

APPENDIX C
CNDDDB RECORD SEARCH

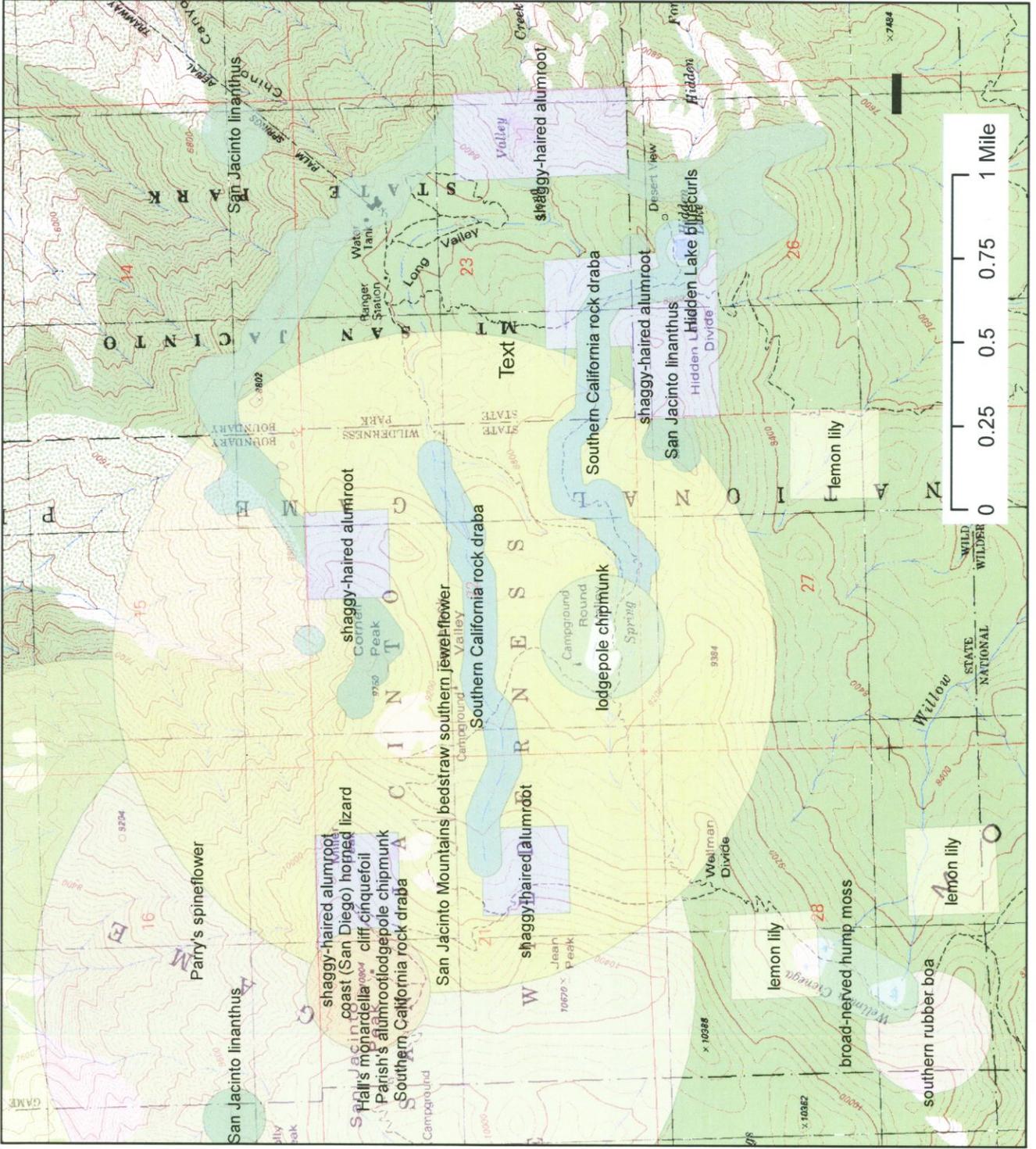
- 1) CNDDDB MAP OF PROJECT AREA AND VICINITY
- 2) CNDDDB REPORT

San Jacinto Peak Quadrangle - Round Valley CNDDDB Output

May 2009

Legend

- Hall's monardella
- Hidden Lake bluecurls
- Johnston's rock-cress
- Parish's alumroot
- Parry's spineflower
- San Jacinto Mountains bedstraw
- San Jacinto linanthus
- Southern California rock draba
- broad-nerved hump moss
- cliff cinquefoil
- coast (San Diego) horned lizard
- lemon lily
- lodgepole chipmunk
- shaggy-haired alumroot
- southern jewel-flower
- southern rubber boa



California Department of Fish and Game
 Natural Diversity Database
 CNDDB Wide Tabular Report

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks										Population Status			Presence	
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extrp.					
<i>Arctozous pallidus</i> pallid bat	G5 S3	CDFG: SC	Fed: None Cal: None	398 S:1	0	0	0	0	0	0	1	0	1	1	0	0			
<i>Arabis johnstonii</i> Johnston's rock-ress	G1 S1.2	CNPS: 1B.2	Fed: None Cal: None	6 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Calochortus palmeri</i> var. <i>munzii</i> San Jacinto maniposa-lily	G2T1 S1.2	CNPS: 1B.2	Fed: None Cal: None	4 S:1	0	0	0	0	1	0	1	0	0	0	1				
<i>Carex occidentalis</i> western sedge	G4 S2S3	CNPS: 2.3	Fed: None Cal: None	8 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Casibifaja lasiorhyncha</i> San Bernardino Mountains owl's-dover	G2 S2.2	CNPS: 1B.2	Fed: None Cal: None	40 S:2	0	0	0	0	0	2	2	0	2	0	0				
<i>Chaenactis parishii</i> Parish's chaenactis	G3 S2.3	CNPS: 1B.3	Fed: None Cal: None	19 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Chaetodipus fallax pallidus</i> pallid San Diego pocket mouse	G5T3 S3	CDFG: SC	Fed: None Cal: None	71 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Charina umbratica</i> southern rubber boa	G5T2T3 S2S3	CDFG:	Fed: None Cal: Threatened	43 S:8	0	1	0	0	0	7	7	1	8	0	0				
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	G3T2 S2	CNPS: 1B.1	Fed: None Cal: None	94 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Chorizanthe xanthi</i> var. <i>leucotheca</i> white-bracted spineflower	G4T2 S2.2	CNPS: 1B.2	Fed: None Cal: None	15 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Crotalus ruber ruber</i> northern red-diamond rattlesnake	G4T3T4 S2?	CDFG: SC	Fed: None Cal: None	105 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Cypseloides niger</i> black swift	G4 S2	CDFG: SC	Fed: None Cal: None	46 S:2	0	0	0	0	0	2	1	1	2	0	0				
<i>Deinandra mohavensis</i> Mojave tarplant	G2 S2.3	CNPS: 1B.3	Fed: None Cal: Endangered	34 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Dendroica petechia brewsteri</i> yellow warbler	G5T3? S2	CDFG: SC	Fed: None Cal: None	48 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Desert Fan Palm Oasis Woodland</i>	G3 S3.2	CDFG:	Fed: None Cal: None	80 S:1	0	0	0	0	0	1	1	0	1	0	0				
<i>Dinacoma caseyi</i> Casey's June beetle	G1 S1	CDFG:	Fed: Candidate Cal: None	5 S:1	0	0	0	0	1	0	1	0	0	0	1				

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<i>Draba corrugata</i> var. <i>saxosa</i> Southern California rock draba	G2T2 S2.3	CNPS: 1B.3	Fed: None Cal: None	5 S:4	0	1	0	0	0	0	3	3	1	4	0	0				
<i>Ensalina klauberi</i> large-blotched salamander	G5 S2S3	CDFG: SC	Fed: None Cal: None	6 S:1	0	1	0	0	0	0	0	0	1	1	0	0				
<i>Falco mexicanus</i> prairie falcon	G5 S3	CDFG:	Fed: None Cal: None	456 S:1	0	0	0	0	0	1	1	0	1	1	0	0				
<i>Galium angustifolium</i> ssp. <i>jacinticum</i> San Jacinto Mountains bedstraw	G5T1 S1.3	CNPS: 1B.3	Fed: None Cal: None	7 S:3	0	2	0	0	0	1	1	2	3	3	0	0				
<i>Glaucomys sabrinus californicus</i> San Bernardino flying squirrel	G5T2T3 S2S3	CDFG: SC	Fed: None Cal: None	8 S:1	0	0	0	0	0	1	1	0	1	1	0	0				
<i>Halictus harmonius</i> harmonius halictid bee	G1 S1	CDFG:	Fed: None Cal: None	3 S:1	0	0	0	0	0	1	1	0	1	1	0	0				
<i>Heuchera hirsutissima</i> shaggy-haired alumroot	G2 S2.3	CNPS: 1B.3	Fed: None Cal: None	12 S:9	0	0	0	0	0	9	4	5	9	9	0	0				
<i>Heuchera parishii</i> Parish's alumroot	G2 S2.3	CNPS: 1B.3	Fed: None Cal: None	12 S:1	0	0	0	0	0	1	1	0	1	1	0	0				
<i>Ivesia califida</i> Tahquitz ivesia	G1 S1.3	CNPS: 1B.3	Fed: None Cal: Rare	2	2	0	0	0	0	0	1	1	2	2	0	0				
<i>Lilium parryi</i> lemon lily	G3 S2.1	CNPS: 1B.2	Fed: None Cal: None	72 S:16	1	1	0	0	0	14	4	12	16	16	0	0				
<i>Linanthus jaegeri</i> San Jacinto linanthus	G2 S2.2	CNPS: 1B.2	Fed: None Cal: None	6 S:5	0	0	0	0	0	5	3	2	5	5	0	0				
<i>Malaxis monophyllos</i> ssp. <i>brachypoda</i> white bog adders-mouth	G4T4 S1.1	CNPS: 2.1	Fed: None Cal: None	3 S:1	0	0	0	0	1	0	1	0	0	0	1	0				
<i>Meesia utiginosa</i> broad-nerved hump moss	G4 S2.2	CNPS: 2.2	Fed: None Cal: None	31 S:1	0	0	0	0	0	1	1	0	1	1	0	0				
<i>Monardella macrantha</i> ssp. <i>hallii</i> Hall's monardella	G5T3 S3.3	CNPS: 1B.3	Fed: None Cal: None	28 S:1	0	0	0	0	0	1	1	0	1	1	0	0				
<i>Monardella nana</i> ssp. <i>leptosiphon</i> San Felipe monardella	G4G5T2 S2.2	CNPS: 1B.2	Fed: None Cal: None	20 S:1	0	0	0	0	0	1	1	0	1	1	0	0				
<i>Neotamias speciosus speciosus</i> lodgpole chipmunk	G4T2T3 S2S3	CDFG:	Fed: None Cal: None	24 S:3	0	0	0	0	0	3	3	0	3	3	0	0				

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<i>Ovis canadensis nelsoni</i> DPS peninsular bighorn sheep	G4T3Q S1	CDFG:	Fed: Endangered Cal: Threatened	7 S:1	0	0	0	0	0	0	0	1	0	1	0	1	0	0		
<i>Phrynosoma coronatum</i> (blainvillii population) coast (San Diego) horned lizard	G4G5 S3S4	CDFG: SC	Fed: None Cal: None	435 S:2	0	0	0	0	0	0	2	0	2	0	2	0	0	0		
<i>Potentilla rimicola</i> cliff cinquefoil	G2G4 S1.3	CNPS: 2.3	Fed: None Cal: None	6	0	1	0	0	0	0	5	1	5	1	6	0	0	0		
<i>Rana muscosa</i> Sierra Madre yellow-legged frog	G1 S1	CDFG: SC	Fed: Endangered Cal: None	129 S:8	2	2	0	0	1	3	4	4	7	1	0	0	0	0		
<i>Selaginella eremophila</i> desert spike-moss	G4 S2.2?	CNPS: 2.2	Fed: None Cal: None	20 S:1	0	0	0	0	0	1	1	0	1	0	1	0	0	0		
<i>Sidotheca emarginata</i> white-margined oxeye	G2 S2.3	CNPS: 1B.3	Fed: None Cal: None	7 S:1	0	0	0	0	0	1	1	0	1	0	1	0	0	0		
<i>Spermophilus tereticaudus chlorus</i> Palm Springs round-tailed ground squirrel	G5T1T2 S1S2	CDFG: SC	Fed: Candidate Cal: None	11 S:1	0	0	0	0	0	1	1	0	1	0	1	0	0	0		
<i>Streptanthus bernalinus</i> Laguna Mountains jewel-flower	G3 S3.3	CNPS: 4.3	Fed: None Cal: None	22 S:2	0	0	0	0	0	2	2	0	2	0	2	0	0	0		
<i>Streptanthus campestris</i> southern jewel-flower	G2 S2.3	CNPS: 1B.3	Fed: None Cal: None	20 S:1	0	0	0	0	0	1	1	0	1	0	1	0	0	0		
<i>Symphoricarpos defoliatus</i> San Bernardino aster	G3 S3.2	CNPS: 1B.2	Fed: None Cal: None	46 S:1	0	0	0	0	0	1	0	1	0	1	1	0	0	0		
<i>Trichostema austrimontanum</i> ssp. compactum Hidden Lake bluecups	G3G4T1 S1.1	CNPS: 1B.1	Fed: Threatened Cal: None	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0		
<i>Uma inornata</i> Coachella Valley fringe-toed lizard	G1Q S1	CDFG:	Fed: Threatened Cal: Endangered	161 S:1	0	0	0	0	1	0	1	0	1	0	0	0	0	1		

APPENDIX D

MINIMUM TOOL AUTHORIZATION ANALYSIS AND REQUEST

D

Round Valley Headcut Repair and Elevation Restoration
Mount San Jacinto State Park
California Department of Parks & Recreation

MEMORANDUM

STATE OF CALIFORNIA
DEPARTMENT OF PARKS AND RECREATION
CENTRAL VALLEY DISTRICT

DATE: June 18, 2009

TO: Ron Krueper, District Superintendent
Inland Empire District

FROM: Doug Rischbieter
Calaveras Big Trees State Park

SUBJECT: Staff Recommendation: Minimum Tool Analysis for Round Valley Meadow Restoration

INTRODUCTION: The Department is proposing a restoration project in Inland Empire District, within the Mount San Jacinto State Wilderness of Mount San Jacinto State Park. I have completed an analysis for the project described below, and recommend it be undertaken in September, 2009, consistent with Public Resources Code §4351.1(c). The approval of the Director is required pursuant to PRC §4351.1(b).

SUMMARY: Round Valley comprises about 7 acres of extraordinarily sensitive habitat within 13,770-acre Mount San Jacinto State Park. It is also within the 9,900-acre Mount San Jacinto State Wilderness. A project is required to stop the continuing, unnatural erosion of the stream through the meadow, which threatens to down-cut further through and cause drying of virtually the entire Round Valley Meadow. A restoration of the degraded lower portion of Round Valley Meadow will be accomplished by borrowing nearby (on-site) native soil material to fill a gully created by past disturbance of the seasonal unnamed stream draining the meadow. The stream will be restored to a stable, natural course at its natural meadow surface elevation. Restoration of natural hydrologic function at this site will help preserve this fragile resource for future generations; rehabilitation of borrow areas and revegetation of the restored area is expected to restore natural appearance of this and the post-project appearance of the site will be indistinguishable from undisturbed areas.

MANAGEMENT NEED: The Round Valley Meadow is an exceedingly uncommon and fragile wetland habitat, made all the more rare by its isolation high above the Southern California desert. This meadow, and the meadow's seasonal stream, exhibit evidence of human-caused disturbances that have resulted in an unnatural and unstable erosional feature: a series of headcuts and "nick-points" that are prone to continue receding up-meadow and downcutting through the fragile meadow soils. Hamilton (1983) describes the outcome of this process occurring in nearby Tahquitz meadow: an inevitable drying trend resulting from gully erosion. Such drying trends inevitably and often irreparably alter vegetation patterns, with local extinction of fragile wetland plants as hydrologic conditions become unsuitable and they are displaced by upland species.

Left unchecked, progressive erosion and headcutting of the now-confined, channelized, and lowered stream will cause a resultant lowering of the watertable. Once the meadow is unnaturally dried in this fashion, it will allow invasion by upland plants and its wetland character and habitat will be greatly and permanently diminished. This project will restore the natural wetland and streamside elevations, eliminate the headcut and concentrated streamflow, and discourage future volunteer trails through signage and split-rail or pole-fencing at the most critical points.

Currently, an unnatural concentration of surface flow continues to accelerate erosion of the meadow's fragile soil, and has opened a deep rent in the wetland, soil, and subsoil and the meadow's eastern (downstream) end. This scouring erosion, which has created a series of headcuts in a gully up to 10 feet deep, is poised to continue westward and upslope. In the upstream and intermediate reaches of the gully, "cantilevered blocks" can be seen in various states of detachment (Micheli and Kirchner 2002). Though the process of failure of a single block can take years in a wet

meadow, and the gully has advanced headward only a few feet in recent decades, there is no sign that this process is stabilizing or reversing in Round Valley. The largest nick-point is presently temporarily arrested in the roots of encroaching conifers, but once these roots are undermined the erosion will accelerate and the damage will be irreparable. In 2002, the restoration of Mount San Jacinto State Park hydrologic resources, including the Round Valley Meadow, was identified and adopted as a goal of the Mount San Jacinto State Park General Plan (DPR 2002).

Cooper and Wolf (2009) also documented dramatic and inexorable ongoing changes to the wetland vegetation of Round Valley Meadow over recent decades, and made recommendations that could arrest and reverse these trends that are continuing to degrade this fragile and rare meadow resource.

MINIMUM REQUIRED MANAGEMENT ACTIONS: The modern accepted treatment for eroding gullies is to either attempt stabilization by construction of structures to deter future erosion, or to fill the gully in a manner that restores native grade and enables the continuation of natural hydrologic and vegetative processes. The former is a method of temporary nature, though it has long-term maintenance requirements and other impacts; the latter is envisioned as a permanent solution to the problem, with impacts limited to the construction period and perhaps the revegetation process in the following growing season.

In this Wilderness context, filling the gully, and restoring natural grade and hydrologic processes, is the necessary and recommended Minimum Management Requirement. The impacts of such a project are short-term and mostly limited to the construction period. The post-project restored site will persist with little if any need for maintenance work -- the results of the work will be preserved but natural hydrologic and vegetative processes and function. The restored site will be of a natural appearance, reminiscent of the pre-disturbance condition, and is in this fashion more appropriate in a Wilderness setting than would be an alternative project of construction and periodic maintenance of structures. The latter approach also is insufficient because it would only help prevent the existing problems becoming worse, it would not correct the problem or past damage.

MINIMUM TOOL ASSESSMENT: While the downcutting and eroded area has not yet advanced to a point where repair is impossible, it nevertheless requires work of a scale not feasibly accomplished with hand labor alone. These techniques proposed to be used for stream and meadow grade restoration, though relatively innovative and uncommon, have been successfully implemented on a similar scale in a meadow in Calaveras Big Trees State Park (Rischbieter 1999) and in several other Northern California watershed restoration projects.

Specifically, this project requires placement of about 800 cubic yards of fill material into the eroded gully at the foot of Round Valley. Almost all of this material should consist of compactable native soil, to attain complete natural appearance and vegetative regrowth, but placement of this soil at the points needed is hampered by the following constraints:

- Unlike previous State Park projects of this type, it is not possible to import hundreds of tons of fill dirt to this remote Wilderness location or access the site by wheeled vehicle;
- The nearest source of suitable fill material in adequate volume is about 400 feet away from the gully, and requires excavation and hauling and compaction for stable, permanent placement;
- Proper construction techniques and Best Management Practices dictate that the work should be accomplished when the gully is dry or nearly-dry, a situation that does not occur until late-summer at Round Valley;
- All work, including fill placement, regrading, surface stabilization, and initial revegetation must be accomplished before seasonally inclement and winter weather conditions become likely at the site, normally mid-fall;
- The project cannot span two work seasons, because a disturbed, half-repaired gully site would be at high risk for additional failure and unacceptable water quality and other resource impacts during high flows likely during periods of accelerated snowmelt;

- Because of the remoteness of the site, and the large number of workdays required but confined within the few-week period described above, workers on this project must be available to camp at the worksite to avoid unnecessary daily recurrence of the several hours necessary to travel to/from the worksite;
- The capacity of the Wilderness campsites near the project site cannot reasonably accommodate more than about two dozen crew and staff at one time, without noticeable impacts to resources and public use of the area;
- Because the duration of the project of this scale is necessarily several weeks, it is preferable to conduct the work during a season when it has the least impact to Park visitors and their expectation of a Wilderness experience, and to minimize the duration for the same reason.

Excavating, moving, and carefully placing 800 cubic yards of soil between points 400 feet apart using hand tools, such as shovels and wheelbarrows, is not feasible with a reasonable-size crew – even two crews totaling 24 workers. With wheelbarrows each loaded with 0.1 cubic yard, 20 workdays (more than 3 weeks) would require 400 wheelbarrow loads/trips each day just to be loaded and moved – over 60 per hour – even without consideration of the need for crewmembers to place and compact the fill, or the work involved to reclaim and revegetate the disturbed areas. Between the post-holiday (Labor Day) commencement of this project, there are not a sufficient number of weeks before the likelihood of winter weather arrives to complete this work by hand. Instead, successful completion of this project will require the use of mechanized equipment (two small backhoe-loaders) to excavate and move the fill material, and to help the crews compact and stabilize it. Since there is no road access for wheeled vehicles to the site, and the mechanized equipment is too large to disassemble and carry on foot, an airlift (via helicopter) is the only means by which to deliver and remove equipment at this remote Wilderness site.

MEASURES TAKEN TO MINIMIZE IMPACTS: The construction window for this project would be an approximately 30-day period beginning on or about September 10, 2009. All rehabilitation work of disturbed areas is also expected to be completed by the end of the 30-day period. Work is scheduled for this season because day and overnight Wilderness use diminishes dramatically in late summer and early fall, and nominally moreso in advance of and following Labor Day Weekend. Also, while annual attendance at Mount San Jacinto State Park averages about 375,000 visitors per year, only about 20,000 (5%) actually venture into the State Wilderness. The proposed work schedule also coincides with a scheduled closure of the Palm Springs Aerial Tramway: this primary access route to the Wilderness is scheduled to be shut-down, for seasonal maintenance, from September 12 through 25, 2009. This is another circumstance that allows this project to proceed with a minimum impact to Park visitors.

All work would be limited to the hours between 7:30 a.m. and 5:30 p.m., up to 7 days a week. Areas around the construction site would be barricaded off, as necessary, to deter unsafe public access, but no closures to public use of the Park, meadow, or most surrounding campsites would be necessary. Inconvenience to the public would be negligible, but the noise of motorized equipment operating will contrast will normal public expectation of peaceful Wilderness experience during these daytime hours.

Other project circumstances contribute to minimizing and avoiding impacts. Project timing also minimizes project impacts because instream work will be done when the seasonal stream at the project site is dry or nearly dry. At project completion, disturbed areas, including borrow areas, will be regraded to mimic the natural topography and rehabilitated through scatter of leaf-litter and revegetation. Revegetation will be primarily accomplished through planting of up to 4,500 plugs of native meadow species, including *Carex* spp., that have been salvaged from the bottom of the existing gully before filling occurs. The replanting objective will be 4 sod plugs per square yard (Cooper and Wolf 2009); bare areas between replanted plugs will be protected from erosion by scattering of native thatch harvested from dispersed areas of the meadow (this native thatch will also include a seed-load that will contribute to revegetation the following spring). If a sufficient number of sod plugs cannot be salvaged on-site, seed-heads from meadow plants will be harvested by hand, and seeds germinated and raised in a local nursery to allow additional replanting to occur the following spring.

The route followed by the backhoe-loaders, between the borrow areas and the fill site, may require scarification (with hand tools) and mulching with leaf-litter, if significant topsoil compaction occurs. Limbs and "slash" that may be byproducts of trees and logs used for the project also will be used as scatter for erosion control in a manner of

natural appearance; excess limbs and slash (if any) may be chipped with a small garden-sized power chipper, or burned near the worksite in small piles under the terms and conditions of a local burning permit.

FOLLOW-UP ACTIONS: Post-project monitoring will follow the steps outlined in a Mitigation and Monitoring Plan adopted by the Department as part of its California Environmental Quality Act filing and compliance. The Mitigation and Monitoring Plan will also be incorporated into the Clean Water Act 401 Water Quality Certification to be issued to the Department by the Regional Water Quality Control Board. It will include monitoring of revegetation success and site stability, and additional planting efforts if necessary, for a period enduring at least 5 years following project completion.

CONCLUSION: It is an objective of this project that the Wilderness setting will bear no lasting evidence of the disturbances undertaken for project implementation. The site will be subject to, and perpetually maintained by, natural hydrologic and vegetative processes and functions. The entirety of the circumstances of this project meet criteria outlined in the Department Operations Manual Section 0304.5.4:

1) Reasonable alternatives to the use of mechanized equipment, for the purpose of excavating, moving, and compacting about 800 yards of soil over a distance of several hundred feet, within a reasonable timeframe, do not exist;

2) A significant resource management need exists, being the inevitable major future erosional damage predicted to occur in Round Valley, and the result of the work will be substantially unnoticed (owing to topographic restoration of natural-appearing grade, and revegetation);

3) The use of this mechanized equipment will be non-recurring, and is limited in time and area to the minimum necessary; and

4) The District Superintendent will provide prior written approval, assuring that the above requirements are met.

The foregoing analysis has been prepared to support a recommendation to the Director that we proceed to implement the Round Valley Headcut Repair and Elevation Restoration Project at Mount San Jacinto State Park. This project requires an exception to the prohibition of motorized equipment in State Wilderness, to be authorized pursuant to Public Resources Code 4351.1(b). These recommendations are made consistent with PRC 4351.1(c), and are consistent with the provisions of DPR's Department Operations Manual (DOM), Section 0304.5.4. Based on the circumstances and analysis discussed above, I request that you recommend to the Director that approval be issued pursuant to PRC §4351.1(b), to conduct and implement the Round Valley Headcut Repair and Elevation Restoration Project following completion of public review pursuant to CEQA and after securing other necessary environmental permits.

If you have any questions or require additional information, please call me at (209) 795-3488.

cc: Garratt Aitchison, San Jacinto Sector
Wayne Harrison, Central Valley District
Rick Rayburn, Resource Management Division
Keith Demetrak, Resource Management Division