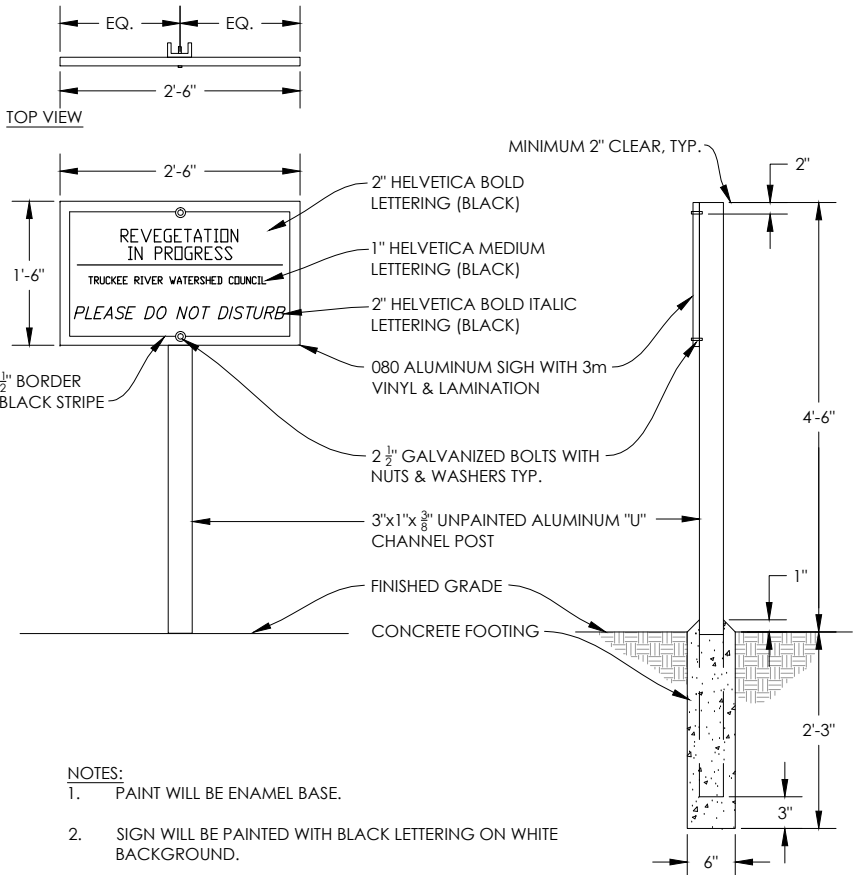


SOD STRIP LAYOUT
SECTION VIEW
1" = 2' A 5.0



- NOTES:
1. SEAL TOP OF CUTTINGS WITH PRUNING SHEARS
 2. TREAT BELOW GRADE PORTION OF SEALANT.
 3. PLANTING PITS MUST BE FILLED WITH CUTTING WITH ROOTING HORMONE. WATER AND ALLOW TO DRAIN COMPLETELY 24 HOURS BEFORE PLANTING.

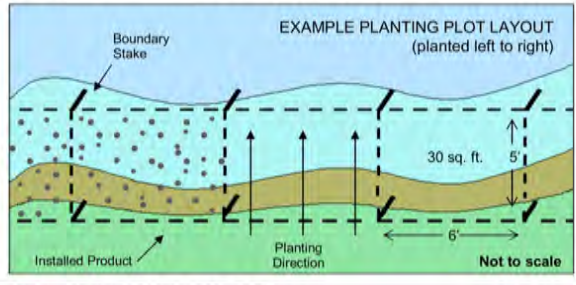
2 CUTTING PLANTING
SCALE: NTS



- NOTES:
1. PAINT WILL BE ENAMEL BASE.
 2. SIGN WILL BE PAINTED WITH BLACK LETTERING ON WHITE BACKGROUND.
 3. ALL EXPOSED BOLT THREADS, EXTENDING BEYOND NUT, WILL BE STRIPPED AFTER INSTALLATION.

4 TEMPORARY REVEGETATION SIGN
SCALE: NTS

SubmerSeed® APPLICATION GUIDELINES



GENERAL RECOMMENDATIONS:

Pre-Application --

- Take care not to allow product to be exposed to excessive cold, heat, direct sun, or moisture prior to or during application. If short-term storage is necessary, the product should be stored in its original packaging in a cool (optimally 50 to 70 degree Fahrenheit) location, away from exposure to direct sunlight. Basements and garages are often the most appropriate location for storage, but take care not to place the product in a location that is prone to excessive afternoon heating or broad temperature swings. Stable conditions are preferable.
- Target the **shallow water zone** where water is usually present but is usually less than six (6) inches deep during the growing season (May – August). Do not hesitate to apply product to substrate that is not currently inundated (covered with water), especially if there are clues to suggest that water does reach the area during a good portion of the growing season (**transition zone**). NOTE: If the transition zone where the product is placed becomes excessively dry especially early on in the plant's development, periodic watering will increase germination success.
- Seek out soft (e.g. sandy, muddy, etc.) soils rather than seeding on a stone-lined bank. If stone banks are the only option, consider adding some organic topsoil to create a more inviting setting for plant development. Be sure that the amount of available moisture is appropriate (see below).
- Avoid seeding in areas that are almost always dry (**upland zone**) or where water is almost always deeper than six (6) inches (**deep water zone**). Obligate species thrive in moist to shallow-water conditions, but extremely dry conditions or deep waters will not allow for germination or long-term survival. Unless a significant drawdown is anticipated **DO NOT SOW PRODUCT IN MORE THAN SIX (6) INCHES OF WATER – GENERALLY, SHALLOWER IS BETTER**

Application --

- Establish **planting plots** (like the ones shown above) by marking the corners of each plot with a **boundary stake** – the stakes can be removed after application (take care not to disturb product), or can be left in place until the seedlings are well established. A typical application rate is 2,000-lbs of SubmerSeed per surface acre (43,560 square feet) or ~1 lb/22 square feet. This rate attempts to ensure sufficient coverage over a given area without adding so much material that resulting seedlings struggle from competitive forces with plants from adjacent particles.
- The **planting plots** should be small enough (no larger than 20' x 20') that product can be evenly distributed throughout their area. EXAMPLE: (see above) – Planting plot = 5' x 6' or 30 square feet; each planting plot – in the example above – would require 1.5 pounds of product. **General Rule of Thumb: At the 2,000-lb/acre application rate, particles should average one to three inches from their nearest neighboring particle.**
- When possible, sow product in a consistent **planting direction** (i.e. shore line, out – left to right) to best ensure uniform coverage.

Post-Application --

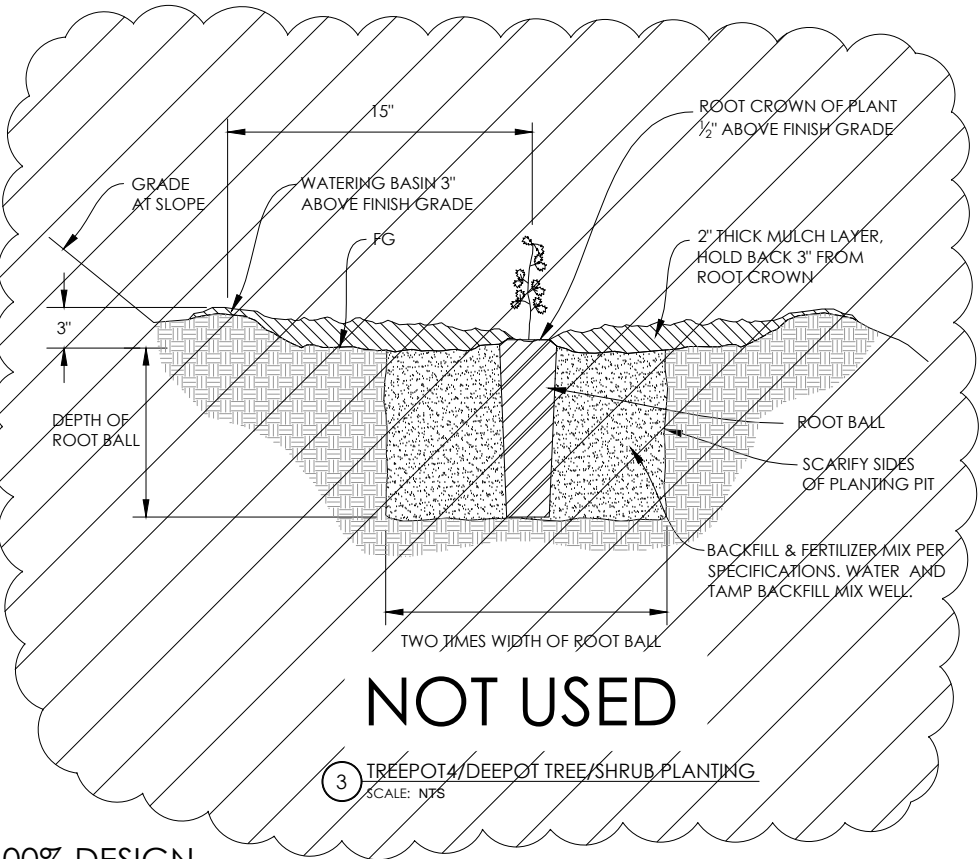
- Consider protecting the area from waterfowl, at least until seedlings are well established. Document the seeded location for future reference and to monitor establishment through time.
- Make a conscious effort to avoid disturbance of areas already sown with product. Take care to minimize traffic over these areas until plants can establish themselves. Depending on weather and site-specific conditions, plants may not bloom until their second or even third full season. Be patient; nature has a tendency to move at its own pace.

SubmerSeed® is a patented product of AquaBlok, Ltd.
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Rev. 1/02/12

AquaBlok, Ltd.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614 U.S.A.
Telephone (800) 688-2649
Facsimile (419) 385-2990



5 SUBMERSEED APPLICATION
SCALE: NTS



3 TREEPOT/DEEPOP TREE/SHRUB PLANTING
SCALE: NTS

Attachment B. Stewardship Calculator

LONG-TERM STEWARDSHIP COSTS CALCULATOR

NOTE: Enter values in blue-shaded cells.

Click on individual Tasks and Descriptions for additional guidance.

Project Name:	Acres:	State (or state equivalent):	Country:	Prepared by:	Date:
Truckee Meadows Restoration Project	6.56	CA	USA	NFWF	01/09/18

Unit Cost Estimates:			
	Quantity	Units	Cost
Regular staff hourly rate (inc benefits)		hour	\$ 40.00
Short-term staff hourly rate (inc benefits)		hour	\$ -
<i>Click + to the left to expand additional hourly rates (see Instructions below).</i>			
Travel Costs:			
Mileage OR cost (round-trip)	2	miles	\$ -
Mileage rate	0.54	\$/mile	
Vehicle Travel Cost:			\$ 0.81
Overnight lodging cost (per night)	\$ -	\$/night	
Per diem (meals)	\$ -	\$/day	

Additional Rates:	
Capitalization rate	3.25%
% of annual costs covered by fund (50% or 100%)	100%
Contingency (10-20%)	10%
Administrative (recommended min 10%)	10%

Instructions:
<i>To expand additional hourly rates, the sheets must be unprotected (on the Review tab, click Unprotect Sheet). Then click the + to expand the hourly rates. Note this unprotects cells with formulas - take care not to inadvertently change formulas.</i>
<i>Rows may be copied and pasted where needed to add additional tasks. To copy and paste, select the rows by clicking on the row numbers on the left side (to select multiple rows, click and drag the cursor down). Right-click the selected rows and choose "Copy." Select and right-click on the row above which you want to paste the copied rows, then choose "Insert Copied Cells." After pasting, check Subtotal formulas to make sure pasted rows are included in the sums.</i>
<i>After all costs have been estimated for all necessary tasks, rows for unused tasks may be deleted.</i>
<i>Do not delete columns.</i>

Site Protection Monitoring and Easement Stewardship Costs												
NOTE: Enter values in blue-shaded cells. Click on individual Tasks and Descriptions for additional guidance.												
Stewardship Tasks	Description	Regular Staff (hours)	Short-term Staff (hours)	Quantity	Unit	Unit Cost	Extended Cost	Recurrence Interval (years)	Annual Cost	Subtotal	Notes (explain assumptions used in cost estimate; indicate corresponding LTMP task)	Responsible Party
Monitoring the site protection mechanism										\$ 500.81		
Preparation for site visit	Staff time	1			hours		\$ 40.00	1	\$ 40.00			TDLT
Travel expenses occurring annually	Number of trips annually			1	# trips							
	Overnight stays for annual site visit(s)			0	# nights	\$ 0.81	\$ 0.81	1	\$ 0.81			
	Allowance for meals (# of days) for annual site visit(s)			0	# days							
Travel expenses (non-annual trips)	Number of trips			0	# trips							
	Overnight stays for site visit(s)			0	# nights	\$ -	\$ -	3	\$ -			
	Allowance for meals (# of days) for site visit(s)			0	# days							
Site visit	Visual assessment, notes, photos. Include travel time and time on-site.	6			hours		\$ 240.00	1	\$ 240.00			TDLT
Prepare and submit report, maintain records	Report preparation & submittal, agency coordination, maintenance of records	4			hours		\$ 160.00	1	\$ 160.00			TDLT
	Expenses (e.g. printing, copying, mailing)			1	ea	\$ 10.00	\$ 10.00	1	\$ 10.00			TDLT
Supplies	Add description (e.g. iPad/tablet, camera, GPS, aerial or satellite imagery, UAV (drone))			1	ea	\$ 50.00	\$ 50.00	1	\$ 50.00			TDLT
Maintaining landowner/neighbor relationships										\$ -		
Staff time	Communicating with landowner/neighbors, reviewing reserved rights, etc.				hours		\$ -	1	\$ -			
Communications/outreach	Staff time				hours		\$ -	1	\$ -			
	Expenses (e.g. newsletter/brochure printing, postage, supplies for events, etc.)			0	ea		\$ -	1	\$ -			
Enforcement to correct violations										\$ 63.00		
Option A: Legal defense fund contribution	Lump sum (based on LTA Legal Defense Reserves calculator). Entire lump sum is carried over to Summary tab.				ea		\$ -	N/A	N/A			
Option B: Legal defense costs	Staff time				hours		\$ -	8	\$ -			
	Travel expenses (Number of trips)				# trips							
	Travel expenses (Overnight stays for site visit(s))				# nights	\$ -	\$ -	8	\$ -			
	Travel expenses (Meals (# of days) for site visit(s))				# days							
	Legal fees				hours		\$ -	8	\$ -			
Legal Defense Insurance	Annual insurance premium, prorated for an individual property			1	ea	\$ 63.00	\$ 63.00	1	\$ 63.00		TDLT to enroll parcel in Conservation Defense Liability Insurance Policy No. 2016CA0541 or other comparable policy.	TDLT
ANNUAL COST SUBTOTAL:										\$ 563.81		

Land Management and Maintenance Costs												
NOTE: Enter values in blue-shaded cells. Click on individual Tasks and Descriptions for additional guidance.												
Management and Maintenance Tasks	Description	Regular Staff (hours)	Short-term Staff (hours)	Quantity	Unit	Unit Cost	Extended Cost	Recurrence Interval (years)	Annual Cost	Subtotal	Notes (explain assumptions used in cost estimate; indicate corresponding LTMP task)	Responsible Party
Infrastructure Maintenance and Replacement										\$ 40.00		
Travel expenses recurring annually	Number of trips annually				# trips	\$ -	\$ -	1	\$ -			
	Overnight stays for annual site visit(s)				# nights							
	Allowance for meals (# of days) for annual site visit(s)				# days							
Travel expenses (non-annual trips)	Number of trips				# trips	\$ -	\$ -	3	\$ -			
	Overnight stays for site visit(s)				# nights							
	Allowance for meals (# of days) for site visit(s)				# days							
Site visit	Inspect boundaries, signs, other infrastructure. Include prep time, travel time and time on-site.				hours		\$ -	1	\$ -		Included with annual site visit	
Remove trash and rectify trespass, vandalism	Trash removal and addressing trespass, vandalism				hours		\$ -	1	\$ -		Included with annual site visit	
Replace fence	Materials or Contract Amount				linear ft	\$ -	\$ -	1	\$ -			
	Labor or Staff Oversight				hours		\$ -		\$ -			
Replace signs	Material (add description)			2	ea	\$ 200.00	\$ 400.00	10	\$ 40.00			
	Labor (may be included in annual site visit)				hours		\$ -		\$ -			
Other (select from drop-down)	Materials or Contract Amount				ea	\$ -	\$ -	1	\$ -			
	Labor or Staff Oversight				hours		\$ -		\$ -			
Equipment daily use rate	Vehicle (add description)				day	\$ -	\$ -	1	\$ -			
	Other (select from drop-down list)				day	\$ -	\$ -	1	\$ -			
Equipment replacement	Vehicle (add description)				ea	\$ -	\$ -	1	\$ -			
	Other (select from drop-down list)				ea	\$ -	\$ -	1	\$ -			
Ecological Management										\$ 240.00		
Travel expenses	Number of trips annually				# trips	\$ -	\$ -	1	\$ -			
	Overnight stays for annual site visit(s)				# nights							
	Allowance for meals (# of days) for annual site visit(s)				# days							
Travel expenses (non-annual trips)	Number of trips				# trips	\$ -	\$ -	3	\$ -			
	Overnight stays for site visit(s)				# nights							
	Allowance for meals (# of days) for site visit(s)				# days							
Update management plan	Review and update management plan				hours		\$ -	5	\$ -			
Ecological monitoring	Monitoring T&E species, inventories, reporting				hours		\$ -	1	\$ -			
	Supplies				ea	\$ -	\$ -		\$ -			
Invasive species control (plants)	Materials or Contract Amount				ea	\$ -	\$ -	1	\$ -			
	Labor or Staff Oversight	6			hours		\$ 240.00		\$ 240.00			
Nuisance wildlife control	Materials or Contract Amount				ea	\$ -	\$ -	1	\$ -			
	Labor or Staff Oversight				hours		\$ -		\$ -			
Prescribed fire	Cost of burn (burn plan, implementation of burn, follow-up monitoring)				ea	\$ -	\$ -	1	\$ -			
	Staff oversight of contract				hours		\$ -		\$ -			
		Annual training and recertification costs				ea	\$ -	\$ -	1	\$ -		
Vegetation management	Materials or Contract Amount				ea		\$ -	5	\$ -			
	Labor or Staff Oversight				hours		\$ -		\$ -			
Supplies	Small equipment & supplies				ea	\$ -	\$ -	1	\$ -			
Other (add description)	Materials or Contract Amount				ea	\$ -	\$ -	1	\$ -			
	Labor or Staff Oversight				hours		\$ -		\$ -			
Occupancy										\$ -		
Property taxes	Taxes, drainage assessments, other fees			1	ea		\$ -	1	\$ -		Not paid for by ILF Program	
Insurance				1	ea	\$ -	\$ -	1	\$ -			
Other fees	eg. utilities, water rights			1	ea	\$ -	\$ -	1	\$ -			
ANNUAL COST SUBTOTAL:										\$ 280.00		

SUMMARY OF LONG-TERM COSTS AND PRINCIPAL NEEDED

Project Name:	Acres:	State (or state equivalent):	Country:	Prepared by:	Date:
Truckee Meadows Restoration Project	6.56	CA	USA	NFWF	1/9/2018

Site Protection Monitoring and Easement Stewardship

Annual Cost Subtotal (see Tab 2 for details)		\$	563.81
Contingency (10-20%)	10%	\$	56.38
Administrative (min 10%)	10%	\$	62.02
Annual Cost Total (includes Option B Legal Defense Costs):		\$	682.21
Capitalization Rate:	3.25%		
Option A: Legal defense fund contribution		\$	-
Total Fund Principal Needed for Site Protection Monitoring and Easement Stewardship:		\$	20,991.08

Land Management and Maintenance

Annual Cost Subtotal (see Tab 3 for details)		\$	280.00
Contingency (10-20%)	10%	\$	28.00
Administrative (min 10%)	10%	\$	30.80
Annual Cost Total:		\$	338.80
Capitalization Rate:	3.25%		
Total Fund Principal Needed for Land Management and Maintenance:		\$	10,424.62
Overall Total Fund Principal Needed:		\$	31,415.70

Attachment C. Long-Term Funding Agreement

NATIONAL FISH AND WILDLIFE FOUNDATION

AND

TRUCKEE DONNER LAND TRUST – LONG-TERM LAND MANAGER

TRUCKEE MEADOWS RESTORATION ILF PROJECT SITE
LONG-TERM FUNDING AGREEMENT

This Truckee Meadows Restoration ILF Project Site Long-Term Funding Agreement (“Agreement”) is entered by and between the National Fish and Wildlife Foundation, a Congressionally chartered foundation and District of Columbia non-profit corporation (“NFWF” or “Program Sponsor”), and the Truckee Donner Land Trust (“Long-Term Land Manager”) (together, the “Parties,” and individually, a “Party”), as of the date of the signature of the last Party to sign (such date, the “Effective Date”).

WHEREAS, NFWF established the Sacramento District California In-Lieu Fee Program (“ILF Program”), which provides a collaborative and strategic approach to wetlands mitigation, pursuant to and in accordance with the 2008 Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332; 40 CFR Part 230) (“2008 Rule”).

WHEREAS, the ILF Program was approved through execution of an Enabling Instrument, dated October 10, 2014 (as the same has been amended from time to time, the “Instrument”), by and among NFWF as the Program Sponsor, the United States Army Corps of Engineers, Sacramento District (“USACE”), Region IX of the U.S. Environmental Protection Agency (“USEPA”), the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (“NMFS”), the State Water Resources Control Board (“State Water Board”), the Central Valley Regional Water Quality Control Board (“Central Valley Water Board”), and the Lahontan Regional Water Quality Control Board (“Lahontan Water Board”) (each referred to herein individually as an “Agency,” and collectively the “Agencies”). The Agencies comprise the Interagency Review Team (“IRT”), which is led by the USACE.

WHEREAS, in accordance with the Instrument, the ILF Program funds and delivers compensatory mitigation projects that are developed and implemented in collaboration with various partners in the public and private sectors, including landowners, land stewards, and those with knowledge, experience and/or technical expertise in restoring, creating, enhancing, and/or preserving aquatic resources. An ILF project may be 1) a stand-alone project developed and implemented solely with ILF Program funds; or 2) a component of a larger restoration project, in which case the ILF project component of the larger project would be developed and implemented with ILF Program funds and the remainder of the larger project would be financed with other funding.

WHEREAS, each ILF project must be developed and implemented in accordance with a Project Development Plan approved by the USACE and other applicable Agencies. Pursuant to the Instrument and the 2008 Rule, the Project Development Plan must include the 12 elements, and other information as the USACE may require, as set forth in 33 CFR 332.4(c)(2) through (14) of the 2008 Rule. (33 CFR

332.4(c)(iii).) The 12 elements are as follows: 1) objectives; 2) site selection; 3) site protection instrument; 4) baseline information; 5) determination of credits; 6) mitigation work plan; 7) maintenance plan; 8) performance standards; 9) monitoring requirements; 10) long-term management plan; 11) adaptive management plan; and 12) financial assurances.

WHEREAS, the Truckee Meadows Restoration Project - Project Development Plan, dated April 3, 2018 ("PDP") for the Truckee Meadows Restoration Project ("ILF Project") provides that the ILF Project site ("ILF Project Property") will be owned and maintained in perpetuity by Long-Term Land Manager in accordance with the Long-Term Land Management Plan (Attachment 7 to the PDP) ("LTMP") (attached hereto for reference as Attachment A), and provides for long-term funding (also known as an "endowment" as that term is defined in Section 65965(a) of the California Government Code) for management and protection of the ILF Project Property in accordance with the PDP and LTMP.

WHEREAS, Long-Term Land Manager has certified to Project Sponsor that it meets all of the requirements set forth in California Government Code section 65968, subsections (e)(1) through (e)(5), and, therefore, is qualified under California Government Code section 65968(f) to be a holder of the "endowment" or long-term funding for the perpetual long-term management and protection of the ILF Project Property (hereafter referred to as the "Endowment Fund"). The certification is attached hereto as Attachment B.

WHEREAS, the PDP includes this Agreement and the applicable IRT Agencies' approval of the PDP constitutes its approval of this Agreement as the document governing the intent, uses, benefits, purposes, and duration of the Endowment Fund, and the terms and conditions under which it will be held, managed, invested, and used by Long-Term Land Manager.

NOW, THEREFORE, in consideration of the mutual promises made herein, and for other and further consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

I. PURPOSES

- A. The purposes of this Agreement are to establish an Endowment Fund for the perpetual management and protection of the ILF Project Property to be held by the Long-Term Land Manager in trust for the benefit of the ILF Project Property, and to set forth the Parties' respective responsibilities with respect to ILF Project Property and the funds to be held in and expended from the Endowment Fund.
- B. If and to the extent the funds are subject to the Uniform Prudent Management of Institutional Funds Act ("UPMIFA") (California Probate Code section 18501 *et seq.*), this Agreement is the record under which the funds are transferred to, and held by, the Foundation, and as such shall be considered the "gift instrument" for purposes of UPMIFA. As reflected by its incorporation into the PDP, this Agreement shall be deemed in all respects to set forth the applicable IRT Agencies' approval as to the intent, uses, benefits, purposes, and duration of the Endowment Fund.

II. FUND ESTABLISHMENT, INVESTMENT, AND REPORTING

- A. This Agreement, through its approval under the PDP, authorizes the Long-Term Land Manager to hold the Endowment Fund as requested by and received from the Program Sponsor, in the amount of Thirty-One Thousand Four Hundred Fifteen Dollars and Seventy Cents (\$31,415.70) in 2018 dollars ("Endowment Amount"), to be provided in accordance with Section VI.A. (Funding) of the LTMP to be held in trust to pay the costs of the perpetual long-term management and protection of the ILF Project Property, in accordance with the PDP, including this Agreement, the LTMP, and the associated "Long Term Stewardship Calculator" of the costs of perpetual long-term management and protection of the ILF Project Property, dated April 3, 2018, all of which have been approved by the applicable IRT Agencies as part of the PDP.
- B. The Long-Term Land Manager shall, as soon as practicable after the Long-Term Land Manager's receipt of the Endowment Amount from Program Sponsor for the Endowment Fund, invest the Endowment Amount in accordance with the Long-Term Land Manager's Investment Policy Statement ("IPS"), which is attached hereto as Attachment C. Long-Term Land Manager shall not make any material modifications to the "Investment Pool: Long Term" portion of the IPS without first obtaining any required approvals of the applicable IRT Agencies' for such modifications.
- C. The Long-Term Land Manager and Program Sponsor agree that after the performance standards for the ILF Project are met and the Long-Term Land Manager receives from Program Sponsor 1) written notice that the performance standards for the ILF Project have been met; and 2) the Endowment Amount for the Endowment Fund, then on the date of Long-Term Land Manager's receipt of the later to be delivered of item (1) and item (2) (such date, the "Commencement Date"), Long-Term Land Manager's obligations under the PDP, including this Agreement and the LTMP, to perpetually manage and protect the ILF Project Property shall commence and Program Sponsor shall have no further legal obligation, responsibility, oversight, or involvement with the ILF Project and/or the ILF Project Property under the ILF Program. Long-Term Land Manager agrees, beginning on and continuing after the Commencement Date, to conduct the perpetual management and protection of the ILF Project Property in accordance with the PDP and LTMP and to pay the expense thereof with funds drawn from the Endowment Fund.
- D. In accordance with California Government Code section 65966(e)(1), the Long-Term Land Manager shall submit to the applicable state IRT Agencies an annual fiscal report for the Endowment Fund each year the Endowment Fund is in existence. The Long-Term Land Manager also agrees to provide the annual fiscal report to the applicable federal IRT Agencies. In each annual fiscal report, the Long-Term Land Manager shall include the following and any other information required by California Government Code section 65966(e) or any amendments thereto:
 1. the balance of the Endowment Fund at the beginning of the reporting period;
 2. the amount of any contribution to the Endowment Fund during the reporting period including, but not limited to gifts, grants, and contributions received;
 3. the net amounts of investment earnings, gains, and losses during the reporting period, including both realized and unrealized amounts;
 4. the amounts distributed during the reporting period that accomplish the purpose for which the Endowment Fund was established;
 5. the administrative expenses charged to the Endowment Fund from internal or third-party sources during the reporting period;
 6. the balance of the Endowment Fund at the end of the reporting period;

7. the specific asset allocation percentages, including but not limited to, cash, fixed income, equities, and alternative investments; and
8. the most recent financial statements for the organization audited by an independent auditor who is, at a minimum, a certified public accountant.

III. TERM, TERMINATION, AND TRANSFER

- A. This Agreement shall continue in full force and effect until either 1) the ILF Project Property is sold to, acquired by, or otherwise transferred to another entity; or 2) the applicable IRT Agencies determine the Agreement should be “terminated for cause” (as described in Subsection III.A.2. below).
 1. The Long-Term Land Manager shall provide no less than one hundred eighty (180) days prior written notice to the applicable IRT Agencies of any transactions involving the ILF Project Property being sold to, acquired by, or otherwise transferred to another entity and its intent to terminate the Agreement.
 2. The applicable IRT Agencies shall provide no less than one hundred eighty (180) days prior written notice to the Long-Term Land Manager of the intent to terminate the Agreement if the applicable IRT Agencies determine the Agreement should be “terminated for cause” because the Long-Term Land Manager has failed to substantially perform its obligations under the LTMP and/or this Agreement. Within thirty (30) days of receipt of such notice, the Long-Term Land Manager may request in writing a meeting with the applicable IRT Agencies to resolve the matter. If the Long-Term Land Manager and the applicable IRT Agencies cannot come to an agreement at such meeting, each participating entity may refer the matter to higher levels of authority within the entity. If any further meetings do not resolve the issue, the matter shall be referred to mediation. If the mediation does not result in resolution of the dispute or if the Long-Term Land Manager fails to participate in the mediation, the applicable IRT Agencies shall be entitled to terminate the Agreement thirty (30) days from the date of the mediation.
 3. Notwithstanding Subsections III.A.1 and III.A.2. above, regardless of the date that notice of termination is provided and the passage of the intervening minimum one hundred eighty (180) day notice period, termination is not effective unless and until the Long-Term Land Manager has transferred in an orderly fashion 1) the custody, control or other power necessary for the investment, management, and administration of all the funds in the Endowment Fund (other than funds in an amount equal to any fees due and owing to the Long-Term Land Manager or its financial institutions) to an entity identified or approved in writing by the applicable IRT Agencies to serve as a successor Endowment Fund holder; and 2) the perpetual long-term land management responsibilities for the ILF Project Property under the LTMP to an entity designated or approved by the applicable IRT Agencies to serve as a successor Long-Term Land Manager.
- B. Within ninety (90) days following final disbursement of the funds in the Endowment Fund to any successor, the Long-Term Land Manager shall provide to the applicable IRT Agencies a final annual fiscal report on the Endowment Fund.

IV. CONTACT INFORMATION AND COMMUNICATIONS

- A. All approvals, notices, reports, and other communications required or permitted under this agreement shall be in writing and delivered by first-class mail, overnight mail, receipt-confirmed facsimile, electronic mail, or electronic PDF format. Each Party agrees to notify the other promptly after any change in name representative, address, telephone, or other contact information.
- B. If any notice or communication is required or permitted to be delivered to the applicable IRT Agencies hereunder, such notice or communication shall be delivered to the applicable IRT Agencies identified in Section IV.C. below.
- C. The individuals and/or positions named below shall be the representatives of the Parties and applicable IRT Agencies for purposes of this Agreement:

Program Sponsor Primary:	Chris Gurney Wetlands Program Manager, Impact-Directed Environmental Accounts National Fish and Wildlife Foundation 90 New Montgomery Street, Suite 1010 San Francisco, CA 94105 Phone: (415) 593-7627 Facsimile: (415) 778-0998 Email: christopher.gurney@nfwf.org
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Program Sponsor Alternate:	Jana Doi Manager, Impact-Directed Environmental Accounts National Fish and Wildlife Foundation 90 New Montgomery Street, Suite 1010 San Francisco, CA 94105 Phone: (415) 243-3102 Facsimile: (415) 778-0998 Email: jana.doi@nfwf.org
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Long-Term Land Manager Primary:	John Svahn Stewardship Director Truckee Donner Land Trust P.O. Box 8816 Truckee, CA 96162 Phone: (530) 582-4711 Facsimile: (530) 582-5528 Email: john@tdlandtrust.org
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Long-Term Land Manager Alternate:	Ward W. Fansler Chief Financial Officer Truckee Donner Land Trust P.O. Box 8816 Truckee, CA 96162
--------------------------------------	---

Phone: (530) 582-4711
Facsimile: (530) 582-5528
Email: ward@tdlandtrust.org

USACE: Krystel Bell
Mitigation Banking Specialist
US Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, CA 95814
Phone: (916) 557-7745
Facsimile: (916) 557-7803
Email: Krystel.I.bell@usace.army.mil

USEPA: Leana Rosetti
Environmental Scientist
Environmental Protection Agency Region 9
75 Hawthorne Street, MC WTR-3
San Francisco, CA 94105
Phone: (415) 972-3070
Facsimile: (415) 947-3528
Email: rosetti.leana@epa.gov

State Water Board: Ana Maria Saenz
Environmental Scientist
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814
Phone: (916) 341-5480
Facsimile: (916) 341-5463
Email: AnaMaria.Saenz@waterboards.ca.gov

Lahontan Water Board: Elizabeth van Diepen
Environmental Geologist
Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150
Phone: (530) 542-5492
Facsimile: (530) 544-2271
Email: Elizabeth.vanDiepen@waterboards.ca.gov

- D. The Parties agree and acknowledge that any change to their respective representatives or any change to the applicable IRT Agencies as set forth in Section IV.C. above shall not constitute an amendment to this Agreement and may be effected through written notice to the other Party.

V. MISCELLANEOUS PROVISIONS

- A. If any provision of this Agreement is held to be unlawful or invalid by any court of law with duly established jurisdiction over this Agreement, the Parties intend that the remainder of this

Agreement shall remain in full force and effect notwithstanding the severance of the unlawful or invalid provision(s).

- B. Except as otherwise provided in this Agreement, this Agreement may be amended only by a written amendment, signed by the Parties. Counterpart originals, facsimile copies, and/or portable document format (pdf) versions of signed amendments are acceptable and will be treated as binding originals, but this Agreement may not be amended via electronic mail.
- C. Each of the Parties is acting in its independent capacity in entering into and carrying out this Agreement and not as an agent, employee, or representative of the other Party.
- D. The Parties will cooperate in good faith to achieve the objectives of this Agreement and to avoid disputes. The Parties will use good faith efforts to resolve disputes at the lowest organizational level and, if a dispute cannot be so resolved, the Parties will then elevate the dispute to the appropriate officials within their respective organizations.
- E. Nothing contained in this Agreement is intended to unlawfully delegate the applicable IRT Agencies' duties or to limit the authority of any of the applicable IRT Agencies to fulfill their respective statutory or regulatory responsibilities.
- F. This Agreement shall not be the basis of any claims, rights, causes of action, challenges, or appeals by any person not a Party to this Agreement, except that the Parties acknowledge that the applicable IRT Agencies are third party beneficiaries under this Agreement and shall have rights as third party beneficiaries hereunder.
- G. This Agreement shall be governed by and interpreted in accordance with the laws of the State of California, disregarding principles of conflicts of law.
- H. Any waiver by either Party of any term or provision of this Agreement shall be given in writing. No waiver shall be construed as a waiver of any other provision of this Agreement, nor shall such waiver be construed as a waiver of such provision respecting any other event or circumstance.
- I. The headings used in this Agreement are for convenience only and shall not determine or limit the interpretation, construction or meaning of this Agreement.
- J. This Agreement may be executed in one or more counterparts, each of which shall be considered an original, but all of which together shall constitute one and the same instrument.
- K. This Agreement represents the entire agreement of the Parties with respect to the subject matter hereof and may not be amended, except in writing signed by each Party hereto.
- L. Each Party to this Agreement warrants to the other that its respective signatory has full right and authority to enter into and consummate this Agreement and the transactions contemplated hereby.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective authorized representatives, intending to be bound legally.

NATIONAL FISH AND WILDLIFE FOUNDATION

By: _____ Date: _____

Timothy J. DiCintio, Senior Vice President
Impact-Directed Environmental Accounts

TRUCKEE DONNER LAND TRUST

By: _____ Date: _____

Ward W. Fansler, Chief Financial Officer

ATTACHMENT A

Long-Term Land Management Plan

ATTACHMENT B

California Government Code Section 65968(e) Certification

Tuckee Donner Land Trust

California Government Code Section 65968(e) Certification

GOVERNMENT CODE - GOV

TITLE 7. PLANNING AND LAND USE [65000 - 66499.58]

(Heading of Title 7 amended by Stats. 1974, Ch. 1536.)

DIVISION 1. PLANNING AND ZONING [65000 - 66210]

(Heading of Division 1 added by Stats. 1974, Ch. 1536.)

CHAPTER 4.6. Mitigation Lands: Nonprofit Organizations [65965 - 65968]

(Chapter 4.6 added by Stats. 2006, Ch. 577, Sec. 2.)

65968.

(e) The holder of an endowment shall certify to the project proponent or the holder of the mitigation property or a conservation easement and the local or state agency that required the endowment that it meets all of the following requirements:

(1) The holder has the capacity to effectively manage the mitigation funds.

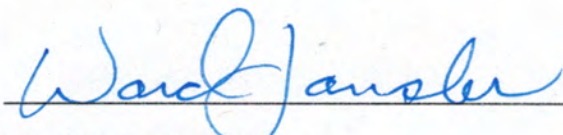
(2) The holder has the capacity to achieve reasonable rates of return on the investment of those funds similar to those of other prudent investors for endowment funds and shall manage and invest the endowment in good faith and with the care an ordinarily prudent person in a like position would exercise under similar circumstances, consistent with the Uniform Prudent Management of Institutional Funds Act (Part 7 (commencing with Section 18501) of Division 9 of the Probate Code).

(3) The holder utilizes generally accepted accounting practices as promulgated by either of the following:

(A) The Financial Accounting Standards Board or any successor entity for nonprofit organizations.

(B) The Governmental Accounting Standards Board or any successor entity for public agencies, to the extent those practices do not conflict with any requirement for special districts in Article 2 (commencing with Section 53630) of Chapter 4 of Part 1 of Division 2 of Title 5.

Truckee Donner Land Trust hereby certifies that it is compliant with California Government Code Section 65968(e).



3/23/2018

Ward W. Fansler, CPA
Chief Financial Officer
Truckee Donner Land Trust

ATTACHMENT C

Investment Policy Statement



Truckee Donner Land Trust

Investment Policy

Adopted by the Board of Directors

on 12/4/2017

Introduction

The purpose of this Investment Policy is to establish guidelines for the investment of funds held by the Truckee Donner Land Trust. The funds held will be divided into three separate investment pools. The three pools will be called: 1) the Short-Term Pool, 2) the Intermediate Term Pool, and 3) the Long Term Pool.

This Investment Policy reflects the policy, objectives, and guidelines of the Truckee Donner Land Trust Board of Directors for the management of each of the three investment pools.

Definitions

1. “Board of Directors” shall refer to the governing body of the Truckee Donner Land Trust.
2. “Finance Committee” shall refer to the decision making body established by the Board of Directors to oversee the management of the investment assets and adherence to the Investment Policy.
3. “TDLT Staff” shall refer to the Executive Director and finance staff involved with the implementation of the Investment Policy.
4. “Investment Manager” shall mean any individual, or group of individuals, employed to manage the investments of all or part of the Truckee Donner Land Trust’s assets, e.g., the manager of a mutual fund
5. “Advisor” shall mean any individual, or organization employed to provide advisory services, including advice on investment objectives and/or asset allocation, manager search and performance monitoring.
6. “Fiduciary” shall mean any individual or group of individuals that exercise discretionary authority or control over the fund management or any authority or control over management, disposition or administration of portfolio assets.

This Investment Policy:

- Establishes the Board of Directors’ expectations, objectives and guidelines in the investment of the assets.
- Creates the framework for a well-diversified asset mix that can be expected to generate acceptable long-term returns at a level of risk suitable to the Board, including:
 1. describing an appropriate risk posture for the investment of the assets
 2. specifying the target asset allocation policy

3. establishing guidelines regarding the selection of investment managers, permissible securities and diversification of assets
 4. specifying the criteria for evaluating the performance of the investments
- Defines the responsibilities of the Finance Committee, TDLT staff, Advisor, and Investment Manager(s).
 - Establishes a basis for evaluating investment results

This Investment Policy is intended to be a summary of an investment philosophy and the procedures that provide guidance for the Finance Committee and TDLT staff regarding implementation of the Policy. The Policy should be dynamic and reflect the Board of Directors' current status and philosophy regarding the investment of the various asset pools. This Policy will be reviewed at least annually.

Investor Information:

Name: Truckee Donner Land Trust. (Truckee Donner Land Trust)
P.O. Box 8816
Truckee, CA 96162-8816

Authorized Decision Makers

The Board of Directors is responsible for adopting and amending the Investment Policy. The Board of Directors authorizes the members of the Finance Committee to make decisions pertaining to the oversight of the investment assets, within the parameters of the Policy.

Delegation of Authority

The Finance Committee of Truckee Donner Land Trust is the fiduciary responsible for monitoring the investment management of assets. As such, the Finance Committee is directed to collaborate with TDLT staff to delegate certain responsibilities to professional experts in various fields. These include, but are not limited to, investment management consultants, investment managers, custodians, attorneys, auditors, actuaries, and others deemed appropriate to fulfill the fiduciary responsibility of the Finance Committee.

The Finance Committee will not reserve any control over investment decisions, with the exception of specific limitations described in this Policy. Managers will be held responsible and accountable for achieving the objectives stated in this policy. While it is not believed that the limitations will hamper investment managers, each manager should request modifications deemed appropriate.

Investor Circumstances

The Finance Committee describes their own knowledge of investments as medium (some experience investing in mutual funds or individual stocks and bonds).

EXECUTIVE SUMMARY

Investment Pool:

Short-Term

Primary Objectives:

Preservation of Capital – To minimize the probability of loss of principal over the investment horizon.

Liquidity - To provide sufficient cash to meet operational financial obligations. Assets are to be managed to ensure the ability to meet cash flow needs by investing in securities which can be sold readily and efficiently.

Time Horizon:

Less than 2 years

Risk Tolerance:

Very Conservative

Allowable Assets:

- Treasury Bills
- Money Market Funds regulated by the Securities and Exchange Commission under Rule 2a-7
- Bank sweep accounts jointly approved by the Finance Committee and TDLT staff
- Fully insured Certificates of Deposits with a BankRate.com rating of 3 stars or better, or comparable rating from another established bank rating entity
- Commercial paper rated A1, or its equivalent, or better
- Short maturity bond Exchange Traded Funds (ETFs), underlying rated holdings at least 80% investment grade, weighted average maturity under 2 years
- Ultra Short or Short Bond Funds, underlying rated holdings at least 80% investment grade, weighted average maturity under 3 years

The maximum allowable allocation of the aggregate portfolio to illiquid securities is 0%.

Restrictions:

Maximum Average Maturity: less than 2 years
Maximum Individual Maturity: 3 years

Investment Pool:

Intermediate Term

Primary Objectives:

Preservation of Capital – To minimize the probability of loss of principal over the investment horizon.

Liquidity – Assets are to be managed to ensure the ability to meet cash flow needs by investing in securities which can be sold readily and efficiently.

Preservation of Purchasing Power, net of spending - Primary emphasis is on achieving returns in excess of the rate of inflation net of spending.

Target Rate of Return:

Return to meet or exceed that of an appropriate market index aligned with the allocation of assets.

Time Horizon:

2-5 years

Risk Tolerance:

Conservative

Allowable Assets:

1. Cash and Cash Equivalents with Maturities of 5 Years or Less

- Treasury Bills
- Money Market Funds regulated by the Securities and Exchange Commission under Rule 2a-7
- Bank sweep accounts jointly approved by the Finance Committee and TDLT staff
- Fully insured Certificates of Deposits with a BankRate.com rating of 3 stars or better, or comparable rating from another established bank rating entity
- Commercial paper rated A1, or its equivalent, or better

2. Fixed Income Securities

- U.S. Treasury Notes and Bonds, or obligations which carry the full faith and credit of the United States
- Obligations of U.S. Government Agencies or Government Sponsored Enterprises
- Mortgage Backed Bonds
- U.S. Corporate Notes and Bonds with a rating of “BBB” or better
- Fixed Income Securities of Foreign Governments and Corporations with a rating of “A” or better

3. Mutual Funds and Exchange Traded Funds whose overall objectives are consistent with those of this investment pool.

<i>Asset Allocation:</i>	Asset Class	Target	Minimum/Maximum
	Equities	18%	18% - 30%
	Fixed Income	82%	55% - 82%
	Cash and Cash Equivalents	0%	0% - 15%

The maximum allowable allocation of the aggregate portfolio to illiquid securities is 0%.

Rebalancing Procedures:

Portfolio is rebalanced annually or as appropriate

Cash Limits:

Truckee Donner Land Trust wishes to maintain no minimum liquidity needs.

Restrictions:

Bond quality rating: BBB or better

Maximum Average Bond Maturity: 3 years

Maximum Individual Bond Maturity: 5 years

Maximum Individual Security Portion (excluding a mutual fund or ETF): 5%

Investment Pool: **Long Term**

Primary Objective: **Preservation of purchasing power, net of spending.** Primary emphasis is on achieving returns in excess of the rate of inflation net of spending over the investment horizon in order to preserve purchasing power of the assets.

Target Rate of Return: The long-term objective for the assets in this portfolio is to meet or exceed the return of an appropriate balanced market index aligned with the allocation of assets.

Time Horizon: over 5 years

Risk Tolerance: Moderate

Allowable Assets:

1. Cash and Cash Equivalents with Maturities of 5 Years or Less

- Treasury Bills
- Money Market Funds regulated by the Securities and Exchange Commission under Rule 2a-7
- Bank sweep accounts jointly approved by the Finance Committee and TDLT staff
- Fully insured Certificates of Deposits with a BankRate.com rating of 3 stars or better
- Commercial paper rated A1, or its equivalent, or better

2. Fixed Income Securities

- U.S. Treasury Notes and Bonds, or obligations which carry the full faith and credit of the United States
- Obligations of U.S. Government Agencies or Government Sponsored Enterprises
- Mortgage Backed Bonds
- U.S. Corporate Notes and Bonds

- Fixed Income Securities of Foreign Governments and Corporations

3. Equity Securities

- Common Stocks (held by an investment manager, e.g., mutual fund, or in a “managed account”).
- Convertible Notes and Bonds
- American Depositary Receipts (ADRs) of Non-U.S. Companies
- Stocks of Non-U.S. Companies (Ordinary Shares) (held by an investment manager, e.g., mutual fund, or in a “managed account”).
- Real Estate Securities/REITs

4. Allowable Investment Types

- Individual Stocks (held by an investment manager, e.g., mutual fund, or in a “managed account”) or Bonds
- Open-ended Mutual Funds
- Exchange Traded Funds
- Managed Separate Accounts

<i>Asset Allocation:</i>	Asset Class	Target	Minimum/Maximum
	Equities	65%	55% - 70%
	Fixed Income	35%	25% - 35%
	Cash	0%	0% - 10%

The maximum allowable allocation of the aggregate portfolio to illiquid securities is 0%.

Rebalancing Procedures: Portfolio is rebalanced annually or as appropriate.

Cash Limits: Truckee Donner Land Trust wishes to maintain no minimum liquidity needs.

Restrictions: Average Bond quality rating: BBB or better
Maximum Average Bond Maturity: 10 years
Maximum Individual Bond Maturity: 15 years
Maximum Individual Security Portion (excluding a mutual fund or ETF): 5 %

SELECTION/RETENTION CRITERIA FOR INVESTMENTS

Investment Management Policy

The funds should be invested in accordance with these general policies:

- 1. Preservation of Capital.** The Finance Committee and the investment managers should make conscious efforts to preserve capital, understanding that losses may occur in individual securities.
- 2. Risk Aversion.** The Finance Committee recognizes that some risk is necessary to produce long-term investment results sufficient to meet the Fund's objectives. However, investment managers are to make reasonable efforts to control risk, and they will be evaluated regularly to ensure that the risk assumed is commensurate with the given investment style and objectives.
- 3. Adherence to Investment Discipline.** Investment managers are expected to adhere to the investment management styles for which they were hired. Managers will be evaluated regularly for adherence to investment discipline.

Investment Selection

Investment managers (including mutual funds, separate account managers and Exchange Traded Funds) shall be chosen using the following criteria:

- Past performance, considered relative to other investments having the same investment objective. Consideration shall be given to both performance rankings over various time frames and consistency of performance
- Costs relative to other funds with like objectives and investment styles
- The manager's adherence to investment style
- Size of the manager's portfolio
- Length of time the fund/manager has been in existence and length of time it has been under the direction of the current manager(s) and whether or not there have been material changes in the manager's organization and personnel
- The historical volatility and downside risk of each proposed investment
- How well each proposed investment complements other assets in the portfolio
- The likelihood of future investment success, relative to other opportunities
- Quality of client service and performance reporting

Prohibited Transactions

- Short selling
- Margin transactions
- Purchase of privately held securities (not publicly traded) and derivative securities

INVESTMENT MONITORING AND CONTROL PROCEDURES

Reporting

- The investment custodian shall provide TDLT with:
 - Monthly statements for each account held by Truckee Donner Land Trust
 - Quarterly statements for the Finance Committee and TDLT staff for the three investment pools.
 - Such reports shall show values for each asset and all transactions affecting assets within the portfolio, including additions and withdrawals.
- The Advisor shall provide TDLT staff and the TDLT Finance Committee the following management reports on a periodic basis:
 1. Portfolio performance results over varying time periods
 2. Performance results of agreed upon comparative benchmarks over varying time periods
 3. Review of current asset allocation versus policy guidelines
 4. Any recommendations for changes of the above

Meetings and Communication among TDLT Staff, Finance Committee and Advisor

As a matter of course, the Advisor shall keep TDLT staff and the Finance Committee apprised of any material changes in the Advisor's outlook, recommended investment policy, and tactics.

In addition, Advisor shall meet jointly in person or by conference call with TDLT staff and the Finance Committee approximately quarterly to review and explain investment results and any related issues. Advisor shall also be available on a reasonable basis for telephone and email communication as needed.

Advisor is to meet with the Board of Directors as requested.

Investment Manager Performance Review and Evaluation

At least annually, the Finance Committee and TDLT staff will collaboratively review and measure the performance of the total portfolio, as well as asset class components, against commonly accepted performance benchmarks.

Investment managers shall be reviewed regularly regarding performance, personnel, strategy, research capabilities, organization and business matters, and other qualitative factors that may impact their ability to achieve the desired investment results.

In addition, the Finance Committee and TDLT staff will review the performance of the Advisor approximately annually.

Allocation of Funds to the Investment Pools

Approximately annually or in the event of significant inflows or outflows of funds to TDLT, the Finance Committee and TDLT staff will review the allocation of funds to the three Investment Pools and inform the board of any changes in the prior allocation.

DUTIES AND RESPONSIBILITIES

The Advisor

The Advisor is a Registered Investment Advisor and shall act as the investment advisor to the Board of Directors, its Finance Committee and TDLT staff until the Board decides otherwise.

Advisor shall be responsible for:

- Assisting in the development and periodic review of investment policy.
- Recommending an appropriate asset allocation plan consistent with the investment objectives, time horizon, risk profile, guidelines and constraints outlined in this statement.
- Advising about the selection of and the allocation of asset categories.
- Identifying specific assets and investment managers within each asset category.
- Providing research on the Investment Manager(s)
- Monitoring the performance of all portfolio assets.
- Recommending changes to this investment policy statement.
- Periodically reviewing the suitability of the investments.
- Preparing and presenting appropriate reports.

Discretion and Title

- Advisor will not have any discretionary control.
- Advisor shall have no authority to withdraw funds from Truckee Donner Land Trust's accounts, except to cover payment of previously agreed to fees or at TDLT staff's specific direction.
- Advisor may not change Truckee Donner Land Trust's investment policy, including the targeted asset allocation, without the Board of Directors' prior approval.

TDLT Staff

TDLT Staff shall be responsible for:

- Estimating Truckee Donner Land Trust's financial needs, and communicating such needs to the Investment Advisor on a timely basis.
- Providing Advisor with all relevant information on Truckee Donner Land Trust's financial conditions and risk tolerances and notifying Advisor promptly of any changes to this information.
- Reading and understanding the information contained in the prospectus and each investment in the investment pool.

- Being responsible for exercising all rights, including voting rights, as are acquired through the purchase of securities.
- Implementing the investment objectives and policies of the Investment Policy.
- Working collaboratively with the Finance Committee to:
 - Review Advisor's recommendations with regards to policy, guidelines, and objectives on a timely basis and recommending any suggested changes to the Board of Directors.
 - Prudently and diligently selecting qualified investment professionals, with advice and counsel from the Advisor, including investment advisor(s), investment manager(s), and custodian(s). Regularly evaluating the performance of investment managers(s) to assure adherence to policy guidelines and to monitor investment objective progress.
 - Developing and enacting proper control procedures: e.g., replacing investment manager(s) due to fundamental change in investment management process, or for failure to comply with established guidelines.
- Quarterly reporting to the Finance Committee regarding performance of the investment portfolio and each of the investment pools, composition of the investment assets in aggregate and in each investment pool

The Finance Committee

Finance Committee shall be responsible for:

- The oversight of the performance of the investment pools.
- Reporting to the Board of Directors on the performance of the investment pools.
- Recommendations to the Board of Directors for any changes to the Investment Policy.

The Investment Manager(s)

Each Investment Manager must be a registered investment advisor under the Investment Advisors Act of 1940 and will have full discretion to make all investment decisions for assets placed under its jurisdiction. Each Investment Manager is also responsible for reporting, on a timely basis, periodic investment performance results.

Proxy Voting


TDLT staff is responsible for and empowered to exercise all rights, including proxy-voting rights.

ADOPTION

Adopted by the below signed:

Date: 12/4/2017

Signature: Board Secretary

A handwritten signature in blue ink, appearing to read "J. Brown", is written above a horizontal line.

Attachment 8. ILF Project Budget



Sacramento District California In-Lieu Fee Program Pre-proposal Budget Form

Budget Line Items	Total Project Costs	Proposed Use of NFWF ILF Funds
Land Acquisition		
Estimated Fee Simple Land Value or Conservation Easement Value	\$ -	\$ -
Phase 1 Environmental Site Assessment	\$ -	\$ -
Legal Description and Deed Restriction	\$ 1,500.00	
Legal and Accounting Fees	\$ -	\$ -
Title Report/Property Assessment and Warranty	\$ -	\$ -
Other	\$ -	\$ -
Total Land Acquisition Costs	\$ 1,500.00	\$ -
Project Planning, Design, and Permitting		
Technical Studies (sum of sub-tasks)	\$ 7,400.00	\$ -
-Wetland Delineation	\$ 1,200.00	\$ -
-Biological Resources Assessment	\$ 1,000.00	\$ -
-Hydrological Study	\$ 3,200.00	\$ -
-Cultural Resources Report	\$ 2,000.00	
Engineering/Landscape Design/Construction Plan Documents	\$ 10,000.00	\$ -
Project Prospectus	\$ 1,000.00	\$ -
Project Development Plan	\$ 1,000.00	\$ -
Interim and Long-Term Management Plan	\$ -	\$ -
CEQA/NEPA	\$ 5,000.00	\$ -
Permitting	\$ 2,000.00	\$ -
Other	\$ -	\$ -
Subtotal Project Planning, Design, and Permitting Costs	\$ 26,400.00	\$ -
Project Implementation/Construction		
Earthwork	\$ 95,000.00	\$ 95,000.00
Erosion Control	\$ 44,500.00	\$ 44,500.00
Plantings	\$ 20,125.00	\$ 20,125.00
Irrigation (temporary)	\$ 6,000.00	\$ 6,000.00
Fencing/Signage	\$ -	\$ -
Weed Removal/Treatment	\$ 9,250.00	\$ 9,250.00
Other	\$ -	\$ -
Subtotal Implementation/Construction Costs	\$ 174,875.00	\$ 174,875.00
Interim Management and Monitoring (a five-year period is typically required)		
Annual Monitoring (x 5 years)	\$ 2,640.00	\$ 2,640.00
Annual Monitoring Report (x 5 years)	\$ 2,560.00	\$ 2,560.00
Post-construction Wetland Delineation	\$ -	\$ -
Interim Annual Management (x 5 years, sum of sub-tasks)	\$ 8,000.00	\$ 8,000.00
-Weed Control	\$ 4,000.00	\$ 4,000.00
-Supplemental Plantings	\$ 4,000.00	\$ 4,000.00
Site Visits	\$ 5,425.00	\$ 5,425.00
Subtotal Interim Maintenance and Monitoring Costs	\$ 18,625.00	\$ 18,625.00
Long-term Management and Maintenance (after five-year interim monitoring period is complete)		
Long-term Management and Maintenance Fund (assuming 3.25% capitalization rate)	\$ 31,415.70	\$ 31,415.70
Subtotal Average Annual Long-term Management and Maintenance Costs	\$ 31,415.70	\$ 31,415.70
TOTAL PROJECT COSTS	\$ 252,815.70	
TOTAL NFWF ILF FUNDS REQUESTED		\$ 224,915.70

Note: We know that some items in the budget sheet will not be applicable for all projects and expect a high degree of uncertainty at the pre-proposal stage. Please take a best-guess at predicting any unknown costs and know that there will be opportunities to revise the budget later on in the project development process.

Attachment 9. Functional and Conditional Assessment Data

Basic Information Sheet: Slope Wetlands

Assessment Area Name: Truckee Meadows Winter Creek Wetland	
Project Name: Truckee Meadows Restoration Project	
Assessment Area ID#:	
Project ID#:	Date: July 10, 2017
Assessment Team Members for This AA: Chris Gurney (NFWF) and Matt Freitas (TRWC)	
Assessment Area Size: 2 ha	
Surface water present during the assessment? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Flowing? in ditch	
Briefly describe the hydrology of the AA (e.g., water sources, channels, swales, etc.) Naturally non-channeled wet meadow fed by adjacent spring. Meadow is artificially drained by one main ditch and several smaller ditches.	
AA Category: <input checked="" type="checkbox"/> Pre-Restoration <input type="checkbox"/> Post-Restoration <input checked="" type="checkbox"/> Pre-Mitigation <input type="checkbox"/> Post-Mitigation <input type="checkbox"/> Pre-Impact <input type="checkbox"/> Post-Impact <input type="checkbox"/> Ambient <input type="checkbox"/> Reference <input type="checkbox"/> Training <input type="checkbox"/> Other:	
Which best describes the type of wetland? <input type="checkbox"/> Channeled Wet Meadow (assoc. with a fluvial channel) <input checked="" type="checkbox"/> Non-Channeled Wet Meadow <input type="checkbox"/> Forested Slope <input type="checkbox"/> Seep or Spring	
Are peat soils present in the AA? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
AA Encompasses: <input type="checkbox"/> entire wetland <input checked="" type="checkbox"/> portion of the wetland	
Which best describes the dominant hydrologic state of the AA at the time of assessment? <input type="checkbox"/> ponded/inundated <input checked="" type="checkbox"/> saturated soil, but no surface water <input type="checkbox"/> moist <input type="checkbox"/> dry	
What is the apparent hydrologic regime of the wetland? <p><i>Perennial</i> slope wetlands contain surface water year-round, <i>seasonal</i> slope wetlands support surface water for 4-11 months of the year (in > 5 out of 10 years.) <i>Temporarily flooded</i> slope wetlands possess surface water between 2 weeks and 4 months of the year.</p> <input type="checkbox"/> perennial <input checked="" type="checkbox"/> seasonal <input type="checkbox"/> temporarily flooded	

Photo Identification Numbers and Description:		
	Photo ID No.	Description
1		Looking North into the AA
2		Looking South into the AA
3		Looking East into the AA
4		Looking West into the AA
5		
6		
7		
8		
9		
10		

Site Location Description (including County and USGS Topographic Quadrangle if known):
Project site is located in Town of Truckee, Nevada County, California (Truckee USGS quadrangle) and is centered at approximately 39.3256°N, -120.1736°W.

Comments:

Scoring Sheet: Slope Wetlands

AA Name: <u>Wintercreek Meadow</u>				Date <u>7/10/17</u>	
Attribute 1: Buffer and Landscape Context				Comments	
Aquatic Area Abundance Score (D)		Alpha	Numeric	~21% of transect aquatic area ~70% with buffer ~103m average buffer width B2, native veg w/some soil disturbance	
Buffer					
Buffer submetric A: Percent of AA with Buffer	Alpha	Numeric			
Buffer submetric B: Average Buffer Width	C	6			
Buffer submetric C: Buffer Condition	B	9			
Raw Attribute Score = $D + [C \times (A \times B)^{1/2}]^{1/2}$ (do not round)			14.1	Final Attribute Score = (Raw Score/24) x 100 = 58.9	
Attribute 2: Hydrology					
Water Source		Alpha	Numeric	Watershed is >20% developed Natural water supply w/more rapid drawdown <20% root zone dewatered	
Hydroperiod		C	6		
Hydrologic Connectivity (all but Channeled)		B	9		
Hydro Connectivity submetric A: Bank Height Ratio	Alpha	Numeric			
Hydro Connectivity submetric B: Percent Dewatered	n/a	n/a			
Hydrologic Connectivity for Channeled (avg. of submetrics A-B)			n/a		
Raw Attribute Score = sum of numeric scores			21	Final Attribute Score = (Raw Score/36) x 100 = 58.3	
Attribute 3: Physical Structure					
Structural Patch Richness		Alpha	Numeric	8 patches moderate macro & micro topography	
Topographic Complexity		B	9		
Raw Attribute Score = sum of numeric scores			15	Final Attribute Score = (Raw Score/24) x 100 = 62.5	
Attribute 4: Biotic Structure					
Plant Community Composition (submetric A is not applicable for Non-Channeled meadows)					
Plant Community submetric A: Number of plant layers	Alpha	Numeric	8 co-dominants <10% invasive conifers only		
Plant Community submetric B: Number of Co-dominant species	B	9			
Plant Community submetric C: Percent Invasive species	A	12			
Plant Community submetric D: Number of Encroachment groups	B	9			
Plant Comm. Composition (avg. of submetrics A-D or B-D)			10		
Horizontal Interspersion		Alpha	Numeric	moderate interspersion four life forms	
Plant Life Forms		B	9		
Raw Attribute Score = sum of numeric scores			28	Final Attribute Score = (Raw Score/36) x 100 = 77.8	
Overall AA Score (average of four final Attribute Scores)				(64)	

Meadow Name <u>Hilltop-Ponderosa Wetland Complex</u>	Date : <u> </u> / <u> </u> / <u> </u> MM DD YYYY
GPS Location: <u>39.325806°</u> N <u>-120.173631°</u> W	
GPS Datum (e.g., WGS 84, NAD 27) <u>WGS 84</u>	
Elevation (ft) <u>~5850 feet</u>	Slope (°) <u>0-2%</u> County <u>Nevada</u>
Watershed (HUC8) <u>16050102</u>	Landowner <u>Truckee Donner Land Trust</u>
USGS Quad Name <u>Truckee 7.5'</u> 7.5' or 15' (circle one)	
Observers: <u>Matt Freitas (TRWC), Peter Kulchawik (Balance Hydrologics), Jeannette Halderman (botanist)</u>	

CONDITION CATEGORY				
Parameter	Natural Condition	Slightly impacted	Moderately Impacted	Heavily Impacted
1. Bank Height in Main Channel (measured in the riffle).	Little or no channel incision, Banks 0-2 feet high along >95% of the channel length.	Bank heights of 2-4 feet along less than 25% of the channel length; 0-2 feet elsewhere. .	Bank heights of 2-4 feet along more than 50% of channel length; higher than 4 feet along less than 25% of channel length.	Bank heights > 4 feet along more than 25% of channel length. Note if sections of channel have banks 0-2 feet high.
Score: N/A	4	3	2	1
Second Channel (if present):	4	3	2	1
2. Bank Stability	<5% of bank length is unstable.	5-20% of bank length is unstable.	20-50% of bank is unstable	>50% of bank is unstable.
Score: N/A	4	3	2	1
Second Channel (if present): N/A	4	3	2	1
3. Gullies/ditches outside of main channel	No gullies or ditches outside of the main channel	Ditch or start of a gully outside of the main channel. Combined length of all gullies & ditches is less than 1/10 th meadow length.	Combined length of all gullies and ditches up to 1/2 of meadow length	Combined length of all gullies and ditches is greater than 1/2 of meadow length.
Score: 1	4	3	2	1
4. Vegetation Cover	Graminoids account for 75-100% of the area covered by vegetation	50-75% graminoid cover	Forbs dominate. 25-50% graminoid cover.	Forbs dominate. <25% graminoid cover.
Score: 3	4	3	2	1
5. Bare Ground	Bare ground covers less than 5% of the meadow area.	Bare ground covers 5-10% of meadow area	Bare ground covers 10-15% of meadow area.	Bare ground covers > 15% of meadow area.
Score: 2	4	3	2	1
6. Conifer or Upland Shrub Encroachment	No upland shrub or conifer encroachment. Raised, topographically distinct areas may have upland species present, but not the meadow surface.	Few encroaching upland species; <10% of total meadow area	Encroaching upland species cover 10-20% of total meadow area	Encroaching upland species cover >20% of total meadow area
3 Score:	4	3	2	1
Total				9
Possible Points				16
Total/Possible				0.5625



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Meadow Name <u>Hilltop-Ponderosa Wetland Complex</u>	Date : <u> </u> / <u> </u> / <u> </u> MM DD YYYY
GPS Location: <u>39.325806°</u> N <u>-120.173631°</u> W	
GPS Datum (e.g., WGS 84, NAD 27) <u>WGS 84</u>	
Elevation (ft) <u>~5850 feet</u>	Slope (°) <u>0-2%</u> County <u>Nevada</u>
Watershed (HUC8) <u>16050102</u>	Landowner <u>Truckee Donner Land Trust</u>
USGS Quad Name <u>Truckee 7.5'</u> 7.5' or 15' (circle one)	
Observers: <u>Matt Freitas (TRWC), Peter Kulchawik (Balance Hydrologics), Jeannette Halderman (botanist)</u>	

CONDITION CATEGORY				
Parameter	Natural Condition	Slightly impacted	Moderately Impacted	Heavily Impacted
1. Bank Height in Main Channel (measured in the riffle).	Little or no channel incision, Banks 0-2 feet high along >95% of the channel length.	Bank heights of 2-4 feet along less than 25% of the channel length; 0-2 feet elsewhere.	Bank heights of 2-4 feet along more than 50% of channel length; higher than 4 feet along less than 25% of channel length.	Bank heights > 4 feet along more than 25% of channel length. Note if sections of channel have banks 0-2 feet high.
Score: N/A	4	3	2	1
Second Channel (if present):	4	3	2	1
2. Bank Stability	<5% of bank length is unstable.	5-20% of bank length is unstable.	20-50% of bank is unstable	>50% of bank is unstable.
Score: N/A	4	3	2	1
Second Channel (if present): N/A	4	3	2	1
3. Gullies/ditches outside of main channel	No gullies or ditches outside of the main channel	Ditch or start of a gully outside of the main channel. Combined length of all gullies & ditches is less than 1/10 th meadow length.	Combined length of all gullies and ditches up to 1/2 of meadow length	Combined length of all gullies and ditches is greater than 1/2 of meadow length.
Score: 3	4	3	2	1
4. Vegetation Cover	Graminoids account for 75-100% of the area covered by vegetation	50-75% graminoid cover	Forbs dominate. 25-50% graminoid cover.	Forbs dominate. <25% graminoid cover.
Score: 4	4	3	2	1
5. Bare Ground	Bare ground covers less than 5% of the meadow area.	Bare ground covers 5-10% of meadow area	Bare ground covers 10-15% of meadow area.	Bare ground covers > 15% of meadow area.
Score: 4	4	3	2	1
6. Conifer or Upland Shrub Encroachment	No upland shrub or conifer encroachment. Raised, topographically distinct areas may have upland species present, but not the meadow surface.	Few encroaching upland species; <10% of total meadow area	Encroaching upland species cover 10-20% of total meadow area	Encroaching upland species cover >20% of total meadow area
4 Score:	4	3	2	1
Total				15
Possible Points				16
Total/Possible				0.9375



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Table 1. Qualitative comparison of functions (functional loss vs. gain):

Function	Impact site	Mitigation site	PM Justification
Short- or long-term surface water storage		++	Hydroperiod of shallow surface ponding would improve due to filling of drainage ditch
Subsurface water storage		++	Hydroperiod of subsurface water storage would improve due to filling of drainage ditch
Moderation of groundwater flow or discharge		++	Groundwater would be conveyed more naturally through the site after drainage ditch is filled
Dissipation of energy		+++	Filling of drainage ditch will dissipate energy and eliminate concentrated flows
Cycling of nutrients		++	Filling of ditch and reduced runoff/increased water storage would improve nutrient cycling
Removal of elements and compounds		++	Filling of ditch and reduced runoff/increased water storage would improve filtration capacity
Retention of particulates		+++	Filling of ditch will reduce export of sediment to the Truckee River downstream
Export of organic carbon		0	No change projected
Maintenance of plant and animal communities		+	Biotic structure would improve with improved hydrology
Step 2.a adjustment for column __:			

Table 1 instructions:

1. Describe amount of functional loss (impact) and gain (mitigation) in each respective column. Gain and loss can be described in text (for example, small loss, moderate loss, large loss, no loss, etc.) or symbolically (for example, +, ++, +++, 0, ---, --, -).
2. Note: alternate lists of functions may be used.
3. Note: a single adjustment should be used to account for all functions combined (see example 7 in attachment 12501.3)

Attachment 10. Pre-Project Hydrologic Monitoring Data

BALANCE HYDROLOGICS, Inc.

MEMO

To: Matt Frietas, Truckee River Watershed Council
From: Peter Kulchawik, P.E.
Date: November 20, 2017

Subject: Pre-Project Hydrologic Monitoring Data for the Truckee Meadows Restoration Project, Town of Truckee, Nevada County, California

This memo provides pre-project hydrologic monitoring data for the Truckee Meadows Restoration Project. The goals of the monitoring program were to (1) characterize pre-project hydrologic conditions to quantify changes under post-project conditions, and (2) understand the water balance of the Ponderosa Golf Course Irrigation Pond to inform the restoration design. The project is anticipated to restore hydrologic support to a degraded wet meadow system by raising groundwater levels and providing more persistent outflow to the meadow from the Irrigation Pond.

Balance Hydrologics collected the data between November 20, 2015 and October 31, 2017. Construction of the project occurred between September 5, 2017 and October 27, 2017; data from this period does not represent pre-project conditions as the hydrology of the site was temporarily affected by construction activities. We also note that construction of Site 1 (the area south of Brockway Road) was postponed until 2018. The two monitoring locations for Site 1 (groundwater wells 15-1 and 15-2) were not affected by construction activity, and continue to represent pre-project hydrologic conditions in that area.

The pre-project data represent hydrologic conditions during years with average and above-average precipitation. The Truckee #2 SNOTEL site is located roughly 2 miles southwest of the project site, and has a period of record from October 1, 1980 to present. Mean annual precipitation at the site is approximately 35 inches. Total precipitation for Water Year 2016 (i.e. October 1, 2015 to September 30, 2016) was 38 inches or 109 percent of average. Total precipitation for Water Year 2017 (i.e. October 1, 2016 to September 30, 2017) was 76 inches or 217 percent of average. The monitoring data for Water Year 2017 represent an extreme year, and should be treated as such by those using these data.

Hydrologic data was collected at 11 monitoring locations (Figure 1): six shallow groundwater wells, three streamflow gages, and one surface water stage gage for the Ponderosa Golf Course Irrigation Pond (GCIP). The three surface water gages were positioned to quantify inflow (WEIR) and outflow (IPON and IPOS) from Irrigation Pond.

All monitoring locations were instrumented with self-contained datalogging pressure transducers (Solinst Model 3001 Levellogger Junior pressure transducer/datalogger). Balance staff took manual measurements throughout the monitoring period (Tables 1 through 5) to calibrate the dataloggers. The dataloggers collected data at 15-minute intervals, however, daily average values are presented in the interest of clarity.

Certain data are presented as estimated or approximate due to ice affects, limitations of the gaging stations, or equipment malfunction. These data are noted with a code descriptor in the enclosed digital spreadsheet. We advise of the following most notable periods of estimated or approximate data:

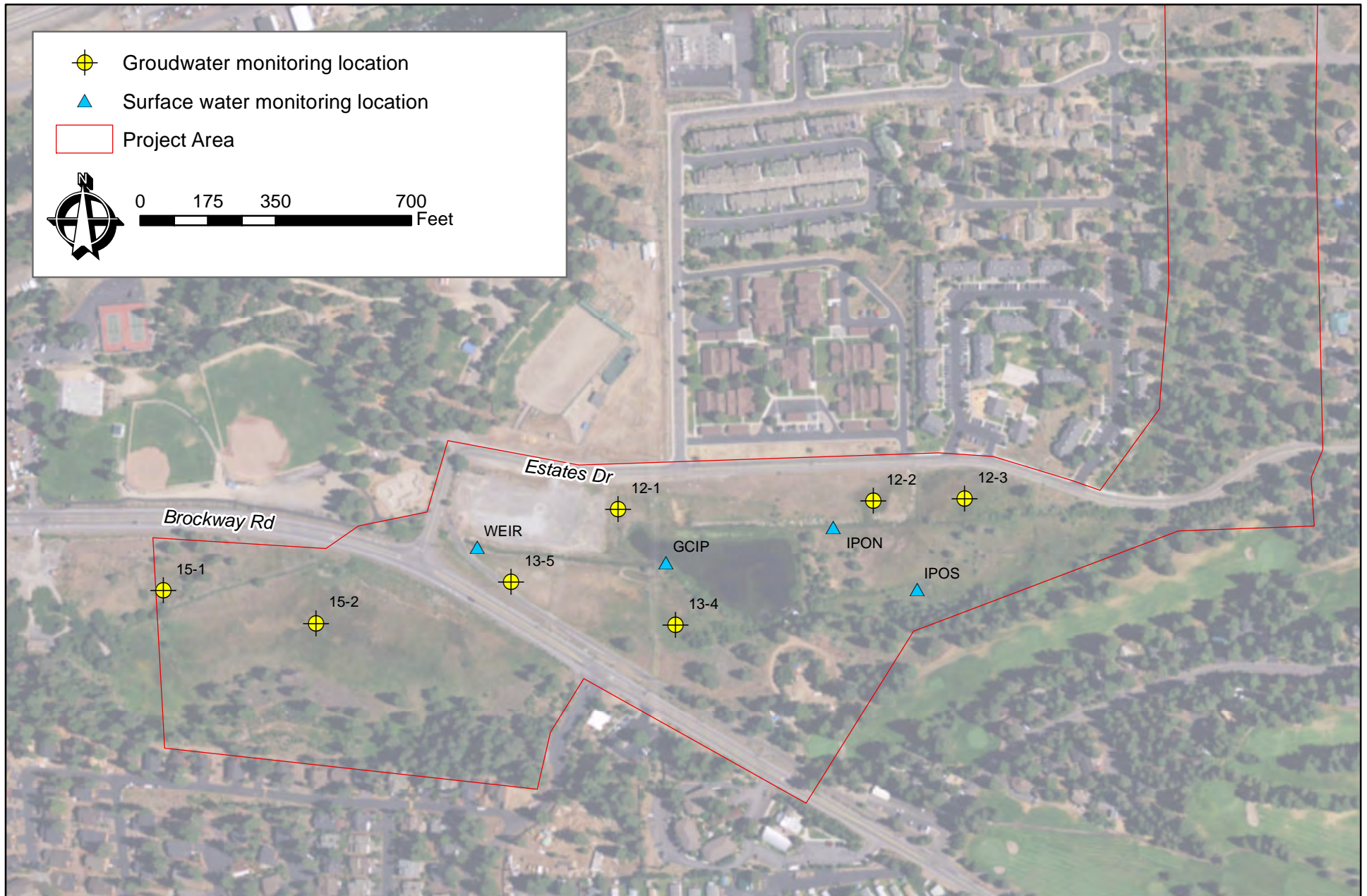
- No data were available when groundwater levels were below the bottom of the monitoring well elevation.
- The WEIR streamflow gage datalogger malfunctioned and did not collect data from June 14, 2016 to April 27, 2017. Streamflow at the WEIR site from October 14, 2016 to April 14, 2017 was estimated as the sum of the two gages on the Irrigation Pond outlet channels (IPON and IPOS). This is a reasonable representation of streamflow at the WEIR site because this period is outside of the normal irrigation season, when the water balance of the Irrigation Pond is affected by golf course operations.
- A series of very cold storms in January and February 2017 caused datalogger readings to be affected by ice at all stations.

Limitations:

This report was prepared in general accordance with the accepted standard of practice existing in Northern California at the time the investigation was performed. No other warranties, expressed or implied, are made. It should be recognized that interpretation and evaluation of streamflow records and of subsurface conditions is a difficult and inexact art. Judgment leading to conclusions and recommendations presented above were based on existing information and personnel communications, which in total represent an incomplete picture of the site. More extensive studies can reduce some of the uncertainties associated with this study.

Balance Hydrologics has prepared this report for the Truckee River Watershed Council's exclusive use on this particular groundwater and surface water monitoring study. Information and interpretations presented in this report should not be applied to specific projects or sites without the expressed written permission of the authors, nor should they be used beyond the particular area to which we have applied them. Lastly, we ask that if readers are aware of additional data, observations, conditions, or forthcoming changes to the bases of our decisions, please contact us or the Truckee River Watershed Council at the first opportunity, such that these data may be promptly revised.

Enclosures: Daily values for pre-project hydrologic monitoring (digital format)
Tables 1 – 5: Observer Logs
Figure 1: Pre-project hydrologic monitoring locations



**Balance
Hydrologics, Inc.**

Y:\GIS\Projects\214128 Truckee Wetlands Design\Figures\214128 Pre-proj Gaging Overview.mxd

**Figure 1. Pre-project hydrologic monitoring locations,
Truckee Meadows Restoration Project
Town of Truckee, Placer County, California**

Aerial Photo Source: ESRI ArcGIS Online and data partners

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Table 1. Truckee Meadows Restoration Project, Pre-Project Field Observer Log, Ponderosa Golf Course Irrigation Pond inflow (WEIR)

Preliminary and subject to revision

Site Conditions				Streamflow		High-Water Marks		Remarks
Date/Time (observer time)	Observer	Stage	Hydrograph	Measured Discharge	Measurement method	Estimated stage at staff plate	Inferred dates?	
(mm/dd/yr)		(feet)	(R/F/S/U/B)	(cfs)		(feet)	(mm/dd/yr)	
8/5/15 14:05	pk	1.01	--	--	BT	--	--	Almost zero flow over weir; observed stage good estimate of v-notch invert elevation. Less than 5 gpm seeping around left side of weir.
11/20/2015 12:10	pk/bt	--	--	--	BT	--	--	No flow at weir, dry upstream. Weir repair needs noted.
12/2/2015 10:15	bt	--	--	--	BT	--	--	Repaired weir. No flow at weir, 6" of snow on bed upstream.
1/18/2016 13:25	pk	1.16	F	0.03	BT	--	--	Pond upstream of gage mostly frozen with ~1' snow on ice. Difficult to read GH through snow/ice, GH is +/- 0.01'. Stage may be ice affected. Weir repairs appear to be holding. 2'+ snow on meadow. Light rain-on-snow over weekend
2/9/2016 12:55	pk	1.34	--	--	BT	--	--	Weir intact, minimal piping. Water clear.
2/9/2016 14:25	pk	1.35	R	0.202	BT	--	--	Weir may have flanked on both sides on 1/31 event.
2/26/2016 12:44	bt	1.39	S	--	BT	--	--	Weir holding well with one pen tip size hole that is not affecting flow; some algae and scum on water surface behind weir
3/29/2016 14:00	pk	1.49	--	--	BT	--	--	Noted significant piping on right bank, 10 to 20 gpm is bypassing weir. Pipe becomes active less than 0.1' below observed stage.
6/7/2016 15:51	pk/nb	1.38	--	0.225	BT	--	--	No significant piping around weir. Small piece of wood was lodged on v-notch prior to Qmeas (GH=1.40 at 15:02). Stage fell, then measured Q 1 hr later. Water mostly clear, algae in pool.
7/15/2016 11:09	pk	1.24	B	0.070	BT	1.65	mid-March	Water clear. Weir in good condition, minimal piping. Thin algae cover (~50%) in pool. Bank veg has grown in substantially.
8/9/2016 12:45	nb	1.15	B	0.027	BT	--	--	Lots of grass 2' upstream of weir. Large collection of algae downstream of weir. Aprox 5 gpm piping from LEW. Flow was low enough to not be completely airborne over weir, affected flow measurement aprox 1 gpm.
8/29/2016 12:20	pk	1.01	B	--	BT	--	--	Pool barely over v-notch; water clear; no debris in notch; piping around left side-nothing on right
12/10/2016 14:30	pk	1.92	U	6.16	PY	--	--	Meadow saturated with some ponding. A few patches of snow remain. Weir is flanked on both sides
3/29/2017 14:17	bt	1.74	B	1.81	MMB	--	--	Weir is flanked on both sides; est about 3 times more on the right side of weir ≈ 0.4 cfs; water clear; weir holding up but needs some work
4/27/2017 13:44	bt, pk	2.72	F	1.658	MMB	--	--	Weir flanked on both sides; severely bent; rating curve compromised because of flanking; debris racked on v-notch; @14:00 stage falling; no data since 6/14/16-logger error
9/5/2017 11:40	pk	1.41	F	0.252	BT	--	--	Final weir measurement before construction (weir to be removed). Weir flanked on both sides; v-notch had racked veg, may be affecting stage (did not clear). Downloaded.
9/25/2017 11:10	pk	n/a	G	0.67	MMB	--	--	Measurement taken in channel during construction and after the weir was removed.

Observer Key: (pk) is Peter Kulchawik, (bt) is Ben Trustman, (nb) is Nathan Black

Stage: Water level observed at outside staff plate

Hydrograph: Describes stream stage as rising (R), falling (F), steady (S), uncertain (U), or baseflow (B)

Certain flow measurements were done by bucket test, wherein the time it takes to fill a known volume is recorded several times and averaged (indicated as 'BT')

High-water mark (HWM): Measured or estimated at location of the staff plate

LEW: left edge of water REW: right edge of water BT: bucket test MMB: Marsh McBirney (electronic flow meter) PY: Pygmy meter

Preliminary and subject to revision

**Table 2. Truckee Meadows Restoration Project, Pre-Project Field Observer Log,
Ponderosa Golf Course Irrigation Pond (GCIP)**

Site Conditions			Remarks
Date/Time (observer time)	Observer	Stage	
(mm/dd/yr)		(feet)	
5/27/2015 14:15	pk/bkh	2.97	1+" rain in last 7 days. Willows all leafed out. Adjacent mitigation wetland ponded and turbid.
11/20/2015 11:49	pk/bt	3.00	Downloaded.
2/9/2016 13:00	pk	3.50	Mitigation wetland 0.5' below rim. Meadow south of weir flooded. ~1' snow on ground, 90% coverage.
2/22/2016 15:23	pk	3.54	Stage is +/- 0.01'.
7/15/2016 11:23	pk	3.05	Stage is +/- 0.01'.
8/9/2016 13:28	nb	2.99	Stage is +/- 0.01'. Pond was being filled came back at 14:50 and stage was 3.02
8/29/2016 12:26	pk	3.25 +/- 0.01	
8/8/2017 12:25	bt	3.45	Logger was stuck at bottom of the well lodged in mud; removed the well and logger at 12:40; well had no trap on the bottom; cleaned out well and downloaded logger; added trap at bottom of well and installed new string; re-installed well in pond at 13:20
11/14/2017 0:00	jj, pk	3.55	Downloaded level logger; post wetland restoration; ground around pond is damp; 1/2" to 1/3" of rain in the last 24 hrs.

Observer Key: (bkh) is Brian Hastings, (pk) is Peter Kulchawik, (bt) is Ben Trustman, (nb) is Nathan Black, (jj) is Jack Jacques

Stage: Water level observed at outside staff plate

Hydrograph: Describes stream stage as rising (R), falling (F), steady (S), uncertain (U), or baseflow (B)

Instrument: If measured, typically made using a standard (AA) or pygmy (PY) bucket-wheel ("Price-type") current meter. If estimated, from rating curve (R) or visual (V).

Estimated measurement accuracy: Excellent (E) = +/- 2%; Good (G) = +/- 5%; Fair (F) = +/- 9%; Poor (P) = > 10%

High-water mark (HWM): Measured or estimated at location of the staff plate

Preliminary and subject to revision

**Table 3. Truckee Meadows Restoration Project, Pre-Project Field Observer Log,
Ponderosa Golf Course Irrigation Pond outflow, North Ditch (IPON)**

Site Conditions				Streamflow	High-Water Marks		Remarks
Date/Time (observer time)	Observer	Stage	Hydrograph	Measured Discharge	Estimated stage at staff plate	Inferred dates?	
(mm/dd/yr)		(feet)	(R/F/S/U/B)	(cfs)	(feet)	(mm/dd/yr)	
2/9/16 13:45	pk	--	--	0.27	--	--	Water mostly clear. Lots of veg interference during Qmeas. Q may be overestimate b/c of velocity profile shape (veg). No staff plate yet.
2/22/2016 15:45	bkh/pk	4.12	--	0.25	--	--	Installed staff plate and LL at 15:20. Still 1'+ snow in meadow, but lots of melt since last visit.
2/26/2016 13:19	bt/pk	4.15	--	--	--	--	Downloaded levellogger
3/11/2016 14:15	bt	4.22	--	0.49	--	--	Lots of grass in channel. On-and-off light rain today.
4/20/2016 13:09	pk	4.01	--	--	4.19	--	Q = 20-40 gpm (visual estimate)
6/7/2016 0:00	pk/nb	3.65	U	0.034	--	--	Depths adjusted in Qmeas b/c bottom of wading rod embedded in silt. Water mostly clear. Thick grasses on banks. Many small shrimp-like critters in water near gage.
6/14/2016 10:20	bt	3.83	--	--	--	--	Download. Grasses overgrown in channel. Low flow.
7/15/2016 11:30	pk	--	--	--	--	--	No flow, although ground moist. Some grass laid down. May have flowed recently when pond level was higher.
8/9/2016 13:46	nb	--	--	--	--	--	No flow, although ground moist. Some grass laid down. May have flowed recently when pond level was higher.
8/29/2016 12:31	pk	3.7	--	--	--	--	Moved levellogger slightly because it appears as though the levellogger may not be in the well
12/10/2016 14:52	pk	4.76	U	2.01	--	--	No flow, muddy channel bottom may have flowed recently. Bottom of channel at 3.35 ft
12/16/2016 8:26	pk	4.58	F	0.70	--	--	Water mostly clear; light ice on pond; 2 inches of precipitation in last 24 hours turning to snow mix overnight; no snow in meadow except a dusting in places
3/29/2017 13:35	bt	4.58	U	2.41	--	--	lots of grass in channel; hard to get velocity at depth; logger would not connect to computer
4/27/2017 14:44	bt, pk	4.65	U	1.19	--	--	lots of algae on left bank; water mostly clear; meadow entirely melted out but very wet with ponded water in places; slate mode last data 4/14/17
11/14/2017 10:53	jj, pk	3.45	U	--	--	--	Level logger was permanently removed and downloaded at the office; post wetland restoration; 1" to 2" of standing water but no measureable flow as majority of flow has been diverted away from gage. 1/2" to 1/3" rain in last 24hrs

Observer Key: (bkh) is Brian Hastings, (pk) is Peter Kulchawik, (bt) is Ben Trustman, (nb) is Nathan Black, (jj) is Jack Jacquet

Stage: Water level observed at outside staff plate

Hydrograph: Describes stream stage as rising (R), falling (F), steady (S), uncertain (U), or baseflow (B)

All flow measurements were done by bucket test, wherein the time it takes to fill a known volume is recorded several times and averaged

High-water mark (HWM): Measured or estimated at location of the staff plate

Preliminary and subject to revision

Table 4. Truckee Meadows Restoration Project, Pre-Project Field Observer Log, Ponderosa Golf Course Irrigation Pond outflow, South Ditch (IPOS)

Site Conditions				Streamflow	High-Water Marks		Remarks
Date/Time (observer time)	Observer	Stage	Hydrograph	Measured Discharge	Estimated stage at staff plate	Inferred dates?	
(mm/dd/yr)		(feet)	(R/F/S/U/B)	(cfs)	(feet)	(mm/dd/yr)	
11/20/15 11:18	pk/bt	--	--	--			Re-launch LL, first data at 11:30. No flow, 6" of snow in ditch.
1/8/2016 14:33	bt	--	--	--			LL frozen in. No flow, completely frozen.
1/18/2016 13:40	pk	--	--	--			No flow, frozen with ~2' snow.
2/9/2016 13:30	pk	7.04	R	0.049	7.25	1/31/2016	Water mostly clear. Patchy thin ice in channel. Lots of veg interference during Qmeas. Q may be overestimate b/c of velocity profile shape (veg).
2/22/2016 16:15	bkh/pk	7.08	--	0.059	--	--	No ice in channel. Still 1'+ snow in meadow, but lots of melt since last visit.
2/26/2016 13:02	bt/pk	7.09	--	0.047	--	--	Downloaded levellogger. Pond more thawed than earlier in week.
4/20/2016 13:13	pk	6.98	--	--	7.15	--	Q = 5 to 10 gpm (visual estimate). Algae/debris may be causing stage shift.
6/14/2016 10:29	bt	6.94	--	--	--	--	Downloaded levellogger. Very low flow. Grasses overgrown in channel. Logger only partly submerged.
7/15/2016 11:28	pk	--	--	--	--	--	No flow. Channel completely dry with no signs of recent flow.
8/9/2016 14:01	nb	6.89	--	--	--	--	No measureable flow however channel was filled for whole distance, bottom of channel at aprox 6.65 hard to tell through the water.
8/29/2016 12:36	pk	6.84	--	--	--	--	No Q but standing water present
12/10/2016 15:06	pk	7.48	U	0.17	--	--	Steady rain for last 12 hr with periods of intense rain; meadow saturated with some ponding; very few patches of snow
12/16/2016 8:48	pk	7.275	F	0.172	--	--	See IPON
4/27/2017 15:07	bt, pk	7.44	U	0.207	--	--	lots of grass and algae in channel; water clear otherwise; levellogger stuck in some mud
11/14/2016 11:35	jj, pk	7.56	U	--	--	--	Downloaded level logger; post wetland restoration; no measureable flow; meadow around gage inundated in ~2" of standing water. 1/2" to 1/3" rain in last 24hrs

Observer Key: (bkh) is Brian Hastings, (pk) is Peter Kulchawik, (bt) is Ben Trustman, (nb) is Nathan Black, (jj) is Jack Jacquet

Stage: Water level observed at outside staff plate

Hydrograph: Describes stream stage as rising (R), falling (F), steady (S), uncertain (U), or baseflow (B)

All flow measurements were done by bucket test, wherein the time it takes to fill a known volume is recorded several times and averaged

High-water mark (HWM): Measured or estimated at location of the staff plate

**Table 5. Pre-project groundwater monitoring observations,
Truckee Meadows Restoration Project, Truckee, California**

Site Conditions					Water Quality Observations			Remarks
Date/Time	Observer	Top-of-casing to water (ft, above casing)	Depth to water (ft, bgs)	Water Surface Elevation (ft, NAVD)	Temperature (°C)	Specific Conductance (at field temp.) (µS/cm)	Specific Conductance (at 25 °C)	
Piezometer 12-01 - West								
Well Bottom Elevation		5848.55 ft (approx)			Installed 12/13/12			
Total Stickup =		2.93 ft above gs						
Top of Casing Elevation =		5853.62 ft						
11/20/2015 10:40	pk/bt	7.67	4.74	5845.95	11.1	270	368	Re-launched LL, first data at 11:00. Approx 4" water in well.
1/8/2016 13:48	bt	4.31	1.38	5849.31	5.8	114	180	~1' snow on ground. Downloaded.
2/22/2016 15:33	pk	3.22	0.29	5850.40	--	--	--	~1' snow on ground. Lots of melt in last 2 weeks.
6/14/2016 9:54	bt	6.39	3.46	5847.23	10.3	201.4	280.7	little mud on tip of logger; field verdant and ground dry; bailed 1/5 water dirty no odor, downloaded
8/9/2016 13:10	nb	8.39	5.46	5845.23	--	--	--	Clay mud on the bottom of SC meter when brought up. C and SC measurements not valid
4/27/2017 14:24	bt	3.63	0.70	5849.99	--	--	--	soil mostly dry, downloaded
10/31/2017 11:36	jj	7.26	4.33	5846.36				Post wetland restoration. Pond is now within ~20' of piezometer
Piezometer 12-02 - Middle								
Well Bottom Elevation		5844.50 ft (approx)			Installed 12/13/12			
Total Stickup =		1.50 ft above gs						
Top of Casing Elevation =		5851.45 ft						
11/20/2015 10:55	pk/bt	4.20	2.70	5847.25	9.6	159	227	Re-launched LL, first data at 11:15
11/20/2015 12:20	pk/bt	--	--	--	--	--	--	Bailed
1/8/2016 14:21	bt	2.85	1.35	5848.60	5.0	94	151	~1' snow on ground. Downloaded.
2/22/2016 15:37	pk	2.31	0.81	5849.14	--	--	--	~1' snow on ground. Lots of melt in last 2 weeks.
6/14/2016 10:07	bt	5.01	3.51	5846.44	12.2	192.7	254.6	logger had mud on tip; bailed 1/2 bailer full dirty water no odor, downloaded
8/9/2016 13:46	nb	7.20	5.70	5844.25	--	--	--	Clay like mud on the bottom of SC meter when brought up. C and SC measurements not valid
4/27/2017 14:38	bt	2.28	0.78	5849.17	--	--	--	Soil damp with some ponding nearby, downloaded
10/31/2017 12:05	jj	6.96	5.46	5844.49				Soil damp but no ponding of water. Post wetland restoration.

**Table 5. Pre-project groundwater monitoring observations,
Truckee Meadows Restoration Project, Truckee, California**

Site Conditions					Water Quality Observations			Remarks
Date/Time	Observer	Top-of-casing to water (ft, above casing)	Depth to water (ft, bgs)	Water Surface Elevation (ft, NAVD)	Temperature (°C)	Specific Conductance (at field temp.) (µS/cm)	Specific Conductance (at 25 °C)	
Piezometer 12-03 - East								
Well Bottom Elevation		5843.39 ft (approx)			Installed 12/13/12			
Total Stickup =		1.80 ft above gs						
Top of Casing Elevation =		5848.32 ft						
11/20/2015 11:15	pk/bt	dry	dry	--	--	--	--	Re-launched LL, first data at 11:30
1/8/2016 14:42	bt	2.09	0.29	5846.23	1.4	63	--	~1' snow on ground. Downloaded. Plug-like ice ring around string, ~1" dia.
2/22/2016 15:45	pk	dry	--	--	--	--	--	Appears frozen, TC to ice = 1.80'. Attempted moving LL to check for ice, LL moved, but could not retrieve (maybe stuck below ice).
6/14/2016 10:40	bt	4.01	2.21	5844.31	12.5	162	213	3 bails of 1/8 bailer full of dirty water dirty water no odor; ground dry and hard, downloaded
8/9//2016 14:04	nb	5.03	3.23	--	--	--	--	Clay like mud on the bottom of SC meter when brought up. C and SC measurements not valid
4/27/2017 15:52	bt	1.74	-0.06	5846.58	--	--	--	Meadow inundate with 1-5 inches of water; pool roughly 4'x6' and 3 inches deep around well, downloaded
10/31/2017 12:25	jj	1.86	0.06	5846.46				Ponding of water around piezo ~2-3". Post wetland restoration
Piezometer 13-04 - Southeast								
Well Bottom Elevation		5848.79 ft (approx)						
Total stickup=		1.80 ft above gs						
Top of Casing Elevation=		5853.65 ft						
11/20/2015 11:37	pk/bt	dry	dry	--	--	--	--	Re-launched LL, first data at 12:00
1/8/2016 14:06	bt	2.21	0.41	5851.44	4.0	110	184	~1' snow on ground. Downloaded.
2/22/2016 15:29	pk	1.97	0.17	5851.68	--	--	--	~1' snow on ground. Lots of melt in last 2 weeks.
6/14/2016 11:17	bt	3.15	1.35	5850.50	11.6	315	423	bailed 2 bailers 1/2 full slightly dirty water, downloaded
8/9/2016 14:47	nb	0.00	dry	--	--	--	--	dry
4/27/2017 15:35	bt	1.84	0.04	5851.81	--	--	--	ground saturated and squishy; some ponding nearby and slight inundation, downloaded
9/7/2017 13:10	ds	dry						
9/25/2017 11:40	pk	dry						
10/31/2017 13:04	jj	3.51	1.71	5850.14				Ground dry, post wetland restoration

**Table 5. Pre-project groundwater monitoring observations,
Truckee Meadows Restoration Project, Truckee, California**

Site Conditions					Water Quality Observations			Remarks
Date/Time	Observer	Top-of-casing to water (ft, above casing)	Depth to water (ft, bgs)	Water Surface Elevation (ft, NAVD)	Temperature (°C)	Specific Conductance (at field temp.) (µS/cm)	Specific Conductance (at 25 °C)	
Piezometer 15-01 - South Brockway, West								
Well Bottom Elevation		5848.82 ft (approx)			Installed 11/20/15			
Total stick up=		2.86 ft above gs						
Top of Casing Elevation=		5859.49 ft						
11/20/2015 13:30	pk/bt		dry					Installed well and LL
1/8/2016 15:04	bt	5.22	2.36	5854.27	4.1	236	392	~1' snow on ground. Downloaded.
2/22/2016 16:15	bkh/pk	4.66	1.80	5854.83				
6/14/2016 11:50	bt	5.44	2.58	5854.05	12.3	574	758	bailed 1/3 full 3 times slightly dirty; area around well dry, downloaded
8/9/2016 14:29	nb	dry						dry at 6.5ft
4/27/2017 16:15	bt	3.32	0.46	5856.17				soil dark and wet but no standing water, downloaded
10/31/2017 13:25:00 PM	jj	4.62	1.76	5854.87				Ground dry, grasses brown
Piezometer 15-02 - South Brockway, East								
Well Bottom Elevation		5852.55 ft (approx)			Installed 11/20/15			
Total stick up		1.25 ft above gs						
Top of Casing Elevation=		5857.62 ft						
11/20/2015 14:00	pk/bt		dry					Installed well and LL
2/22/2016 16:20	bkh/pk	1.37	0.12	5856.25				
2/26/2016 13:31	bt	1.45	0.20	5856.17				Still large patch of up to 6 inches of snow in meadow; ground saturated at bottom of the tube, downloaded
6/14/2016 12:06	bt	2.19	0.94	5855.43	13.1	136.9	177.8	bailed 2/3 clear water, downloaded
8/9/2016 14:35 PM	nb	dry						dry at 4.95 ft
4/27/2017 16:25	bt	1.20	-0.05	5856.42				meadow inundated with 1-3 inches of water; very squishy; upland soil wet but needles and debris are dry, downloaded
10/31/2017 13:45:00 PM	jj	1.28	0.03	5856.34				Standing water around piezo, ~3" deep

Notes:

- 1) ds is David Shaw; bkh is Brian Hastings; bt is Ben Trustman; jj is Jack Jaquet
 - 2) NR is not recorded, -- is not applicable
 - 3) Water surface elevations are based on ground surface elevations indicated on digital elevation models (DEM) provided by the USFS
 - 4) btoc=below top of casing; bgs=below ground surface
- Specific conductance: Measured in micromhos/cm in field using a YSI30 hand-held meter; then adjusted to 25degC by equation $(1.8813774452 - [0.050433063928 * \text{field temp}] + [0.00058561144042 * \text{field temp}^2]) * \text{Field specific conductance}$