



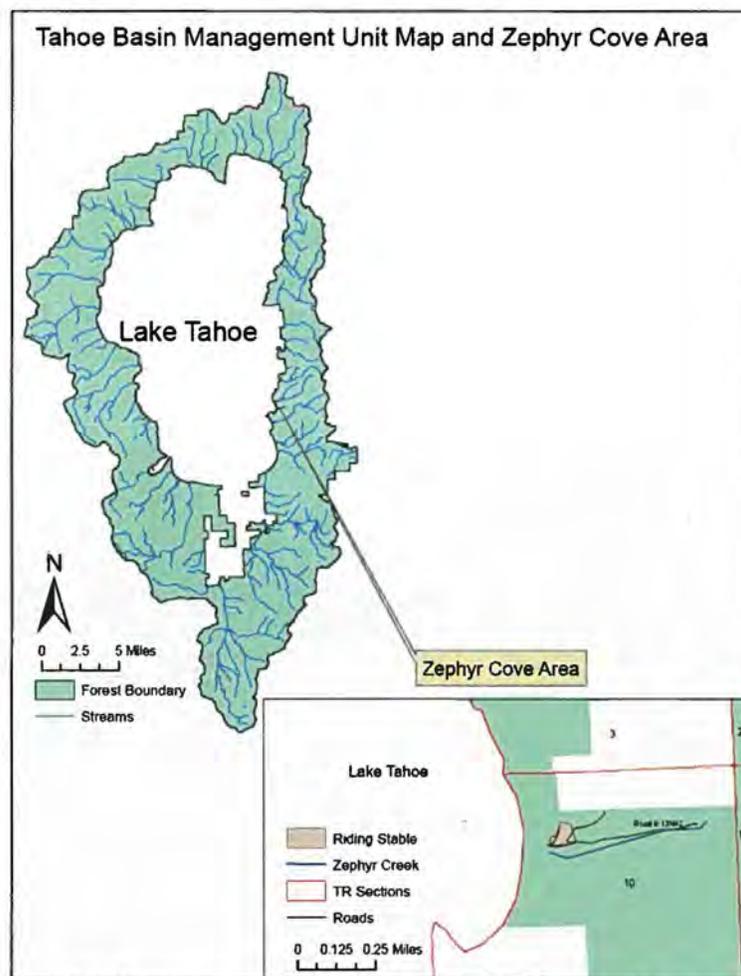
**USDA Forest Service  
Pacific Southwest Region  
Lake Tahoe Basin Management Unit**



**Decision Memo for Implementation of the  
Zephyr Cove Stables Upgrade  
Douglas County, Nevada**

**BACKGROUND:**

This project is located in Douglas County, Nevada within the Roundhill and Genoa Management areas. This project encompasses the existing Zephyr Cove Stables facility, and associated trails. These government owned facilities are located adjacent to Zephyr Cove Creek, and Hwy 28 (figure 1).



**Figure 1. General Area Location and Layout of Zephyr Cove Stables and Associated Features, Tahoe Basin Management Unit**

Zephyr Cove Stables (ZCS) are open from mid April through November, depending on suitable weather. Hours of operation are 9 A.M. through 4 P.M., with later evening hours available for special events. ZCS offers one and two hour trail rides, between 2 and 4 miles in length, and meal rides. Meal rides include a one-hour trail ride and a hay wagon ride from the corrals to a Chuckwagon area for breakfast, lunch, or dinner. The ZCS is permitted to have 55 horses on site.

From 2006 to 2009, the number of clients has ranged from a high of 10,445 to a low of 7,342. Use totals for 2008 and 2009 show a decrease of 18 and 30 percent from the peak in 2007. Currently, there is little marketing for ZCS, by either the permittee (ARAMARK) or the sublease operator (McGill family). ZCS staff believes that the stable has capacity for additional customers.

### **Facilities**

The existing facilities, and a few isolated segments of trails, are located very close to the Zephyr Creek stream environment zone (SEZ) and lie within the riparian conservation area (RCA) boundaries. The current facilities consist of several outbuilding, corrals, and paddocks, parking area, and hay and manure storage area, which covers approximately 3.1 acres. The buildings are in a dilapidated condition and do not meet current building codes for structural design elements, ventilation, and disability access standards required under the Architectural Barriers Act (36 CFR 1191). Site layout is haphazard and appears to be the result of as-needed construction over many years of use, rather than any overall plan. Walking pathways are not well defined and do not meet Forest Service Recreation Accessibility Guidelines (FSORAG), parking is undefined and buildings were not laid out in an efficient manner considering slope, stormwater and traffic/pedestrian flow patterns.



Figure 2. Zephyr Cove Stables

The existing facilities (buildings, roads, and parking areas) are neither compliant with established BMPs specified in published guidelines for stormwater management for Federal projects (EPA, 2009), nor ordinances established by the Tahoe Regional Planning Agency (TRPA) as discussed below. There is some evidence of erosion around buildings also discussed below. The corral and stable operations, including management of horse waste (manure and urine), do not meet BMPs for livestock management as established by the NRCS, (Agricultural Waste Management Field Handbook, NRCS, 2009). There is no treatment of runoff from the livestock corral and the manure storage area does not have hard surfacing and is not covered.



Figure 3. Manure berms along paddocks



Figure 4. Manure storage area looking south towards Zephyr Creek

## Trails

ZCS utilize 7.6 miles of trails, of which 1.3 miles occupy or link to trails not on National Forest System lands (see maps in Appendix). The remaining 6.3 miles includes approximately 4.5 miles subject to medium to heavy daily use, and 1.8 miles subject to light use. There are currently no locations where trails cross live stream channels, or visible evidence of damage to stream channels, riparian vegetation or sedimentation to channels from trails. This determination is based on actual visual surveying of the trails. Because it is not possible to obtain completely accurate representation of actual spatial location from the available GIS layers, the maps presented in the Appendix do not display the actual spatial location of the trails related to the adjacent stream channel. Existing trail conditions are generally poor, and do not meet current standards. There is currently no water control structures or annual maintenance performed on the trails. When trees fall, the facility operator generally reroutes the trail around the barrier. More than 50 percent of the high and medium use segments have significant soil displacement from the pounding of horse hooves and related soil movement. Where the trail segments are located on the fall line or on steep gradients, erosion has caused deep trenches (up to 4 feet deep). The trail needs significant work that will include reroutes, restoration, obliteration and drainage structure construction to meet Pack and Saddle Parameters published in the Forest Service Handbook (FSH 2309.18 Chapter 20).



Figure 5. Incised trail depth up to 3.5 – 4.0 ft located along main trail.



Figure 6. Example of “Dog-Leg” turn along main trail system

### **Risks to resources**

Water flow and water quality monitoring were collected in 2009 however no flows were present in Zephyr Creek below the corral facility location during this below average precipitation year. Sampling in Zephyr creek collected at the most downstream reach of live flow located 1,500 feet above the stable facilities (but below the equestrian trails) indicates that fecal e.coli levels are well below state standards throughout the season of use. Water quality data collection below the stables was again attempted during spring runoff (May/June) in 2010, but again no live flows were present below the corral facilities. Water quality fecal coliform data was also collected in Zephyr Creek between 1984 and 1991. However state standards for e.coli or fecal coliform did not exist at the time, so no comparison was possible. The data did indicate that there was an increase in fecal coliform levels when comparing data collected in the creek below the stables compared to above.

No aquatic biological survey data currently exist for Zephyr or McFaul Creeks, However based on visual surveys of the trails system it appears there is very little potential for impact to aquatic habitat from the existing trail system. Areas were indentified for trail relocation where existing trail could impact aquatic resources.

Wildlife (spotted owl and northern goshawk) surveys were done in the summer of 2009 and 2010. No detections were found during either survey. There are currently no resource concerns based on the lack of detections of FS sensitive species. No sensitive plant

species were found within the project area of the Zephyr Cove Stables Upgrade. Suitable habitat for the following species was identified within the project area: *Botrychium ascendens*, *Botrychium crenulatum*, *Botrychium lineare*, *Botrychium lunaria*, *Botrychium minganense*, *Botrychium montanum*, *Bruchia bolanderi*, and *Epilobium howellii*.

Cheat grass was found throughout the proposed project area of the high use trail, parking, and office areas. A botanical survey was completed at the recommended intensity (intuitive-controlled survey). Between September 10 and September 25, 2010, the facility site and all current and proposed trails (including a 25m buffer on each side of the trail) were visited by LTBMU Botanical Technician. Bull thistle was also found alongside the high use trail and the meadow south of the office/chuck wagon area. Invasive crews treated the bull thistle populations in 2009 and 2010. Map 3 illustrates noxious weed locations.

The stable area and trail system have been surveyed for historic and cultural resources. The historic facilities were evaluated for their eligibility to the National Register of Historic places and determined to be not eligible. No Heritage resource concerns exist for this project (May 4, 2011 Letter from the Nevada State Historic Preservation Officer).

#### **PURPOSE AND NEED:**

ZCS is one of only two permitted stable operations on National Forest Systems lands within the Lake Tahoe Basin, therefore providing a unique recreation opportunity. The purpose of this project is to improve upon the recreational opportunity provided by ZCS by replacing deteriorated infrastructure; implement appropriate regulatory and agency standards for facilities and trails including water quality protection BMPs; and improving the safety, operational efficiency, and aesthetic appeal of ZCS.

**Goals & Objectives:** The project objective is to maintain and improve ZCS as a recreation opportunity for the public, and to meet current and expected public demand within the context of identified resource constraints. This may be accomplished by achieving the following goals:

- Bring the existing structures up to current building codes and standards, to improve safety, aesthetic and efficiency.
- Install stormwater protection BMPs to roads, buildings and parking lots as established in the TRPA code of ordinances.
- Install trail BMPs in accordance with USFS Pack and Saddle Parameters to restore degraded trails. Installation of trail BMPs will improve the visitor experience by establishing a stable trail tread, preventing erosion of the trail tread, and correcting damage adjacent to the trail.
- Establish operations and management guidelines for livestock and livestock facilities management (including management of horse waste) as established by the NRCS, to protect water quality.
- Improve visitor experience by making improvements to site accessibility and visibility, and providing tools for environmental interpretation.

Improvements will remain under Government ownership, but operated and maintained under a special use permit to Zephyr Cove Resort. This arrangement provides for long-term benefits as Zephyr Cove Resort may offset fees due by undertaking Government maintenance of the improvements under appropriate Granger-Thye Act rules and regulations.

### **PROPOSED ACTION:**

The proposed action and project design features meet the Purpose and Need, and Goals and Objectives discussed above. The actions include:

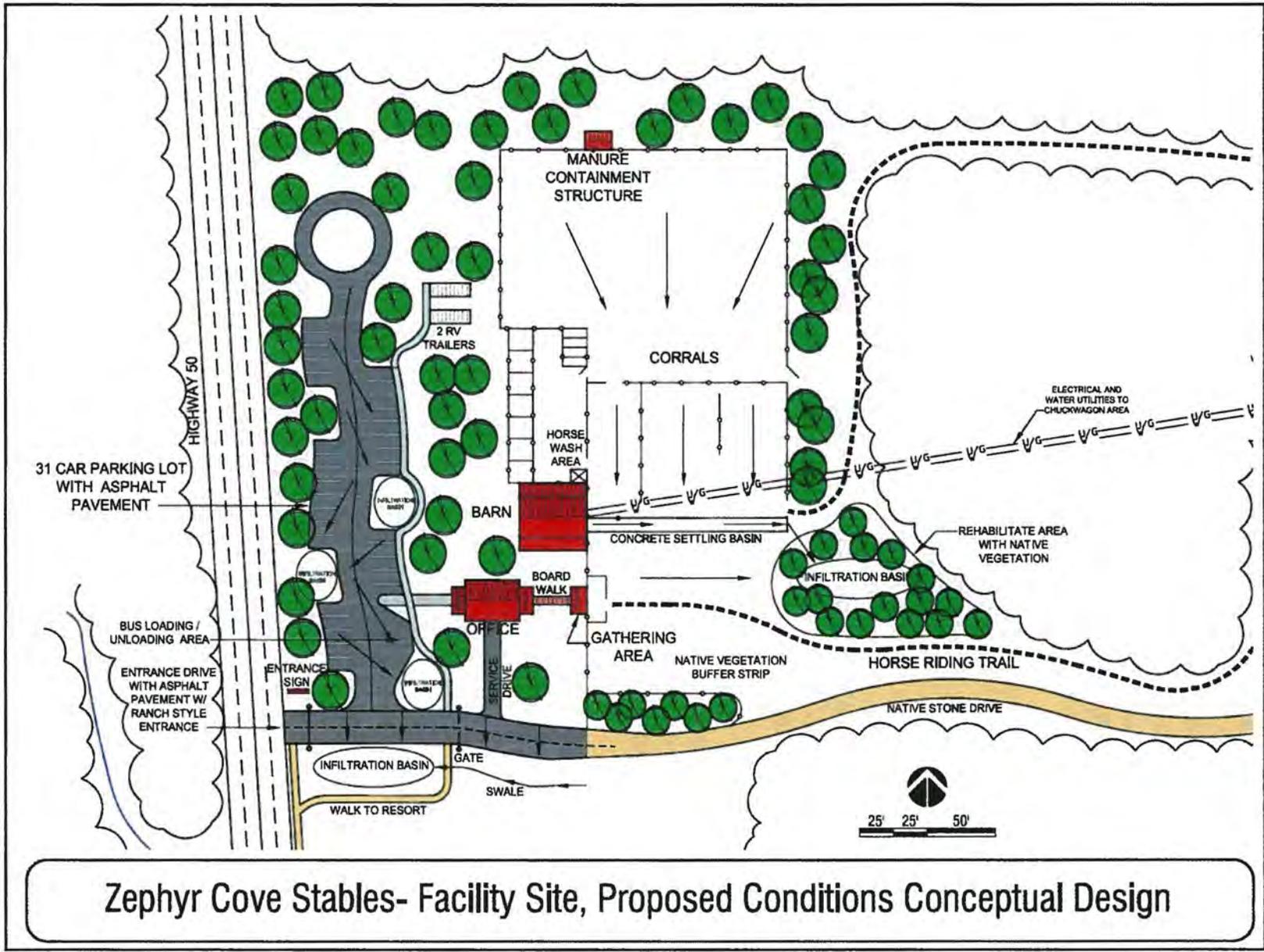
#### **ZCS Facility Improvements and Reconstruction**

As the most intensively developed and used portion of the ZCS operational area, the facility site would require the most intensive redevelopment. The overall proposed site plan for the facility site is detailed in Figure 7. The following paragraphs describe the recommended completed infrastructure and landscaping for the facility site and are displayed in Figure 7. Table 1 provides a summary of the facilities to be improved and their sizes. The heavier weighted arrows on Figure 7 show the direction of proposed runoff flow.

Temporary BMPs would be installed and maintained during all site disturbance and construction activities as described in the TRPA Handbook of Best Management Practices (Volume II of the Lake Tahoe Basin Water Quality Management Plan). All disturbed areas would be returned to their pre-existing grade or a grade determined necessary for site drainage management and vegetation would be reestablished upon the completion of construction.

In accordance with EPA guidance all facility stormwater management will feature green infrastructure and low impact development (GI/LID) practices which focus on maintaining pre-development hydrology to the greatest extent possible through mimicking natural processes to 1) infiltrate and recharge, 2) evapotranspiration, and 3) harvest and use precipitation near where it falls to earth (EPA 2009: 7). A standard of the EPA guidance is that all the runoff from a 95<sup>th</sup> percentile 24-hour storm can be retained on site through the three listed processes (EPA, 2009). A 95<sup>th</sup> percentile 24-hour storm is one which creates more precipitation in a 24-hour period than 94 percent of those on record. In the ZCS vicinity this would be a storm dropping approximately 2 inches of precipitation during a 24-hour period (M. Alexander, pers. com. 2010) and will subsequently be called “the design storm.”





Zephyr Cove Stables- Facility Site, Proposed Conditions Conceptual Design

Figure 8 – Proposed Corral Facility Improvements Zephyr Cove Stables

<b>Table 1: Proposed Infrastructure Improvements, Facility Site</b>				
<b>Item</b>	<b>Size</b>	<b>Quantity</b>	<b>Unit</b>	<b>Description</b>
Office, Admin Bldg.	30x30	900	Square feet	Log structure with covered porches
Barn	30x50	1500	Square feet	Tack room, hay, feed & exterior covered storage
Staff Trailers	TBD	2	EA	Camper trailers with landscape screen or fence
Manure Storage	10x15	150	Square feet	Covered concrete floor with walls on three sides
Horse wash area	10x12	120	Square feet	Concrete pad with hose hydrant
Parking Lot	TBD	31	Car spaces	Paved parking lot, bus loading area
Gathering area	12x20	240	Square feet	Open sided shade structure with interpretive panels
Rehab/landscaping	0.5	1	Acres	Revegetate two areas near stable for visual buffers
Interpretive signage	Varies	2	Lump sum	Vandal resistant signs interpreting LTBMU Forest
<b>Access Trail to Zephyr Cove Resort</b>				
Crushed stone trail	660x5	3300	Square feet	Trail east of Hwy. 50 Linking to Z.C. Resort
Interpretive signage	Varies	2	LS	Vandal resistant signs marsh, water quality, wildlife

The driveway and parking area will be reconfigured to manage traffic flow and stormwater runoff. The new 31-space paved parking lot and all paved drives will be graded so that runoff is directed to a series of infiltration basins of sufficient size to accommodate the volume of runoff generated by the design storm. The existing parking area is largely undesignated and occurs on native ground surface. The 31-space paved parking lot has been designed to meet existing need, while having the capacity to handle those use-levels experienced in 2007. The overall grade of the parking lot and drives would be smooth to foster general sheet flow and distribution of runoff, rather than concentration of runoff into channels. A circular turn-around at the north end of the parking lot would facilitate access by large vehicles such as the Zephyr Cove Resort shuttle bus and trucks pulling horse trailers. Paving would reduce dust generation and erosion from the parking and driveway areas, as well as reducing the amount of dirt tracked onto Highway 50 by vehicles leaving the ZCS parking lot. The parking area would also include a bus stop area and a pathway directing visitors to the ZCS office.

All internal walkways and other areas of water impervious cover, such as the horse washing area, would use grades or gutters to direct runoff into infiltration basins of sufficient size to accommodate the volume of runoff generated by the design storm. Roof runoff would be either collected in gutters, and directed by downspouts that discharge into infiltration basins, or allowed to fall onto gravel infiltration areas the length of the building and at least 5 feet wide, per the directions of the Tahoe Regional Planning Agency's report *Installation of Infiltration Systems, Start to Finish* (2009). Infiltration systems would be inspected and cleaned annually to assure proper operation.

Runoff from the corral and horse stalls area would be directed into a concrete settling basin prior to discharge into an infiltration basin via a vegetated drainage swale. Settling basins can be effective in removing solid animal waste material from agricultural runoff (NRCS 2009: 3-20). The size, depth and outlet flow of the settling basin should be designed to meet the guidelines of the *Agricultural Waste Management Field Handbook* (NRCS 2009).

A horse waste storage facility would be located on the north side of the corral area. Per the recommendations of the NRCS, this facility would be of sufficient size, at 10 by 20 by 4 feet (total volume 800 cubic feet), to contain manure and soiled bedding generated by 55 horses over a period of 7 days, assuming a maximum of 2 cubic feet of combined manure and soiled bedding waste per animal per day (770 cubic feet). (2009: 4-22) The waste storage facility would have a concrete floor, a roof, and have moisture resistant walls at least four feet high on three sides. Since stored waste is scheduled to be removed offsite every other day, the manure storage facility would provide capacity for five extra days of manure storage in case of disruption in normal hauling.

All structures would comply with International Building Code of 2006, as required by Douglas County, and with the Architectural Barriers Act requirements. The ZCS office building would house an administrative office, ticket vending area, enclosed food preparation kitchen, and restrooms. Covered porches at its west and east ends would provide shade and space for visitors to gather. This building would be the first point of contact for visitors, who would pass through the office to a covered gathering area where they would have access to interpretive panels while waiting for trail rides. The purpose of the gathering area is assembly of visitors waiting for trail rides at a single location convenient to the horse handling area. The gathering area would provide shade for visitor comfort. The other structures on the facility site, the barn and staff trailers, would be closed to visitors. The barn would provide indoor storage of tractors, enclosed hay and feed storage, a tack room and covered outdoor equipment storage. The trailers would be screened with landscaping or a fence and provide quarters for facility staff, replacing the existing, dilapidated bunkhouse.

All structures should meet the design guidelines of the Built Environment Image Guide (BEIG). The corrals, horse stalls and hitching areas would be delineated by rustic fencing and graded to direct runoff. As depicted on Figure 1, two areas would be restored to native vegetation, totaling approximately 1 acre. These areas would include the old manure storage area and would visually buffer the horse trail from the corrals and the chuckwagon area access drive.

The entry drive would be marked with an at-grade sign on the north side, consistent with the Forest Service guidance (FSM 2340), and the old-west visual theme would be reinforced by a ranch-style log arch over the driveway. The log arch would meet Tahoe Regional Planning Agency Design Guidelines, which recommend wooden sign elements (F-9).

An access trail from the Zephyr Cove Resort camping area along the east side of Highway 50 (see Figure 9) would provide safe pedestrian access between the larger resort and ZCS over a distance of approximately 660 feet. The access trail along the highway would be surfaced with crushed stone and would drain to a vegetated strip adjacent to the highway. As shown in the detail section of Figure 8, the access trail would be built with a retaining wall on its eastern side. This would limit encroachment into the adjacent stream, marsh, and wet meadow system. The access trail would include interpretive signage describing the water quality, flood control and wildlife habitat benefits provided by wetlands, such as the adjacent stream system.

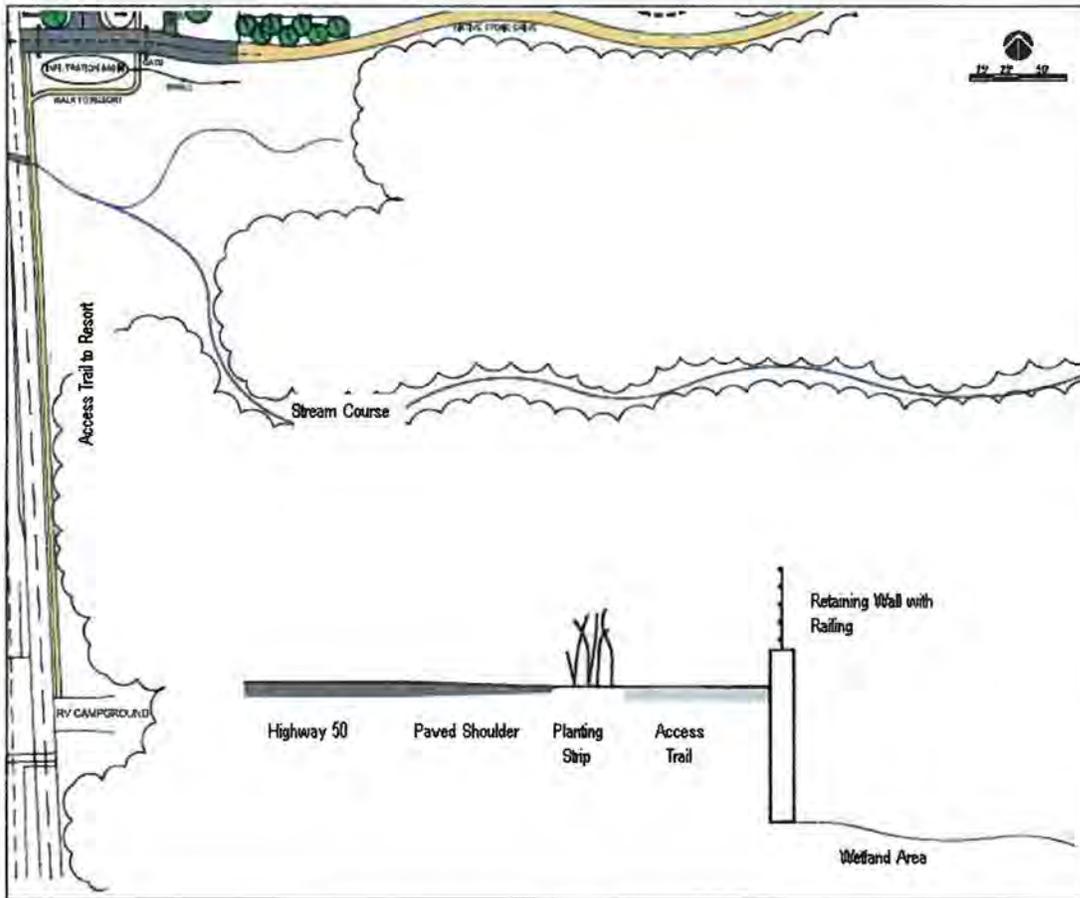


Figure 9 – Proposed Access Trail Improvements

### Chuckwagon Area

Improvements to physical facilities proposed for the chuckwagon area should emphasize operational efficiency and low maintenance in the context of an old-west visual theme (Figure 10 provides a diagram of the proposed site layout). Table 2 provides a list of proposed improvements and their sizes. A key infrastructure improvement would be provision of underground electric and potable water service from the facility site. These

utilities would occupy an approximately 700 foot easement originating at the back of the barn on the facility site. Water use would be for cooking, drinking, and area cleaning only; no sanitary sewer would be provided. Sanitary facilities would be provided by a prefabricated vault toilet and waterless hand sanitizer. Dishes and cookware would be washed in the prep kitchen at the facility site.

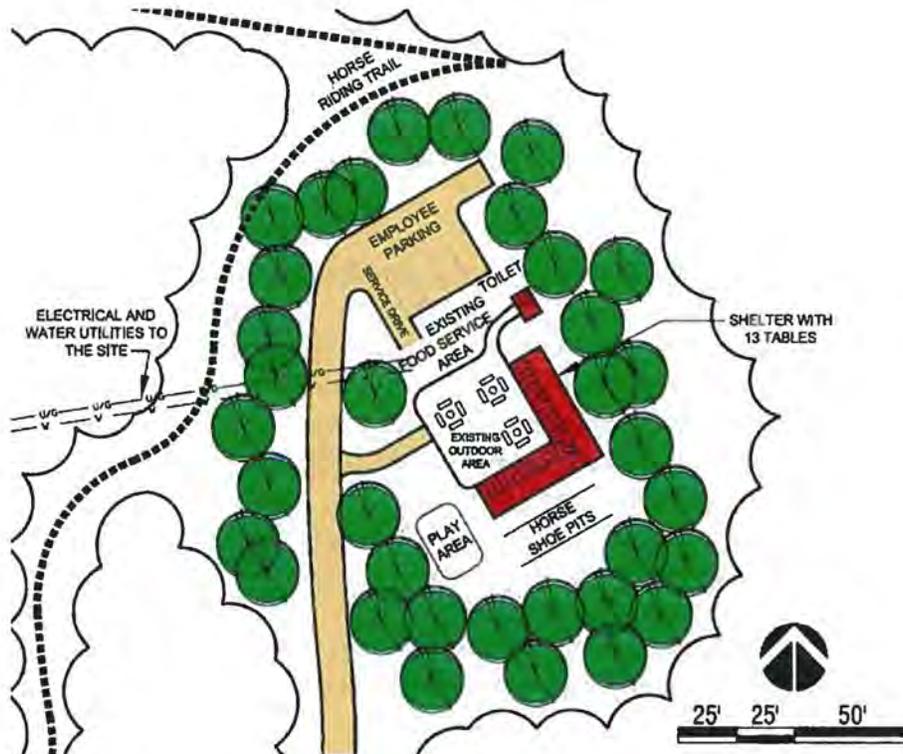


Figure 10 - Proposed Chuckwagon Area Improvements

Buildings in the chuckwagon area would be visually consistent with those in the facility area. Buildings on-site would include an L-shaped dining shelter with metal roof and open sides, large enough for 13 dining tables and a vault toilet located to a less prominent location than the current facility. The existing food preparation area, horseshoe pits, and three fire rings with seating areas would be retained.

<b>Item</b>	<b>Size</b>	<b>Quantity</b>	<b>Unit</b>	<b>Description</b>
Vault toilet	14x20	1	Each	Prefabricated unit
Dining Shelter	12x50	600	Square feet	Shade and weather cover with roof, open sides
Dining Shelter	12x38	456	Square feet	Matches item above, joins with that item in an L shape
Water line	1 inch	700	Linear feet	Service to food serve & cook area, dining shelter
Electrical line	200 A	700	Linear feet	Service to serve & cook area, entertainment & dining
Interpretive signs	Varies	2	Lump sum	Vandal resistant signs, detailing rec. hist. LTBMU role

All the improvements described above will incorporate the following LTBMU design standards.

- New building facilities would be designed to blend with and enhance the existing landscape through the use of native materials and neutral colors. The design will be consistent with the USFS Built Environment Image Guide.
- Building construction will incorporate “green” sustainable construction features to the extent possible and where practicable (i.e. sourcing sustainably produced or local materials, utilizing passive solar, integrating energy-saving technologies, etc).
- Paved surfaces around structures that do not require vehicular circulation will be designed with porous paving systems or gravel where allowable to enhance infiltration of stormwater.
- Building structures will have roofline drip trenches or other BMPs to catch and slow stormwater flowing from the roof.

### **Equestrian Trail**

As previously discussed, the equestrian trail system associated with ZCS has numerous problem areas where water erosion is currently, or could potentially become, severe. In such problem areas, this report recommends reroutes, restoration or decommission.

These recommendations were made where:

- Current grade exceeds 20 percent,
- The trail is located on fall line for more than 50 feet, or
- The trail already is heavily eroded.

Overall, this section recommends annual priorities for implementing 4.1 miles of restoration, 1.6 miles of reroutes and 2.2 miles of decommission, or “abandon and restore to slope,” to bring the Zephyr Cove trail system into compliance with the Forest Service Trail Management Handbook and Engineering Manual requirements over a five year period. In association with each set of restoration or rerouting tasks, annual trail maintenance is also recommended.

### **Trail Restoration**

All of the 4.1 miles of existing trail that will be retained in the proposed trail system will need to be restored. This includes portions of the current one-hour ride loop, of the two-hour ride loop, and of the very lightly used southern trail loop that the operator has requested be included in the Special Use Permit due to its provision of excellent scenic views of Lake Tahoe. Trail Restoration includes construction of water bars, berm removal, out-sloping, and removal of saplings and brush.

### **Trail Reroutes**

Map 1 shows 1.6 miles of potential reroutes located to avoid areas that do not meet Pack and Saddle Trail Class 3. These reroutes avoid current sections of trail that, because they run along the fall line on steep slopes, cannot be reconstructed to meet parameters, and will thus be decommissioned (see maps in Appendix A).

### **Trails off National Forest System (NFS) Lands**

The 1.3 miles of trail segments on the north end of Map 1 travel off NFS lands. This is the northern loop that the operator requested be examined for use. Since the USDA Forest Service cannot issue a permit for lands not under federal ownership, these segments will no longer be considered in this document, other than portions (totaling 950 feet) which cross NFS land to access the remainder of their lengths.

### **Trail Segments to be Decommissioned**

The 2.2 miles of trail segments recommended for removal include those segments that are too steep, on the fall line, or would be rerouted. Trail decommission consists of smoothing across a slope to the contour of the original hillside and site drainage as much as practical. In some areas this will require hauling material short distances into the rut of the old trail.

### **Proposed Trail System**

Map 2 in the Appendix depicts the proposed trail system, a combination of restored original trail and proposed reroutes necessary to avoid problem areas such as steep slopes.

### **Priorities for Restoring, Rerouting and Decommissioning Segments**

Restoration priority for the ZCS equestrian trail system starts with the high use one-hour loop, and then moves to the medium use two-hour loop and finally opening the southwestern loop requested by the operator to provide additional scenic views of Lake Tahoe (see Map 2). Table 3 shows total trail lengths to be restored, rerouted, or decommissioned for each of the priorities. Ultimately this would restore 4.1 miles of trail, create 1.6 miles of trail reroutes and decommission 2.2 miles of unsuitable trail. Implementing the restore, reroute and decommission program would bring the ZCS

equestrian trail system into compliance with the Forest Service Trail Management Handbook and Engineering Manual.

**Restore**

Restoration on the 4.1 miles of existing trail will include construction of water bars, berm removal, out-sloping, and removal of saplings and brush.

**Reroute**

Where the existing trail is too steep or on the fall line, 1.6 miles of reroutes have been flagged on the ground. The constructed reroutes will be out-sloped and rolling or grade dips installed during construction.

**Decommission**

Trails segments that will no longer be used for the trail system will be restored to the existing the natural slope and abandoned. A total of 2.2 miles of trail are identified for decommission.

Priority	Restoration Length		Reroute Length		Decommission Length		Totals	
	Feet	Miles	Feet	Miles	Feet	Miles	Feet	Miles
First	7,390	1.4	3,050	0.6	5,320	1.0	15,760	3.0
Second	10,010	1.9	4,450	0.8	3,790	0.7	18,250	3.5
Third	4,100	0.8	1,060	0.2	2,440	0.5	7,600	1.4
<b>Totals</b>	21,500	4.1	8,560	1.6	11,550	2.2	41,610	7.9

**Amendment to Zephyr Stables Operations Plan**

**Operations and Maintenance of Facilities**

An adsorbent material may be placed in the paddock or stall areas where horses are kept on site to soak up urine. Industry standards and product availability would be used to determine the volume and nature of this material (examples: sawdust, decomposed granite, wood shavings). Manure and any soil applied adsorbent material would be collected from the corrals and stalls into the manure storage facility daily, and hauled off-site to an approved composting or land application site no less frequently than weekly.

All stormwater runoff BMPs (basins/drainage ditches) will be inspected annually, and accumulated debris which decreases the design capacity of these structure will be removed.

### **Annual Trail Maintenance**

Once the work of restoration and rerouting these trails has begun, annual maintenance will be needed to keep restored and rerouted trails from eroding and clear of vegetation. Incorporate into the operating plan for ZCS, annual maintenance of this trail system in compliance with the Forest Service Trail Management Handbook and Engineering Manual.

Maintaining trail drainage is the most important maintenance and should be done once a year during early November. This item includes maintaining the out-slope and water structures. Water structures (water bars, grade and rolling dips) require regular maintenance. Once each year the excess soil and organic litter that builds up at the down-slope end of the drainage feature should be cleaned out and graded to assure that water flows off the trail. For water bars, any loose rocks or logs should be reset annually.

Several trail problems appear to have been initiated when riders detoured around an obstacle, usually a downed tree. Trees and other obstacles that block the trail should be removed within five days of discovery.

Once the trail system has been restored, brush and saplings need to be removed on sections of the trail so that system is cleared of vegetation every three years. The recommended priority for brushing is: one-hour loop, two-hour loop and southwestern loop.

### **USFS Monitoring**

For a minimum period of two field seasons, when eight contiguous weeks of flow is present in South Zephyr Creek below the stables, the USFS will implement water quality monitoring in South Zephyr Creek. E. coli and nitrogen sampling will be conducted when flows are present in South Zephyr Creek between the months of June and August to ensure Nevada state water quality standards are being met. Continued sampling will depend on the results of this initial two season flow periods.

Modifications to the permittee operating plan will be adaptively managed, based on the outcomes of the above described monitoring.

### **Recreation Program Enhancements: Interpretive Services/Information**

The USFS may provide information regarding natural environment and forest management in the Lake Tahoe Basin through installation of interpretative panels within ZCS facilities and chuckwagon area, and signs with interpretive messages along the ZCS trail system. In addition, the USFS may provide briefing papers to ZCS staff, on the natural environment they are experiencing, including local forest treatments, so that guides can present short interpretive talks and answer visitor questions.

## **RESOURCE PROTECTION MEASURES:**

All the resource protection measures below apply to proposed construction activities only, not operational changes.

### Soil/Water

1. Temporary BMPs would be installed and maintained during all site disturbance and construction activities as described in the TRPA Handbook of Best Management Practices (Volume II of the Lake Tahoe Basin Water Quality Management Plan) the USFS BMP Handbook, and California Stormwater Quality Association best management practices handbook (CASQA).
2. All disturbed areas would be returned to their pre-existing grade or a grade determined necessary for site drainage management, and appropriate soil restoration and revegetation measures would be implemented upon the completion of construction

### Sensitive Plants

1. If any sensitive plants are encountered during project implementation, they will be avoided. An LTBMU botanist will be notified to flag buffers around the sensitive plants.
2. No project activities will be allowed within buffered areas unless otherwise specified. Depending on the species and habitat, portions of the project could be implemented in buffered areas as long as the level of disturbance will not degrade local hydrology, soils, or the mychorrhizal community.
3. All species used for restoration and re-vegetation will be approved by an LTBMU botanist or ecologist.

### Noxious Weeds

The following design measures will be implemented to control impacts due to noxious weeds.

1. Include non-native invasive species prevention measures in the construction contracts and special use permit, as described below.
2. Equipment used in the project must be sanitized and free of non-native invasive species before moving into the project area to ensure that the equipment is free of soil, seeds, vegetative material, or other debris that could contain or hold seeds of non-native invasive species. It is recommended that all vehicles, especially large, off-road and/or earthmoving vehicles are cleaned when they come into the Basin or come from an area known to contain non-native invasive species. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material, or other such debris.

3. When working in areas known to harbor non-native invasive species, equipment shall then be cleaned at a washing station before moving to other National Forest Service system lands which do not contain invasive species. Cheat grass is throughout the corral and stable area; equipment will be cleaned before moving to areas not currently infested. “Sanitize equipment after working in infested areas” USFS National Strategy and Implementation Plan for Invasive Species Management.
4. Staging areas for equipment, materials, or crews should not be situated in areas infested by non-native invasive species. However, cheat grass is throughout the corral and stable area, and will be hard to avoid during project implementation; staging in the cheat grass infested portion of the project will be avoided where possible. Areas containing non-native invasive species should be “flagged and avoided” before implementation. Contact the noxious weeds coordinator before project implementation so the area can be avoided.
5. All gravel, fill, or other materials are required to be “weed-free”. Use onsite sand, gravel, rock, or organic matter when possible. Do not use materials from areas contaminated by cheat grass. Otherwise, obtain “weed-free” materials from gravel pits and fill sources that have been surveyed and approved by Nevada Department of Agriculture or by the noxious weed coordinator.
6. Use “weed-free” mulches, hay, and seed sources. Salvage topsoil from project area for use in onsite revegetation, unless contaminated with non-native invasive species. Do not use soil or materials from areas contaminated by cheat grass. “Requiring weed free certified seed for restoration” USFS National Strategy and Implementation Plan for Invasive Species Management. “
7. Minimize the amount of ground and vegetation disturbance in the construction areas. Reestablish vegetation where feasible on disturbed bare ground to minimize non-native invasive species establishment and infestation. Revegetation is especially important in staging areas.
8. Utilize locally collected native seed sources when possible. Plant and seed material should be collected from or near the project area, from within the same watershed, and at a similar elevation when possible. Persistent non-natives such as *Phleum pratense* (cultivated timothy), *Dactylis glomerata* (orchard grass), or *Lolium* spp. (ryegrass) will not be used. Seed mixes must be approved by a Forest Service botanist or a professional appointed by the forest botanist who has knowledge on local flora.
9. After the project is completed the noxious weed coordinator should be notified so that the project area can be monitored for 3 years (as funding allows) subsequent to project implementation to ensure additional non-native invasive species do not

become established in the areas affected by the project and to ensure that known non-native invasive species do not spread.

10. Weed infestations identified before project implementation that are within the project area should be treated or “flagged and avoided” according to the species present and project constraints. (see Map 3 in Appendix)

### Wildlife

1. Implement Limited Operating Periods as described in the Forest Plan and Sierra Nevada Forest Plan Amendment if any sightings of threatened, endangered, candidate, sensitive, management indicator, or special interest species are found ~~to~~ in or adjacent to the project area during implementation.
  - a. If nesting Goshawks are detected within ¼ mile of project area, a Limited Operating Period (LOP) (Northern Goshawk LOP is February 15 – September 15) will apply.
  - b. If nesting Spotted Owls are detected within ¼ mile of project area, a Limited Operating Period (LOP) (Spotted Owl LOP is March 1 – August 15) will apply.
2. Report any sightings of threatened, endangered, sensitive, management indicator, or special interest species, or nests or dens of these species to the project biologist. These species would be protected in accordance with management direction for the LTBMU.
3. Retain all trees and snags during construction, unless any such trees are determined to be an imminent hazard to recreation users.

### Recreation

1. In the event that construction activities coincide with public use of the facility, a traffic safety and control plan will be prepared by the contractor prior to commencing project operations. The plan will provide for public safety on Forest Service controlled roads and trails open to public travel. Safety buffers would be provided around the construction site (i.e. signing and temporary fencing).
2. Vegetative slash and construction waste will be removed from the site and brought to an approved disposal facility.
3. Hazard trees (i.e. those with sufficient height to reach a road or campsite) would be identified and removed as necessary as part of the project. Removal of large trees would be minimized to maintain the natural character of the site.

4. Initiate temporary forest closure only during the project activity period to ensure public safety. Closure should be as limited as possible to reduce restrictions to public access.
5. Provide advanced notice to the public to ensure that the public is aware of proposed project activity. Post signs in project areas near public access points to highlight the proposed action and impacts to public access.
6. Maintain recreational facilities in a usable condition during project construction to the extent possible, as long as human health and safety is not compromised and project implementation is unimpeded.

**REASONS FOR CATEGORICALLY EXCLUDING THE PROPOSED ACTION:**

CEQ regulations allow Federal agencies to exclude from documentation in an environmental assessment (EA) or environmental impact statement (EIS) categories of actions that do not individually or cumulatively have a significant effect on the human environment, based on the agency’s experience and knowledge. I have concluded that the proposed action fits under CE categories:

- FSH 1909.15 31.12 (4) Repair and maintenance of roads, trails, and landline boundaries. [36 CFR 220.6(d)(4)]
- FSH 1909.15 31.12 (5) Repair and maintenance of recreation sites and facilities. [36 CFR 220.6(d)(5)]
- FSH 1909.15 31.2 (1) Construction and reconstruction of trails. [36 CFR 220.6(e)(1)]

This project is consistent with these categories as trail repairs and reconstruction will reduce soil erosion. The repair and replacement of recreation facilities will improve site management and visitor safety, reduce soil erosion, improve management of animal waste and provide improved visitor experience.

**EXTRAORDINARY CIRCUMSTANCES:**

The mere presence of one or more of these resource conditions does not preclude use of a categorical exclusion (CE). It is the existence of a cause-effect relationship between a proposed action and the potential effect on these resource conditions and if such a relationship exists, the degree of the potential effect of a proposed action on these resource conditions that determine whether extraordinary circumstances exist. (36 CFR 220.6(b))

1. Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species –
  - a. Aquatic or terrestrial wildlife - No threatened, endangered, sensitive, special interest, management indicator species, or their habitats will be

affected by the proposed project. No Protected Activity Centers (PACs) will be impacted by the proposed action. (USFS BA/BE, 2011).

- b. Botanical species - **will not affect** *Arabis rigidissima* var. *demota*, *Arabis tiehmii*, *Dendrocollybia racemosa*, *Draba asterophora* var. *asterophora*, *Draba asterophora* var. *macrocarpa*, *Eriogonum umbellatum* var. *torreyanum*, *Erigeron miser*, *Helodium blandowii*, *Hulsea brevifolia*, *Lewisia kelloggii* ssp. *hutchisonii*, *Lewisia kelloggii* ssp. *kelloggii*, *Lewisia longipetala*, *Meesia triquetra*, *Meesia uliginosa*, *Peltigera hydrothyria*, and *Rorippa subumbellata* because there is no suitable habitat for these species within the project area.
  - c. Botanical species - **may affect** individuals, but is not likely to result in a trend toward Federal listing or loss of viability for *Botrychium ascendens*, *Botrychium crenulatum*, *Botrychium lineare*, *Botrychium lunaria*, *Botrychium minganense*, *Botrychium montanum*, *Bruchia bolanderi*, and *Epilobium howellii*. Due to the presence of suitable habitat for the above mentioned species, it is possible that isolated populations may occur within the project area and undiscovered individuals may be inadvertently affected. For this reason (potential impact to undiscovered individuals) a determination of “may impact individuals but not likely to cause a trend toward federal listing or loss of viability” has been made for these species.
2. Flood plains, wetlands, or municipal watersheds – The proposed project present little to no risk of adverse ecological impacts to floodplains, wetlands, or other water bodies within the site. Project has been designed to comply with state and federal surface and groundwater standards.
  3. Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas – The project area is not located in a congressionally designated area.
  4. Inventoried roadless areas or potential wilderness areas – The project is not located within inventoried roadless or potential wilderness areas.
  5. Research Natural Areas – The project is not located within or near a Research Natural Area.
  6. American Indians and Alaska Native religious or cultural sites – No American Indian religious or cultural sites were identified within the project area. There will be no effect to American Indian religious or cultural sites. (May 4, 2011 Letter from Nevada State Historic Preservation Officer).
  7. Archaeological sites, or historic properties or areas – No properties eligible to or listed were identified within the project area. There will be no effect to historic properties or archaeological sites (May 4, 2011 Letter from Nevada State Historic Preservation Officer).

## **FINDINGS REQUIRED BY OTHER LAWS:**

### National Forest Management Act (NFMA)

This Act requires the development of long-range land and resource management plans (Plans). The Lake Tahoe Basin Management Unit Land and Resource Management Plan was approved in 1988 as required by this Act. It has been amended several times, including the Sierra Nevada Forest Plan Amendment, (2004). The amended plan provides for guidance for all natural resource management activities. The Act requires all projects and activities are consistent with the Plan. Therefore, a forest plan consistency analysis of standards and guidelines and management areas was completed for the project. The project is consistent with management direction in the Forest Plan.

### Sensitive Species (Forest Service Manual 2670)

The Manual direction requires analysis of potential impacts to sensitive species, those species for which the Regional Forester has identified population viability is a concern; the project biological review contains the sensitive species list. Potential effects have been analyzed and documented in BE's.

### Clean Water Act

This Act is to restore and maintain the integrity of waters. The Forest Service complies with this Act through the use of Design Features and BMPs. Hydrologic field assessments were completed to determine site specific BMPs and project design features. This decision incorporates BMPs to ensure protection of soil and water resources.

### National Historic Preservation Act

Surveys were conducted during the spring of 2009 for Native American religious or cultural sites, archaeological sites, and historic properties or areas that may be affected by this decision. In a letter dated May 4, 2011 from the Nevada State Historic Preservation Officer, the Forest Service determined there would be no effect to historic properties from this project.

## **PUBLIC INVOLVEMENT:**

Project listed in Quarterly Schedule of Proposed Actions (SOPA). – October 1, 2009.

Proposed Action and Purpose & Need sent to all interested and affected individuals, agencies, and organizations.

A total of three comments were received in response to public scoping. The comments received as well as the LTBMU staff response is contained in a Public Scoping report in the project record.

**REGULATORY AGENCY INVOLVEMENT/PERMITS:**

A TRPA permit will not be required, as this project falls within the qualified exemption status specified in the TRPA/USFS Memorandum of Understanding.

**IMPLEMENTATION DATE:**

This project may be implemented immediately.

**ADMINISTRATIVE REVIEW OR APPEAL OPPORTUNITIES:**

This decision is not subject to appeal pursuant to 36 CFR 215.12(f) as it is a decision which has been categorically excluded from documentation in an EA or EIS.

**CONTACT PERSON:**

For additional information on this project contact:

Jonathan C. Fisher, Project Leader  
Lake Tahoe Basin Management Unit  
35 College Dr.  
South Lake Tahoe, CA 96150

Phone: (530) 530-2741  
Email: [jfisher@fs.fed.us](mailto:jfisher@fs.fed.us).

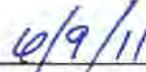
**SIGNATURE AND DATE:**

I have decided to implement the proposed action. I have concluded that this decision may be categorically excluded from documentation in an environmental impact statement or environmental assessment as it is within one of the categories identified by the U.S. Department of Agriculture in 7 CFR part 1b.3 or one of the categories listed in sections 220.6 (d) and (e) of 36 CFR 220.6. My decision concludes that no extraordinary circumstances exist related to the proposed action that may result in a significant individual or cumulative effect on the human environment, and that the decision is not subject to appeal.

My conclusion is based on information presented in this document, my familiarity with the project areas and the entirety of the project file. I also based by conclusion on a review of the project record that shows a thorough review of relevant scientific information.



NANCY GIBSON  
Forest Supervisor  
Lake Tahoe Basin Management Unit



Date

Appendix A

## REFERENCES

NRCS. 2009. Agricultural Waste Management Field Handbook. Natural Resources Conservation Service. Washington D.C.

USFS. 1994. South Zephyr Creek Water Quality Monitoring Report, Lake Tahoe Basin Management Unit

EPA. 2009. Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act, EPA 841-B-09-001, December 2009

U.S.D.A. Forest Service (USFS) 2011. Biological Evaluation for Sensitive Plant Species of the Zephyr Cove Stables Upgrade Project. Completed by Blake Engelhardt.

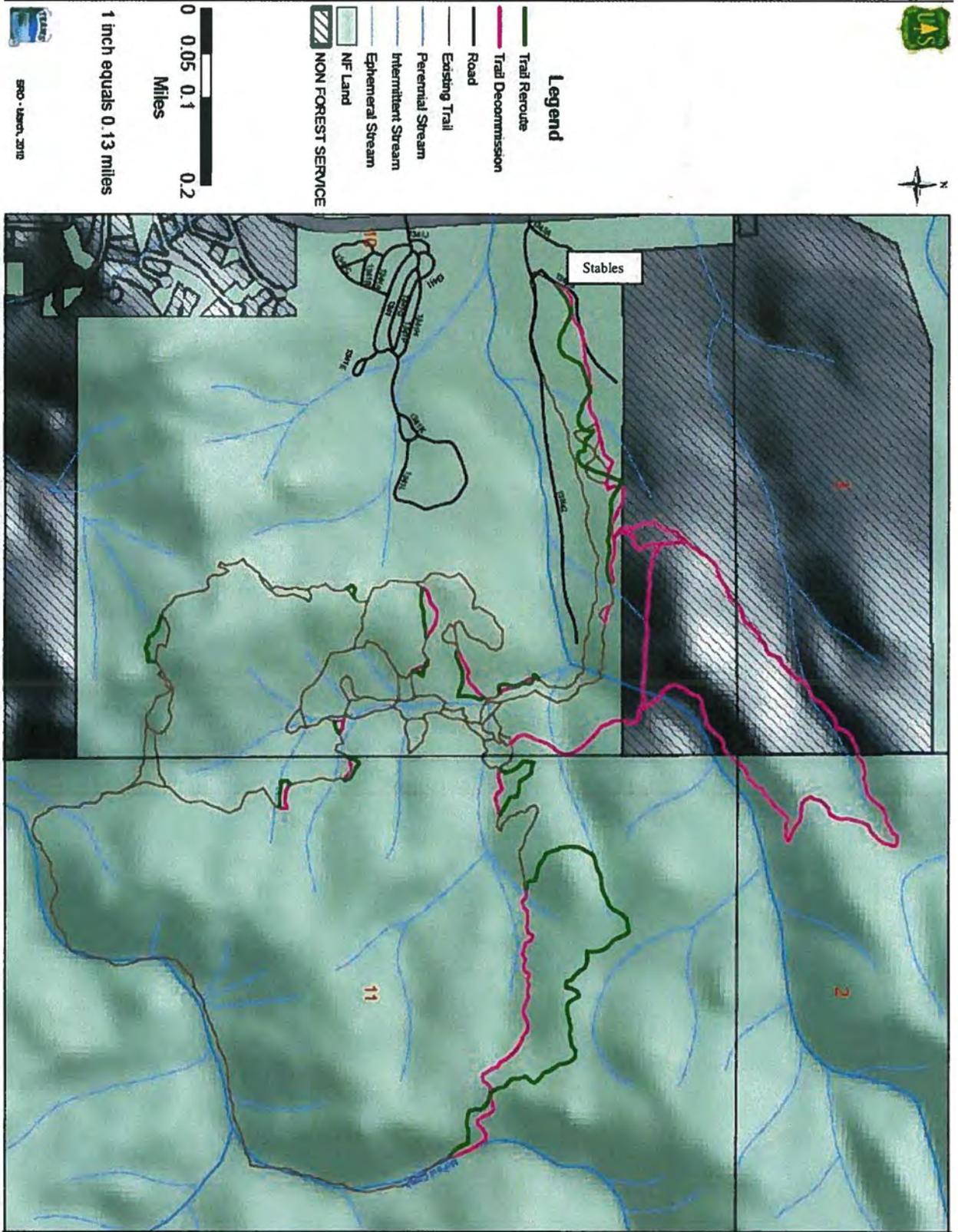
U.S.D.A. Forest Service (USFS) 2011. Biological Assessment and Evaluation for Terrestrial Species Review of the Zephyr Cove Corral Upgrade Project. Completed by Rena Escobedo.

**APPENDIX A**  
**Zephyr Cove Stables Project Maps**

**Map 1 - Proposed changes to existing trails– Zephyr Cove Stables**

**Map 2 - Proposed completed trail network– Zephyr Cove Stables**

**Map 3 – Noxious Weed Locations– Zephyr Cove Stables**



Map 1: Proposed changes to Existing Trails - Zephyr Cove Stables

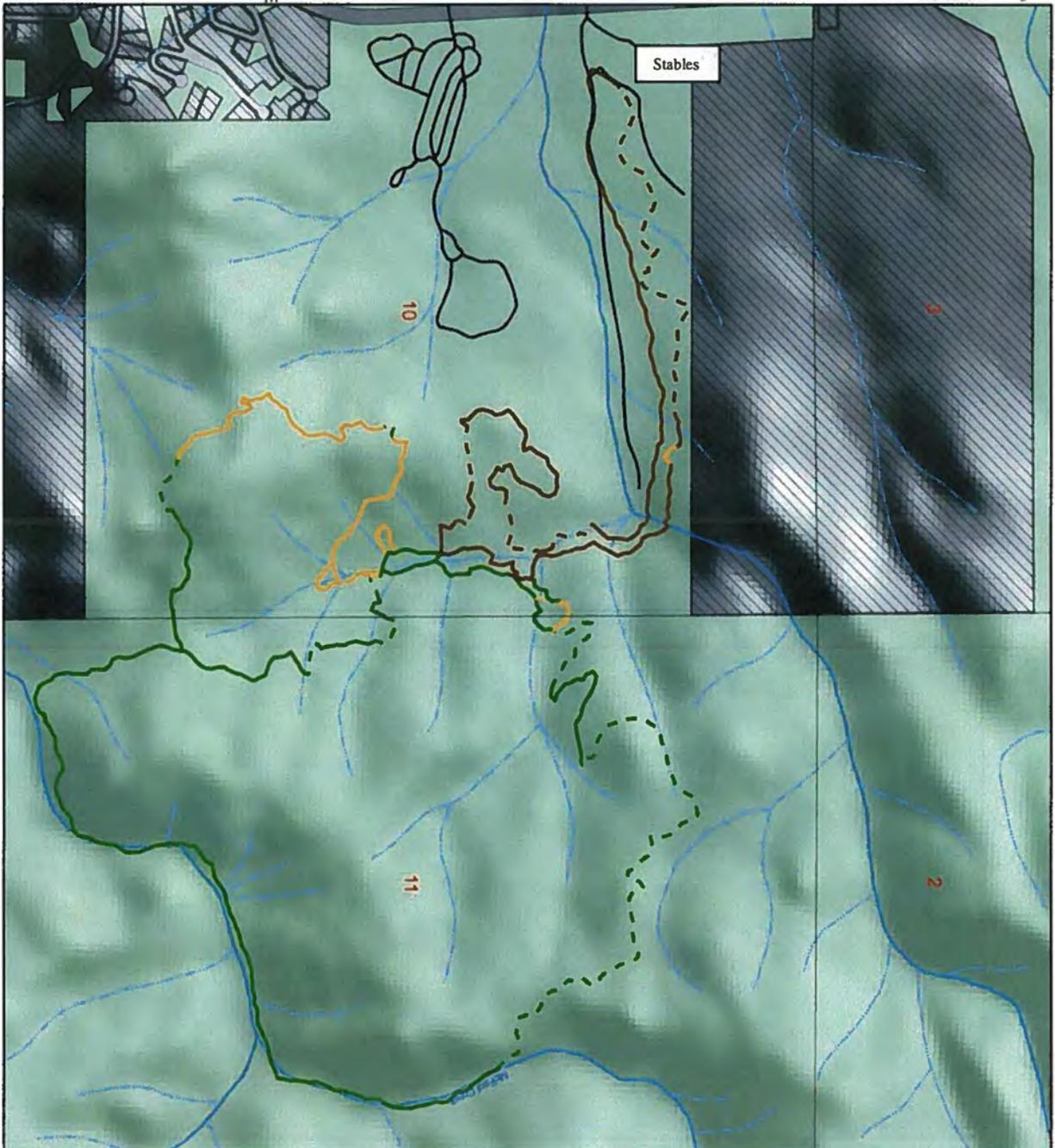


BRD - March, 2010

1 inch equals 0.13 miles

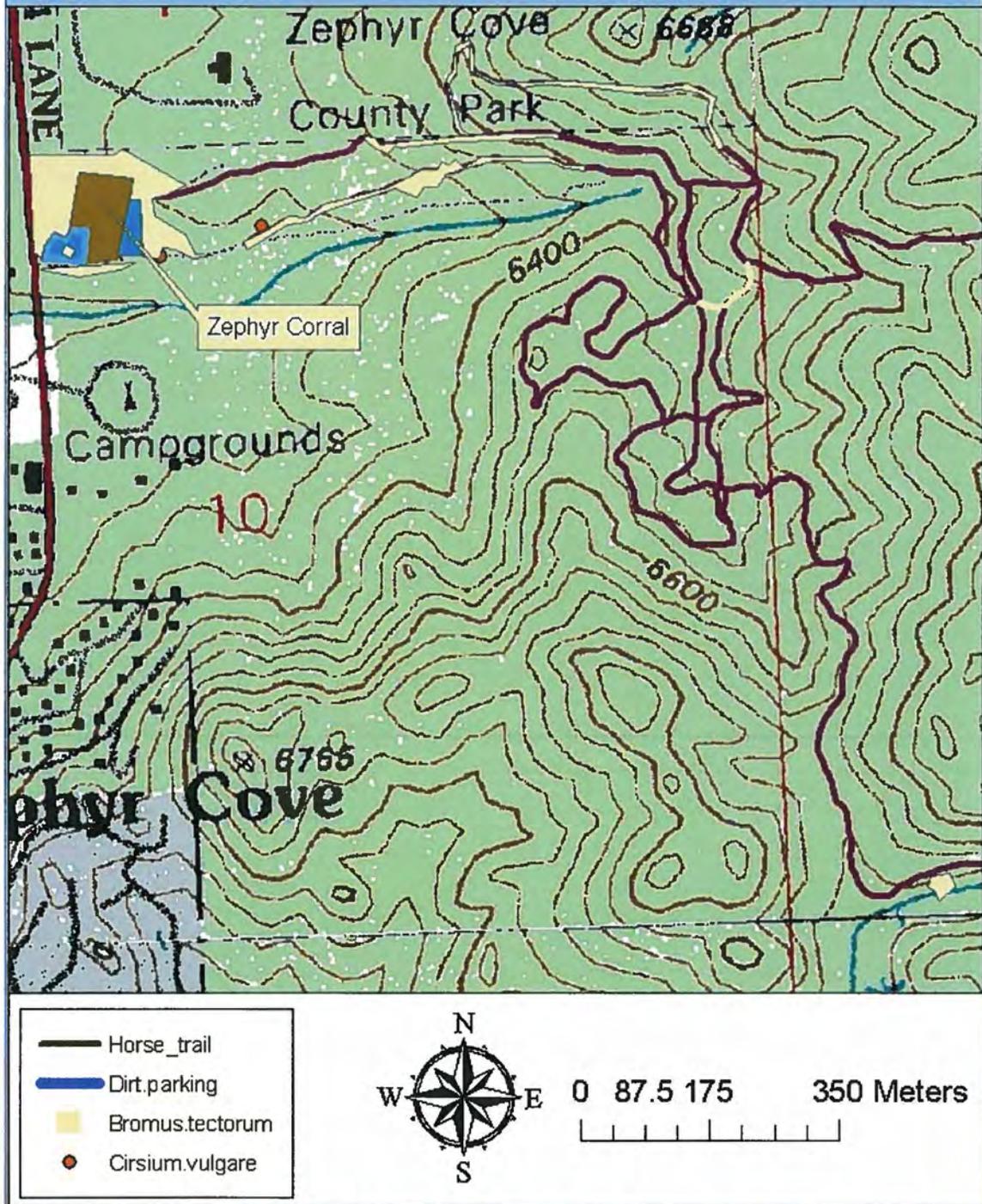


- Legend**
- Existing Trail
  - High Use
  - Medium Use
  - Low Use
  - Trail Reroute
  - High Use
  - Medium Use
  - Road
  - Perennial Stream
  - Intermittent Stream
  - Ephemeral Stream
  - NF Land
  - NON FOREST SERVICE



Map 2: Proposed trail network - Zephyr Cove Stables

**Zephyr Cove Horse Corral  
Zephyr Cove, NV., Douglas County.**



Map 3: Noxious Weed Locations - Zephyr Cove Stables