

HEAVENLY MOUNTAIN RESORT EPIC DISCOVERY PROJECT EIR/EIS/EIS
RESPONSES TO COMMENTS

7.0 COMMENT LETTERS AND RESPONSES

7.1 ORGANIZATION

This chapter includes responses to letters, emails, and oral comments received on the Draft EIR/EIS/EIS (DEIR/EIS/EIS). A reproduction of each letter or email received during the public review period that addresses the DEIR/EIS/EIS precedes each response to comment. Responses are also provided for comments received at the TRPA APC Hearing on September 10, 2014, the USFS LTBMU Workshop on September 18, 2014 and the TRPA Governing Board Hearing on September 24, 2014. Each comment letter, email, or meeting minutes has been numbered and grouped into one of four categories:

Federal, State, Regional, and Local Agency Comments

1. Sharit, Ben, Tahoe Douglas Fire Protection District, 10/7/14
2. Drozdoff, Leo, Nevada Department of Conservation and Natural Resources, 10/17/14
3. Nevada Department of Conservation and Natural Resources, Division of State Parks, 10/17/14
4. Harrison, Elizabeth, Nevada Department of Conservation and Natural Resources, Division of State Lands, 10/20/14
5. Bartlett, Tina, California Department of Fish and Wildlife, 10/20/14
6. Port, Patricia, United States Department of the Interior, Pacific Southwest Region, 10/21/14
7. Thomaselli, Lauren, City of South Lake Tahoe, 10/23/14
8. Wright, Patrick, California Tahoe Conservancy, 10/27/14
9. Goforth, Kathleen, United States Environmental Protection Agency, Region IX, 10/28/14

Stakeholder Comments

10. Bennington, Mary, Tahoe Rim Trail Association, 10/20/14
11. Fish, Ben, Tahoe Area Mountain Biking Association, 10/27/14
12. Ames, Laurel, Tahoe Area Sierra Club, 11/2/14

Public Comments

13. Thomas, Ralph, 8/28/14
14. von Hurwitz, Lon, 9/5/14
15. Ribaud, Carl, 9/17/14
16. Humphries, Phil, 9/23/14
17. Waller, Ellie, 9/24/14
18. O Bray, Perry, 9/26/14
19. Tevlin, Sean, 9/26/14
20. Garrison, Dan, Resorts West, 10/7/14
21. Lake Tahoe Visitors Authority, Tahoe South, 10/9/14
22. Koster, John, Harrah's/Harveys Lake Tahoe, 10/10/14
23. Murillo, Kindred, Lake Tahoe Community College District, 10/13/14
24. Ronan, Patrick, Tahoe Lakeshore Lodge and Spa, 10/13/14
25. Tahoe Douglas Visitors Authority, 10/14/14
26. Hollingsworth, Tamara, Tahoe Chamber of Commerce, 10/14/14
27. Steinbach, John, Lake Tahoe Resort Hotel, 10/14/14

28. Anderson, Robert, Fromarc Insurance Agency Inc., 10/15/14
29. Slack, Sam, Resorts West, 10/16/14
30. Ditchkus, Stephen, Montbleu Resort Casino and Spa, 10/17/14
31. Purvance, Clinton, Barton Health, 10/17/14
32. Atherton, Patrick, Tahoe Chamber of Commerce, 10/18/14
33. Noll, Steve, Design Workshop, 10/21/14
34. Cardoza, Dustin, 10/22/14
35. Chirdon, Lindsay, 10/22/14
36. Colburn, Justin, 10/22/14
37. Greenman, Chris, 10/22/14
38. Hood, Chris, 10/22/14
39. Juha, Hani, 10/22/14
40. Lamb, Jonathan, 10/22/14
41. Poth, Todd, Getaway Reno/Tahoe, 10/22/14
42. Press, David, 10/22/14
43. Scharer, Chuck, Edgewood Companies, 10/22/14
44. Calderwood, Marius, 10/23/14
45. Choi, Cindi, 10/23/14
46. Welch, Martha, 10/23/14
47. Carroll, Sean, 10/24/14
48. Fong, Curtis, TGFT Productions/Bike the West, 10/25/14
49. Galles, Ryan, Sierra House Elementary, 10/26/14
50. Hassett, Bob, Camp Richardson, 10/26/14
51. Cefalu, John, 10/27/14
52. Lowe, Brian, 10/27/14
53. Sidney, Ray, 10/27/14
54. Tanaka, Randy, 10/27/14
55. Warlow, Jim, The Cork and More, 10/27/14
56. Woodward, Todd, 10/27/14
57. Wetter, Matt, 10/28/14

Public Meeting Comments

58. Tahoe Regional Planning Agency, Advisory Planning Commission Meeting, 9/10/14
59. United States Forest Service, Lake Tahoe Basin Management Unit Meeting, 9/18/14
60. Tahoe Regional Planning Agency, Governing Board Meeting, 9/24/14

7.2 MASTER RESPONSES

Comments received on trail conflicts and the adequacy of the traffic impact analysis have been addressed in the following master responses.

Master Response 1: External Trail Network Impacts

(Addresses the following comments: NV State Parks: portion of 3-2, 3-3, 3-4, 3-5, 3-6, 3-8, 3-9, 3-11, 3-12, 3-13, 3-14, 3-15, 3-16, 3-17, 3-18, 3-19, 3-20, 3-21, 3-29 through 3-34, 3-36, 3-38 through 44; CTC 8-2, 8-3, 8-4, 8-5, 8-7 through 8-14; TRTA 10-4)

Trail impacts are discussed on pages 3.13-27 through -30 “Adjacent and Connecting National Forest System Lands” of the DEIR/EIS/EIS. The DEIR/EIS/EIS trail analysis focused on the following evaluation criteria: “Would the Project result in decreased availability or degradation of a high quality recreational experience?” To determine significance of the impact, the analysis considered whether the project would result in a decrease in available recreation or the degradation of high quality recreational experience.

By design, the proposed multi-use Panorama Trail would establish a link between the ski area (including the Boulder and Stagecoach base area parking lots), surrounding public lands (e.g., utilizing the existing Tahoe Rim Trail and Van Sickle Connector Trail) and the Van Sickle Bi-State Park and Heavenly Village. The DEIR/EIS/EIS analysis anticipated an increase in usage of these trails as a result of the new link but that any additional use of the Tahoe Rim Trail and/or Van Sickle Connector Trail resulting from the proposed projects would be operated consistent with the intended use and management of these trails. As documented in Chapter 2 (Section 2.3.5), Heavenly Mountain Resort would be responsible for monitoring the trails and providing an additional “fair share” (either monetary or in kind) support to operate and maintain the trail to the Trail Management Objectives. Therefore, no significant impact to the overall recreational experience would likely occur.

Comments from Nevada State Parks, California Tahoe Conservancy and the Tahoe Rim Trail Association expressed concerns regarding potential impacts to the existing Tahoe Rim Trail and Van Sickle Connector Trail and the Van Sickle Bi-State Park as a result of the construction of the Panorama Trail and subsequent increase in use of the Tahoe Rim Trail and Van Sickle Connector Trail. The comments focused on three potential impacts: trail use conflicts between hikers and mountain bikes, increased wear and tear and associated maintenance requirements and parking supply and demand at the Van Sickle Bi-State Park. Comments also addressed legal constraints of constructing the Panorama Trail on Nevada State Parks property.

The following response addresses the possibility of increased use of the adjacent trail network and resultant user conflicts. While the Tahoe Rim Trail and Van Sickle Connector Trail currently provide a connection between Heavenly (via the Boulder and Stagecoach base areas) and the Van Sickle Bi-State Park, and while the proposed Panorama Trail would provide another access route (relatively speaking as access would require an almost seven-mile ride to connect from the East Peak Mountain Bike Park to the Van Sickle Connector Trail intersection), degradation of the high quality recreational experience in Van Sickle Bi-State Park is not anticipated. This is because the anticipated use will consist of cross-country mountain bike

riders rather than downhill mountain bike riders who may look to ride laps on the Panorama Trail and Van Sickle Connector Trail using the gondola. The proposed Panorama Trail is unlikely to create a downhill mountain bike emphasis on the Van Sickle Connector Trail for the following reasons:

- Using the Panorama Trail from the proposed East Peak Basin Mountain Bike Park to connect with the Van Sickle Connector Trail would necessitate riding about 7 miles of cross country trail with numerous uphill climbs at high elevation. While this is possible for more skilled, fit and experienced riders, it is a considerable distance to ride prior to intersecting with, and descending, the existing Van Sickle Connector Trail to the Van Sickle Bi-State Park and Heavenly Village. The distance and climbing required to reach the Van Sickle Connector Trail would discourage many lower skill level and downhill oriented mountain bikers from riding this trail. Downhill mountain bikers are more interested in the thrill of the descent, which is a different experience than cross-country riding. In addition to the experience, bikes used in downhill riding are heavier than those used for cross-country riding that makes ascending relatively more difficult.
- As described in the DEIR/EIS/EIS, the proposed mountain bike park would predominantly cater to beginner and intermediate ability-level riders and families who are unlikely to be interested in, or capable of, riding the Panorama and Van Sickle Connector trails.
- Although the Van Sickle Connector Trail would technically be accessible after riding up the Gondola, users would need to ride almost 7 miles of the Panorama Trail to reach it. It but may be possible that a number of local (because they would not be renting bikes up on the mountain) advanced riders would purchase a ticket to ride the Gondola for another way to access the top of the Van Sickle Connector Trail. Accessing the top of the Van Sickle Connector Trail by traveling through the proposed mountain bike park and riding almost seven miles of the Panorama Trail does not constitute the traditional “lift-served” mountain biking experience that people expect and pay for. DEIR/EIS/EIS Figure 3.13-1 shows the trails in relation to the ski lifts. Only the Gondola, Big Easy and Comet lifts would be available to provide lift service to mountain bikes. Because of the time required to make a round trip back to the Gondola Base Station, it is unlikely that local, advanced riders would purchase a ticket to ride the Gondola to access the Van Sickle Connector Trail for repeat, lift-served downhill riding. Local riders would be more likely to continue to park at the existing Boulder or Stagecoach base areas for access to the downhill opportunities offered by the Van Sickle Connector Trail.
- The proposed 0.7-mile connector trail between the Gondola Mid Station and the proposed Panorama Trail would be designated for use by hikers only. Bikes would not be allowed to off-load at the Gondola Mid Station.
- The Van Sickle Connector Trail is currently accessible from the parking lots at the Boulder and Stagecoach lodges. According to user count data obtained during the summer of 2014 by the Tahoe Rim Trail Association, approximately 14 people per day bike the upper section of the Van Sickle Connector Trail (e.g., above the waterfall). This represents a low volume of use compared to other trails in the LTBMU (see page 3.13-7 in the revised DEIR/EIS/EIS for more information). No existing use conflicts are known to occur on the Van Sickle Connector Trail as a result of descending mountain bikes, even though the trail is accessible due to its proximity to south shore communities. The

Panorama Trail would provide opportunities for Epic Discovery guests to depart the mountain on the Van Sickle Connector Trail rather than riding down the gondola, but as mentioned above, this guest would likely be an experienced rider with greater trail etiquette than novice or intermediate riders. Even with the anticipated increased use levels on the Van Sickle Connector Trail, the trail condition would be adequately maintained by the trail management partners. Section 2.3.5 – Epic Discovery Project Design Features and Construction Methods contains guidelines for monitoring and maintenance for trails in the vicinity, outlined under the Trail Partnership Action Plan.

As stated above, the proposed Panorama Trail would, by design, result in increased use of surrounding trails, but it is not anticipated that this increased use would adversely impact the existing recreational experience. Adverse wear and tear impacts to trail conditions are also not anticipated. Use levels of the Van Sickle Connector Trail under proposed conditions would remain lower than use levels on other popular trails on public lands focused on trail management elsewhere in the Tahoe Basin, particularly the Corral Trail and the Flume Trail. Conditions on these trails are effectively maintained by the Forest Service and NV State Parks, despite high use levels. Even with some anticipated increase in use on the Van Sickle Connector Trail, Heavenly and the Forest Service are confident that its condition would be adequately maintained based on the agreement to implement the Trail Partnership Action Plan described below. There are a number of heavily used trails across the Tahoe Basin (including Flume and Corral) that are successfully maintained and managed. It is not expected that the Van Sickle Connector Trail would experience this high level of use, and thus it is anticipated that acceptable trail conditions would be maintained.

The Trail Partnership Action Plan (TPAP) is included in the Project design features (Chapter 2.3.5) to address trail operations, maintenance, and improvements and covers the Panorama Trail, Van Sickle Connector Trail, and Tahoe Rim Trail from Daggett Pass south through Heavenly to the intersection with the Star Lake Connector Trail. The Trail Partnership Action Plan defines roles, responsibilities, and appropriate measures to ensure the maintenance of facilities and the recreational experience across nearby recreational resources by the trail management partners. The Trail Partnership consists of the U.S. Forest Service, Nevada State Parks, California Tahoe Conservancy, Heavenly Mountain Resort, Tahoe Rim Trail Association and Tahoe Area Mountain Biking Association. The TPAP identifies management actions to ensure that the user experience would be maintained and protected including adequate signage installed to alert riders of the shared-use nature of this trail, along with proper right-of-way guidance, and monitoring protocols. The TPAP:

1. Includes a statement of mutual intent to work collaboratively to fund, build, operate and maintain a high-quality public outdoor recreation facility;
2. Provides a subsequent set of specific sub-agreements, including an annual maintenance and operating plan between the partners to direct trail design, construction, funding, operations, maintenance, adaptive management and use conflict resolution.
3. Identifies an annual meet and confer process to assess trail conditions and adapt operations, maintenance, improvements, etc. as conditions warrant;
4. Provides a list of potential future management actions that may be taken based on the meet and confer process, including possible effects on other non-trail infrastructure. The

list will have the “including but limited to” concept so as not to preclude other future actions that may be identified;

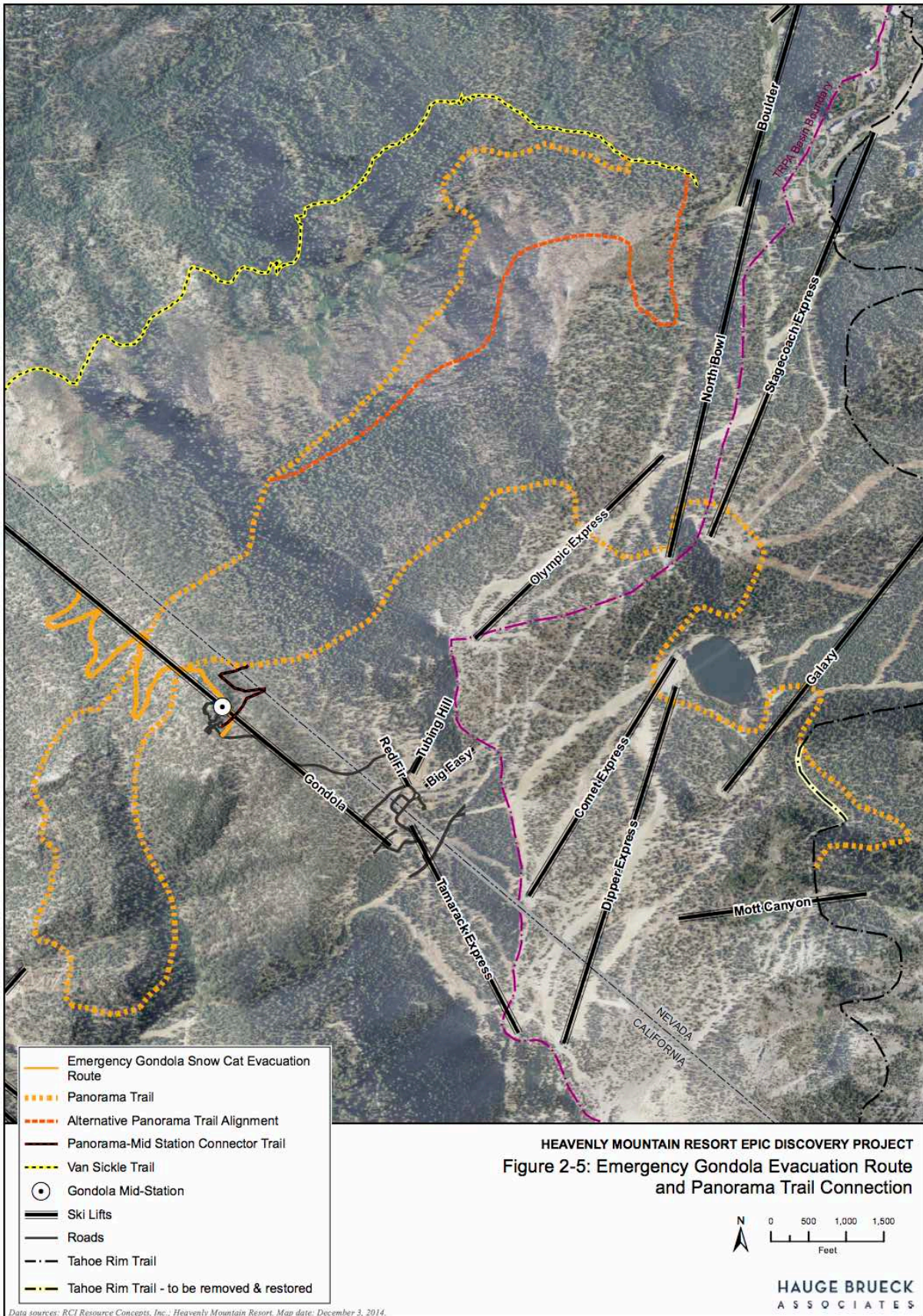
5. Establishes a set of use level triggers beginning with an overall trail assessment that will be monitored and then factored into the meet and confer process in order to respond to conditions on-the-ground; and
6. Includes a sphere of influence map in the Commitment to recognize trail connectivity in the area as a desirable feature and establishes which trails will be included in the agreement.

Implementation of the TPAP will add further insurance that no degradation of high quality recreational experience will occur as a result of the project. Permits for the Panorama trail shall be conditioned on continued monitoring of affected trail usage and implementation of management actions, as set forth in the TPAP or its equivalent, to avoid significant degradation of trail user experience.

The following response addresses the possibility of increased use of the Van Sickle Bi-State Park parking lot as a result of the Panorama Trail construction. Bikers are unlikely to park at the Van Sickle Bi-State Park because riding up the Van Sickle Connector Trail is very difficult, and the top of the Van Sickle Connector Trail is easily accessible from the Boulder and Stagecoach lodges. Visitors who wish to utilize the gondola to access the lift served mountain bike park at Heavenly Mountain Resort would be more likely to park near Heavenly Village and base of the Gondola for convenience. Since Van Sickle Connector Trail mountain bike users are more likely to park at the Boulder or Stagecoach lodges near the top of the trail, or near the Heavenly Village to ride up the Gondola, parking impacts at the Van Sickle Bi-State Park are not anticipated to adversely affect supply. However, as noted above, the Trail Partnership Action Plan Commitment will include monitoring of trail and non-trail facilities and the identification of appropriate actions, if necessary to address adverse conditions.

To address the State of Nevada comment regarding the feasibility of crossing Nevada State Park lands, the lower portion of the proposed Panorama Trail has been relocated. The relocated trail alignment is described in Chapter 2 and would avoid crossing the Van Sickle Bi-State Park by moving the intersection with the Van Sickle Connector Trail approximately 1,000 feet to the east. Refer to the revised DEIR/EIS/EIS Figure 2-5 for the relocated trail alignment. In addition, the relocated intersection between the Panorama Trail, Van Sickle Connector Trail and Tahoe Rim Trail would provide a more convenient location for cyclists to find multiple options for continuing their ride when departing the Heavenly mountain.

In conclusion, the construction of the proposed Panorama Trail is anticipated to benefit recreational use by improving connections between the Heavenly resort and other existing trail networks (e.g., Tahoe Rim Trail and Van Sickle Connector Trail). With the implementation of the TPAP, the increased use of the existing trail network will be monitored to ensure that operation conflicts do not occur and maintenance is conducted as necessary to maintain the existing high quality recreational experience.



Master Response 2: Traffic Impacts

(Addresses the following comments: 9-4 EPA, 12-2 and 12-4 Sierra Club, 17-2 Ellie Waller, and 60-1 Clem Shute)

Comments relating to the traffic analysis (see DEIR/EIS/EIS Chapter 3.7 “Transportation, Parking, and Circulation”) addressed in this Master Response are as follows: The EPA requests that the FEIS update AADT data to include 2012-2013. EPA recommends updating data to provide a clearer picture of roadway congestion and parking demand in relationship to capacity, and an updated traffic count study that looks specifically at summertime roadway congestion to confirm DEIR/EIS/EIS results.

The Sierra Club states that the DEIR/EIS/EIS analyzes traffic issues in the wintertime and fails to discuss summer vehicle trips and parking issues. It comments that while access for the summer uses would be provided using the Heavenly Village Gondola, the DEIR/EIS/EIS traffic section focuses on the Ski Run/Main Lodge areas. Sierra Club recommends that Heavenly operate a summer shuttle to offset increased visitation.

Comments were also received during the DEIR/EIS/EIS TRPA Governing Board hearing asking about the results of the traffic analysis and whether there will be an increase in traffic from the new activities.

The proposed project will primarily generate new visitation during summer months, and as such was the focus of the traffic impact analysis in the DEIR/EIS/EIS. Chapter 3.7 “Transportation, Parking and Circulation” focuses on summer conditions and does not describe wintertime conditions. Heavenly currently has approximately 110,000 visitors during the summer season from June 15th through September 15th. Since these visitors are already coming to Heavenly they are accounted for in the existing conditions (baseline) traffic data that was collected for the DEIR/EIS/EIS; therefore, it is not necessary to account for them separately.

As shown in Table 3.7-10 and discussed in Section 3.7.4.1, new visitors to the Project will generate 448 total new daily trips and 57 total new PM peak hour trips (23 inbound and 34 outbound). New employees will generate 280 daily vehicle trips and 34 PM peak hour (outbound) trips. Table 3.7-12 shows that the Project will generate 728 total daily trips and 91 total PM peak hour trips on a peak summer day.

Although the DEIR/EIS/EIS documents that the Project will result in an increase in daily vehicle trip ends and associated vehicle miles of travel (which will be offset through mandatory contributions to TRPA’s Traffic and Air Quality Mitigation program), the added DVTE’s will not adversely affect traffic conditions or current intersection level of service. The transportation operations analysis includes a detailed intersection level of service and delay analysis for a PM peak hour on a summer Friday, which represents the Tahoe Basin’s peak traffic condition. Wintertime conditions were not used for the analysis. The study area includes intersections near the Heavenly Village Gondola and does not evaluate conditions on Ski Run Boulevard. The analysis was performed using intersection turning movement data from 2013 (provided in Appendix 3.7-A “Traffic Counts Data”). Due to the timing of preparation of the DEIR/EIS/EIS, transportation data was collected on December 13, 2013 and adjusted using a seasonal

conversion factor to reflect peak summer conditions. The seasonal conversion factor was developed by comparing Caltrans' hourly data for all Fridays in December 2013 to Fridays in August 2013. The transportation data and conversion factor is discussed in section 3.7.1.2. Because they offer a reasonable and timely method to conduct traffic analysis, seasonal traffic conversion factors have been used on other projects within the Tahoe Basin (e.g., Homewood Mountain Resort Master Plan).

The traffic impact analysis methodology follows the acceptable requirements of the agencies with jurisdiction over the roadways and intersections in the Project area (e.g., Caltrans, City of South Lake Tahoe, Nevada Department of Transportation). Section 3.7.4.1 describes the project's summer trip generation characteristics in detail. Table 3.7-14 presents the results of the detailed transportation operations analysis, and displays the summer traffic level of service and vehicle delay calculations with the project. As shown in the table, the Project will not create adverse impacts to vehicle delay at project area intersections and therefore, will not adversely impact the operation of existing transit services or existing transportation systems, including roadways and intersections.

To clarify the source of data used in the DEIR/EIS/EIS, the data provided in Appendix 3.7-A "Traffic Counts Data" is not Annual Average Daily Traffic (AADT) data, but is PM peak hour intersection turning movement data collected for the project area on December 13, 2013. The AADT data displayed in Table 3.7-2 is provided for historical context only and was obtained from the Caltrans Traffic Data Branch. This data was not collected just for this project. At the time that the DEIR/EIS/EIS transportation section was prepared, the most recent Caltrans AADT data available was from the year 2012. The Caltrans data does show that traffic on US 50 near the CA/NV state line has declined over the last 10 years. The decline is somewhat due to the "Great Recession (December 2007 – June 2009) but is also due to general decline in traffic for a combination of potential reasons, including increased California tribal gaming, expansion of the transit network, improved bicycle/pedestrian conditions, and the "new normal." Traffic volumes on this corridor began declining in 2004/2005, prior to the "Great Recession." Also, the traffic analysis was performed for the summer Friday peak hour, and there is less historical variability in the peak hour traffic. Caltrans Traffic Data Branch also provides data for the peak hour. Table MR-1 displays the 2003 and 2012 peak hour roadway volumes within the project area.

Table MR-1

Historic Peak Hour Traffic Volumes – US 50

Segment	2003	2012	Average Annual Growth
US 50 East of Pioneer Trail Road	3,250	2,600	-2.2%/year
US 50 East of Park Avenue	3,050	3,000	0%
US 50 West of Stateline Avenue	1,400	2,850	+11.5%/year

Sources: Caltrans Traffic Data Branch

2013 data is now available from Caltrans Traffic Data Branch. As shown in Table MR-2, the AADT for 2013 is the same as the data for 2012.

Table MR-2

Historic Average Daily Traffic Volumes – US 50

Segment	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
US 50 East of Pioneer Trail Road	37,500	37,500	NA	35,500	35,000	33,000	31,500	28,500	29,000	29,000	29,000
US 50 East of Park Avenue	34,000	33,500	NA	29,000	29,000	28,500	27,500	26,500	26,500	26,500	26,500
US 50 West of Stateline Avenue	33,000	33,000	NA	30,500	30,500	28,000	27,500	26,500	26,000	25,500	25,500
US 50 East of CA-NV Stateline	30,500	30,800	28,900	26,500	25,000	25,000	24,000	24,000	27,000	22,500	NA

Sources: Caltrans Traffic Data Branch, 2014

In regard to access for the Epic Discovery project activities, it will be provided at the existing Heavenly Village Gondola. The intersections selected for analysis in the DEIR/EIS/EIS are either adjacent to or in close proximity to the Heavenly Village Gondola. Although comments suggest that the traffic analysis focuses on the Ski Run/Main California base area, transportation conditions are not analyzed on Ski Run Boulevard or other intersections near the Main California Lodge Area because this base area will not be used by the public to access the proposed summer operations.

In regard to transit impacts and transit facilities, Impact TRANS-5 indicates that the project will not include any new transit facilities, and will not interfere with existing transit facilities or services. The project will not create impacts to vehicle delay at study intersections and therefore, will not adversely impact the operation or capacity of existing transit services. Visitor and employee trip generation calculations indicate that approximately 19 visitors and 6 employees will use transit to access the Heavenly Village Gondola area on a peak day. Twenty-five (25) new transit users per day can be accommodated within the existing BlueGo transit system.

In summary, there is no adverse traffic impacts identified that requires mitigation measures not already included in the Heavenly Mountain Resort Master Plan Mitigation Monitoring Program (DEIR/EIS/EIS Chapter 5).

7.3 RESPONSES TO FEDERAL, STATE, REGIONAL, AND LOCAL AGENCY COMMENTS

Nine letters were received from federal, state, regional and local agencies:

1. Sharit, Ben, Tahoe Douglas Fire Protection District, 10/7/14
2. Drozdoff, Leo, Nevada Department of Conservation and Natural Resources, 10/17/14
3. Nevada Department of Conservation and Natural Resources, Division of State Parks, 10/17/14
4. Harrison, Elizabeth, Nevada Department of Conservation and Natural Resources, Division of State Lands, 10/20/14
5. Bartlett, Tina, California Department of Fish and Wildlife, 10/20/14
6. Port, Patricia, United States Department of the Interior, Pacific Southwest Region, 10/21/14
7. Thomaselli, Lauren, City of South Lake Tahoe, 10/23/14
8. Wright, Patrick, California Tahoe Conservancy, 10/27/14
9. Goforth, Kathleen, United States Environmental Protection Agency, Region IX, 10/28/14

Comment Letter 1 – Sharit, Ben, Tahoe Douglas Fire Protection District, 10/7/14

TAHOE DOUGLAS FIRE PROTECTION DISTRICT

Ben Sharit, Fire Chief
Mark Novak, Assistant Chief
Eric Guevin, Fire Marshal



Kevin Kjer, Chair
Larry Schussel, Vice Chair
Greg Felton, Trustee
Steve Seibel, Trustee
Ann Grant, Trustee

October 7, 2014

RECEIVED

OCT 10 2014

TAHOE REGIONAL
PLANNING AGENCY

TRPA
ATTN: Heavenly Mountain Resort Epic Discovery Project Comments
P.O. 5310
Stateline, NV 89449

To: David Landry, TRPA Senior Planner

Re: Heavenly Mountain Resort Epic Discovery Project EIS

1 The Tahoe Douglas Fire Protection District (TDFPD) supports the proposed Heavenly Mountain Resort Epic Discovery Project (Heavenly). This project represents an opportunity for the Lake Tahoe Region to continue to expand recreational opportunities, to a wide range of visitors in an environmentally sensitive manner. Based upon our decade's long partnership with Heavenly, we are confident that this project will be implemented in a manner which benefits the local community, visitors and the environment.

The TDFPD particularly supports the project component that would allow increased snowcat access to the gondola. This proposal is critically necessary to provide for timely evacuation of the gondola.

2 The TDFPD submits the following comment:

Issue: The project area is in an location which can be threatened by wildfire; the gondola, which is the primary method of accessing the project area, may not be in operation for evacuation during a wildfire. Evacuation by motor vehicle is a plausible option, but may not have sufficient capacity to evacuate the proposed number of participants and employees at Epic Discovery in a timely fashion.

Recommendation: Fire modeling of the project area should be conducted to determine the size and location of safety zones for the public and employees. The EIS should analyze for the creation these zones including any impacts of establishing these zones.

Recommendation: The EIS should acknowledge that alternative evacuation methods and routes will be incorporated in the Annual Summer Operations Plan.

Recommendation: Section 3.1-62 and 2.3.5 of the EIS should address the importance of road management, design and maintenance in providing access for emergency responders

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- 2 | as well as providing adequate capacity to evacuate members of the public and employees during emergencies.
- 3 | **Issue:** Section 5.4 - Compliance with Existing Programs refers to the Uniform Building Code as the code of record in Douglas County. The currently adopted building code in Douglas County is the International Building Code.
Recommendation: Change reference to International Building Code and include reference to International Fire Code.
- 4 | **Issue:** Section 7.5-34 - Ensure Adequate Police/Sheriff/Fire Capacity. This section refers solely to the City of South Lake Tahoe Fire Department (CSLTFD) and Lake Valley Fire Protection District (LVFPD). The East Peak Basin area of the project is in the response area of the East Fork Fire Protection District (EFFPD). The Tahoe Douglas Fire Protection District (TDFPD) provides initial response to this area under a Memorandum of Understanding with the EFFPD. The access roads to the East Peak Basin terminate within the boundaries of the TDFPD. Injured persons who require ambulance transport and cannot be transported on the gondola will be transported by the TDFPD. In most situations the TDFPD can access emergencies in the Gondola Basin more expediently than either the CSLTFD or LVFD).
Recommendation: Include TDFPD as providing first response to the East Peak Basin and potentially the Gondola Basin.
- 5 | **Issue:** The DEIS does not address the periodic need for evacuation of sick/injured persons by helicopter.
Recommendation: The EIS should address the need for pre-designated helicopter landing zones. These zones may require periodic tree removal for safety purposes.
- 6 | **Issue:** Several new hiking and mountain biking trails are proposed. Historically the TDFPD has experienced numerous instances where it has been difficult to locate injured hikers/bikers.
Recommendation: Provide signage at all trail junctions. Consider implementing a system of "rescue locator" signs spaced at intervals along all trails.

We applaud the thoroughness and careful analysis that the DEIS represents, we thank you for the consideration of our comments.

Sincerely,



Ben Sharit
Fire Chief

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Comment 1-1 The commenter expresses support for the Project. This is not a comment on the content or adequacy of the DEIR/EIS/EIS. This information is passed on to the Project proponent and decision makers for consideration.

Comment 1-2 Heavenly Mountain Resort maintains and enforces a Fire Protection Plan. The Plan includes systems and procedures for wildfire protection, including the snow making water system, which supplies water through the existing snowmaking system in wildfire situations. These sprinkler lines provide a barrier against wildfires in addition to the summer irrigation plan. Snowmaking lines from California Dam are continually charged on Ridge Run, Maggies, Roundabout, Groove, Patsy's and to Lake View Lodge. On the Nevada side, the Nevada Pumphouse charges Pepi's, Crossover, Von Schmidt, the top of the Gondola area and under the length of Tamarack Chair. In addition, a two-inch fire hose is in place underneath the Gondola Lift line from the mid-station to tower 14 that can be connected to the snow making system and used to provide water to fire crews. Each of the summer operations trucks is equipped with a fire extinguisher, shovel, and fire response kit containing a snowmaking hose and nozzle. A 2000 gallon water truck used for dust abatement may be utilized as an additional water source.

Heavenly Security implements "Fire Watch" procedures during red flag warnings and when lightning is forecast. Heavenly uses "Weather Sentry" web based forecasting and real time lightning detection to monitor storm activity and employees are tasked with monitoring for hot spots or smoke after storms. If a lightning strike occurs, staff are required to report the incident to Heavenly Dispatch and if the strike area can be safely accessed, staff then investigate the area to determine if a fire has started. If the strike occurs in an inaccessible area, staff are required to monitor the area for smoke or other visible signs of fire. Staff are responsible for contacting the appropriate fire protection district for non-emergency reports or 911 if a fire event has occurred.

The Fire Protection Plan also includes a Hot Work Guide that establishes procedures to prevent fires resulting from temporary operations involving an open flame or that produce heat, sparks, or hot slag such as brazing, cutting, grinding, soldering, and welding, among others. Hot work is not permitted in non-designated areas on "Red Flag Warning" days and such work should regularly be moved to a safe location when possible. A Hot Work Permit is required prior to commencement of hot work outside of designated areas to ensure managers are aware of the work and associated risks and monitor the activity during the permitted work period. Hot Work Permits are not issued if a sprinkler protection is impaired, appropriate firefighting equipment is not readily available, combustible/flammable materials are within 35 feet and cannot be protected, floor and wall opening cannot be covered, cutting or welding can conduct enough heat to ignite combustibles, or any condition that could result in undue hazard.

All employees are trained on evacuation procedures. Mountain Operations staff and contractors are trained to use the snowmaking hydrants and fire hoses. No smoking is allowed. Staff is also required to conduct a weekly defensible space check to prevent wildfire spread. They must check for a reduced fuel zone within 100 feet of structures, lean, clean and green areas within 30 feet of structures, and noncombustible areas within 5 feet of structures.

Text has been added to the Project Description in Chapter 2, Section 2.3.5, Emergency Evacuation and Shelter in Place for Summer Operations, on page 2-35 indicating that the Summer Operating Plan will incorporate a section that designates “shelter in place” locations at Tamarack Lodge, East Peak Lodge, the Bear Cave Ski School Building, the top of the Gondola terminal, and Lakeview Lodge, all of which are in the Project Area. Each building can house a specified number of people, including employees, with adequate occupancy capacity to meet the anticipated number of peak visitors (2,000-2,500) plus employees (200) as shown in the following table.

Location	Estimated Emergency Occupant Capacity
Top of Gondola Area	
Tamarack Lodge & Deck	750
Bear Cave Ski School Building	200
Gondola Top Station	250
East Peak Patrol Building	50
Tamarack Meadow	1,000
<i>Subtotal</i>	<i>2,250</i>
East Peak Area	
East Peak Lodge & Deck	650
East Peak Snowmaking Pumphouse	100
Dipper Patrol Building	75
Base of Comet & Dipper Express Lift Maze Area	1,000
<i>Subtotal</i>	<i>1,825</i>
Sky Meadows/Upper California Area	
Sky Meadows Deck	350
Sky Meadows Reservoir Pumphouse	75
Top of Sky Patrol Building	50
Sky Meadows Restrooms	100
Face Patrol Building	75
Lakeview Lodge	400
Aerial Tram Top Station	25
Upper Vehicle Maintenance Shop & Concrete Work Pad	250
<i>Subtotal</i>	<i>1,325</i>
Total	5,400

The Summer Operating Plan will also highlight the importance of maintaining the roadway system for emergency access. As the additional text under Emergency Evacuation and Shelter in Place for Summer Operations indicates, on mountain road management, design (where improvements are proposed), and maintenance procedures shall be implemented in a manner to provide access for emergency responders as well as adequate capacity to evacuate members of the public and employees during emergencies. The Summer Operating Plan will define the primary on mountain access roads to be used for emergency responders and evacuation and will include measures to ensure that those roadways remain open during summer operations for emergency access.

Additional text regarding roadway maintenance will not be added to Chapter 3.1 as suggested, as that chapter addresses hydrology and water quality impacts. Roadways were discussed on page 3.1-62 in regard to erosion impacts on water quality and not

erosion impacts on roadway maintenance and access. The additional text in Section 2.3.5 addresses this concern.

Heavenly Mountain Resort maintains an Emergency Response Plan that includes detailed procedures for different emergency scenarios including wildfire and severe weather events. During such events emergency dispatch is immediately notified and staff are directed to follow protocol regarding communications, notifications, aid, and security. During an event, guests and staff are evacuated by vehicle to the emergency “Staging Areas” as appropriate or safe. Severe weather procedures are activated at the first report of severe weather or lightning within 60 miles. Vehicles will be sent out onto the trails to announce impending threats and visitors may be assisted out of the area. Facilities remain closed until the threat has passed.

The following text will be added to the Emergency Response Plan and Summer Operating Plan:

1. Re-confirm that the protection of life and public safety are the highest priorities;
2. Re-confirm that maintaining the summer road system as an evacuation route will continue to be a priority in terms of minimizing road closures and coordinating road maintenance activities during summer public operations;
3. In the event that off-mountain evacuation using the gondola is not possible, designate the four on-mountain lodges as shelter in place locations: all four lodges are fire sprinklered;
4. Further designate the cleared areas around each lodge as safety zones that will be protected as needed by using the snowmaking system; designate and sign cleared safety areas at the far ends of hiking trails along with designated cleared landing zones.
5. Set up and test the snowmaking system each season for effectiveness and inspect with applicable fire districts; and
6. Investigate the option of using key lifts for downloading to quickly move people to lower mountain areas where they could be evacuated by larger-capacity vehicles.

The Forest Service defines a safety zone as an area where a firefighter can survive without a fire shelter. The size and location of safety zones are determined by wildland fire personnel during an incident and is not something that can be modeled. Since Heavenly Mountain Resort will establish “shelter in place” locations within the Project Area, will maintain fire safety procedures, will add roadway maintenance and evacuation practices to the Summer Operations Plan, and has multiple snowmaking system sprinkler points within the Project Area that can be used to suppress wildfire, additional wildfire modeling is not required to identify other areas more suited as safety zones within the Project Area. The “shelter in place” locations are in relatively open areas within existing forest clearings, are existing structures equipped with fire suppression devices, and are near snowmaking system sprinklers, making them the most feasible safety zones.

Comment 1-3

The reference to the Uniform Building Code in Chapter 5, Section 5.4, page 5-9 under Douglas County has been changed to International Building Code, which is the

currently adopted building code in Douglas County. Reference to the International Fire Code has also been added.

Comment 1-4

This mitigation measure has been removed as it duplicates existing requirements regarding emergency response. Although Operations Mitigation Measure 7.5-34 states the Lake Valley Fire Protection District would provide first response for the California operations, it is currently understood and established that the Tahoe Douglas Fire Protection District is the first responder for events within the Nevada portion of Heavenly Mountain Resort per the existing Fire Protection Plan currently implemented. Since the response boundaries are already established and enforced it is unnecessary and redundant to include Operations Mitigation Measure 7.5-34 in the DEIR/EIS/EIS.

Comment 1-5

The Heavenly Mountain Resort 2013/2014 Operations and Avalanche Control Plan includes helicopter evacuation and access procedures. The procedures state that emergency landing zones shall be barricaded and signed to prevent unauthorized access by personnel. The procedures also establish the following emergency helicopter landing zones, of which those in the Project Area are shown in italics and some of which are depicted in Sheet 1 and Sheet 2:

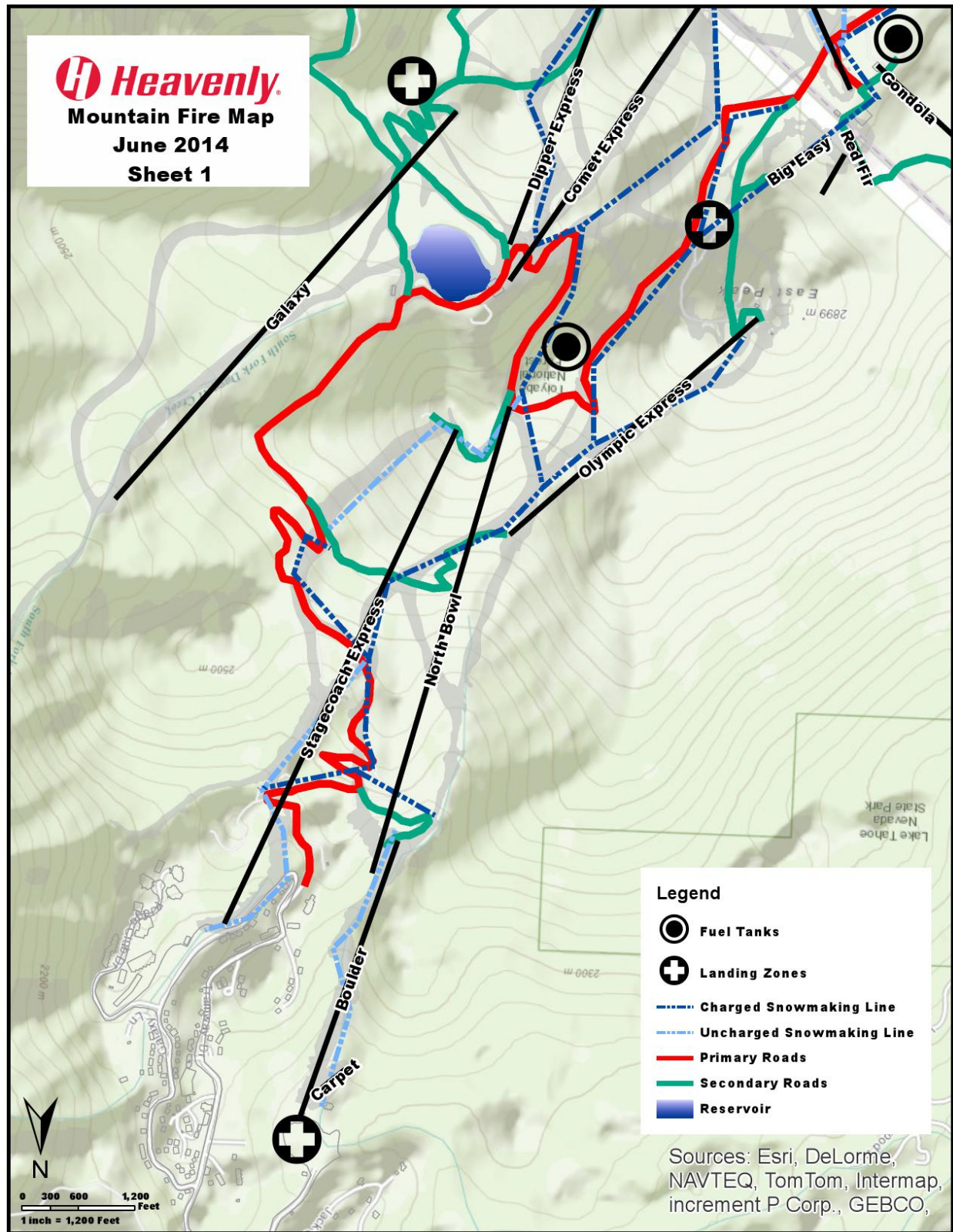
H-1 – California Base Area	H-9 – Killebrew Canyon (Bottom)
<i>H-2 – Base of Sky Chair</i>	H-10 – Stagecoach (Base)
H-3 – California Creek	H-11 – Boulder Base Area
<i>H-4 – Top of Gondola</i>	<i>H-12 – Galaxy (Top)/Dam Road</i>
<i>H-5 – Milky Way (Bottom)</i>	<i>H-13 – Comet and Steve’s Road</i>
H-6 – Olympic Below Nevada Trail	<i>(summer only)</i>
H-7 – Galaxy (Base)	<i>H-14 – Lower Orion’s (summer only)</i>
<i>H-8 – Mott Canyon (Bottom)</i>	<i>H-15 – Top of Red Fir Lift</i>

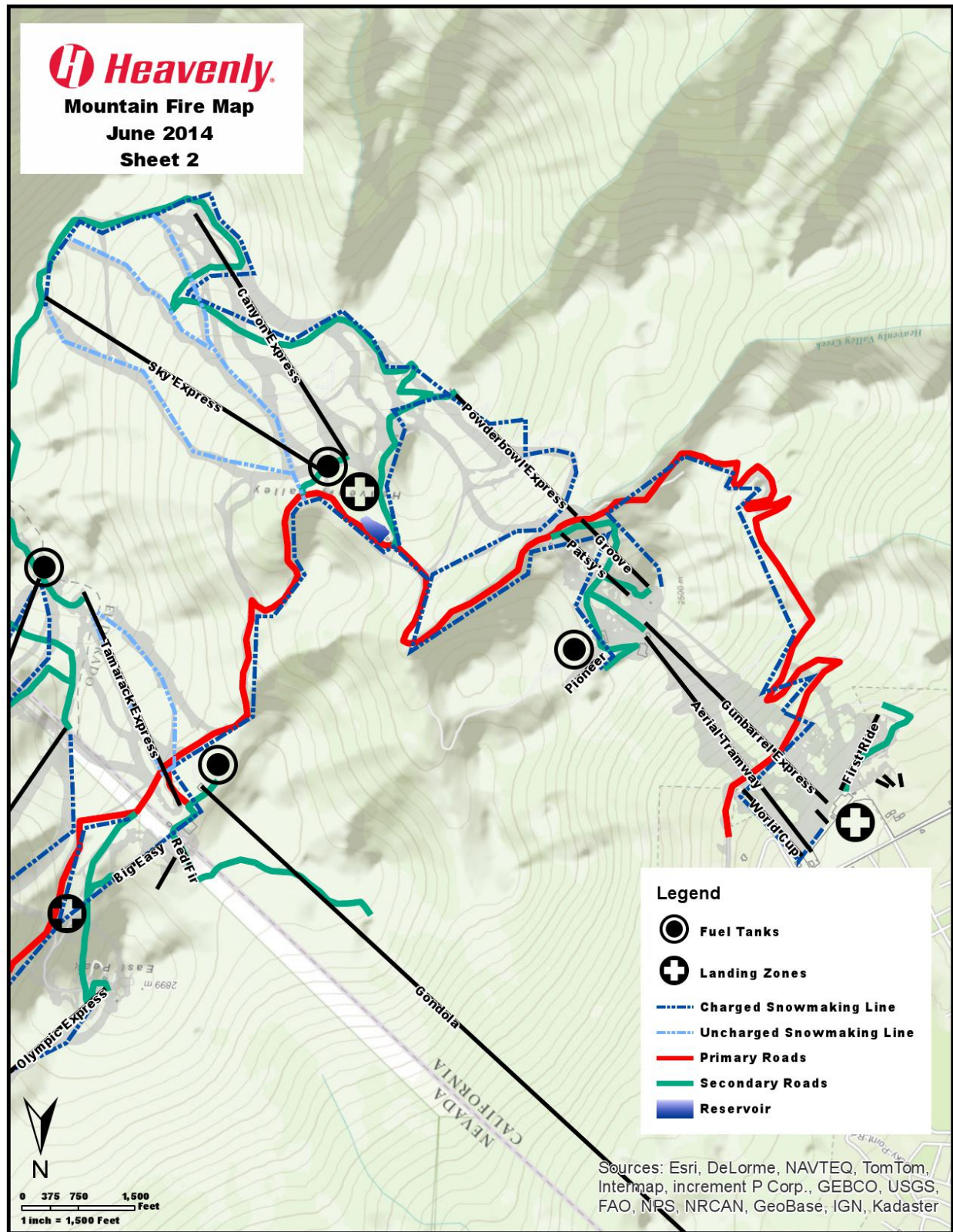
The procedures further state that emergency helicopter landing may occur in areas other than those listed during a life-threatening emergency as long as adequate personnel are present to provide crowd control. These procedures and operations are already in effect and are maintained annually, therefore the DEIR/EIS/EIS does not address helicopter access. Additional tree removal is not anticipated as helicopter landing zones are already established and are maintained per Heavenly’s Emergency Response Plan.

Comment 1-6

The comment requests the addition of trail signage at trail junctions and at intervals along the trails to provide emergency responders with more accurate response location data. The following text has been added to Chapter 2, Connecting Trails on page 2-26 of the DEIR/EIS/EIS regarding locational and directional signage:

As part of the connecting trail implementation, locational/directional signage will be incorporated at trail intersections and spaced at intervals along the proposed trails to provide users with a way to provide emergency responders with their location in emergency situations.





**Comment Letter 2 – Drozdoff, Leo, Nevada Department of Conservation and
Natural Resources, 10/17/14**

LEO M. DROZDOFF, P.E.
Director

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Deputy Director

Division of Environmental Protection
Division of Forestry
Division of State Lands
Division of State Parks
Division of Water Resources
Conservation Districts Program
Natural Heritage Program
State Historic Preservation Office

**STATE OF NEVADA
Department of Conservation and Natural Resources**

October 17, 2014

David Landry
Senior Planner
Tahoe Regional Planning Agency
128 Market Street
Stateline, NV 89449

Re: Heavenly Mountain Resort Epic Discovery Project

Dear Mr. Landry:

1 The Department of Conservation and Natural Resources would like to thank you for the opportunity to comment on the above reference project. We appreciate the time Heavenly and United States Forest Service (USFS) representatives have made to review the different elements of the Heavenly proposal and in particular the alignment of the Panorama Trail portion of the project. This includes the additional trail alternative analysis provided to the Department from the applicant yesterday morning.

After internal review and careful consideration by several of my agency administrators, the Department supports the Epic Discovery Center project and the concept of the Panorama Trail with associated appropriate mitigation provided the Panorama Trail connects to the existing Tahoe Rim Trail Connector Trail easterly of the township line between Township 13 North, Range 18 East and Township 13 North, Range 19 East. The township line serves as the easterly boundary of the Van Sickle State Park as depicted in yellow (NE1/4SE1/4 of Section 25 of Township 13 North Range 18 East) on the attached map.

Specific comments regarding other elements of the project and proposed mitigation efforts are being submitted by the Division of State Parks and the Tahoe Resource Team under separate cover.

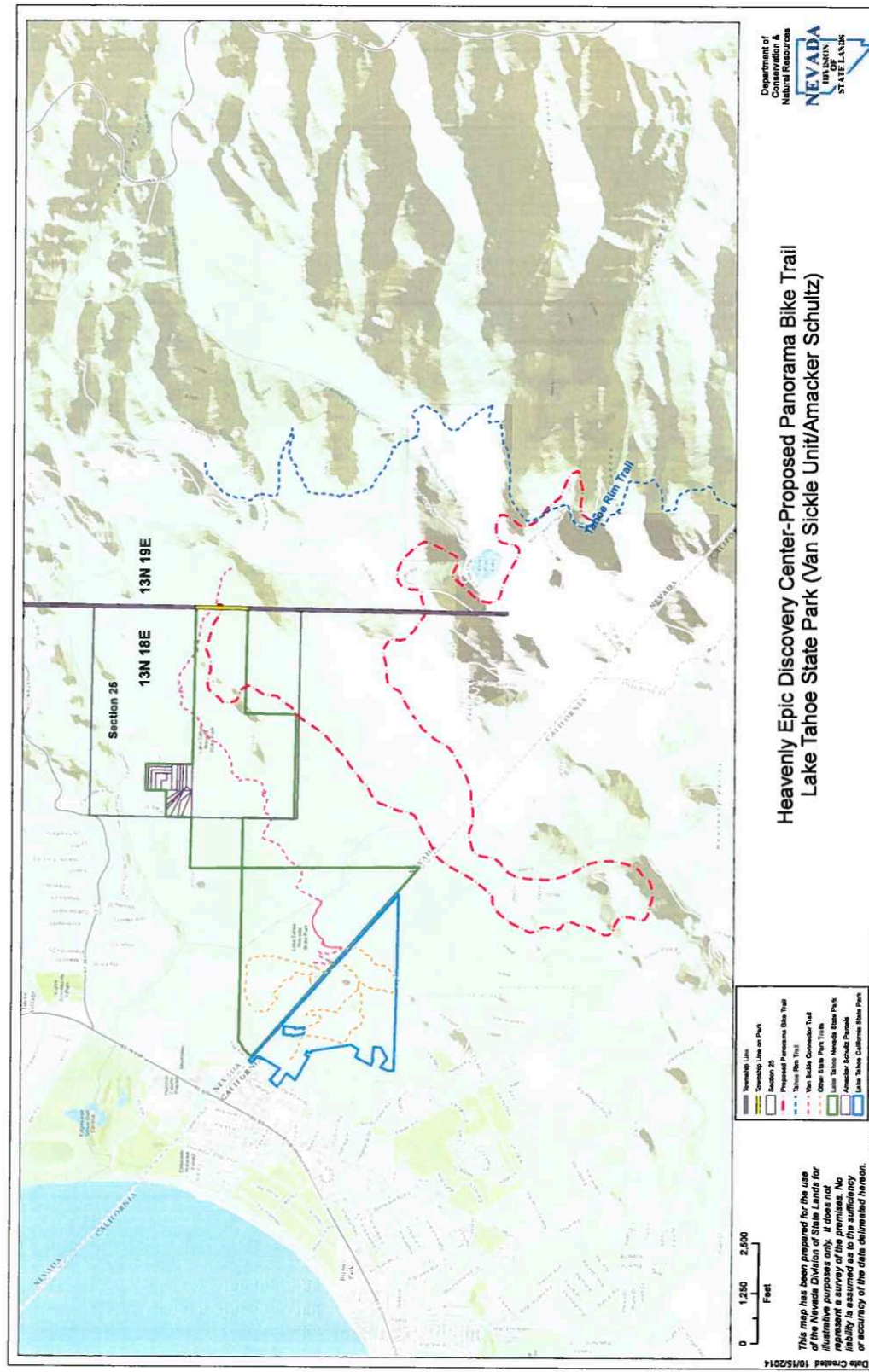
If you have any concerns or require additional information please do not hesitate to contact our Department.

Sincerely,

A handwritten signature in blue ink, appearing to read "Leo Drozdoff", followed by the text "Deputy Director for" in a smaller, less legible script.

Leo Drozdoff, P.E.
Director

cc: Andrew Strain, Heavenly Mountain
Nancy Gibson, Forest Supervisor, LTBMU



Comment 2-1 Comments that state a position for or against a specific alternative are appreciated as this gives the Agencies a sense of the public's or other agencies feeling and beliefs about a proposed course of action. Such information can only be used by the decision maker(s) in arriving at a decision and not for improving the environmental analysis or documentation. Further response to the detailed comments provided by the Nevada Department of Conservation and Natural Resources can be found in the responses to comment letters 3 and 4.

**Comment Letter 3 – Nevada Department of Conservation and Natural Resources,
Division of State Parks, 10/17/14**

LEO M. DROZDOFF, P.E.
Director
Department of Conservation and
Natural Resources

ERIC M. JOHNSON
Administrator

BRIAN SANDOVAL
Governor

STATE OF NEVADA



**DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF STATE PARKS**

October 17, 2014

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David Landry, TRTA Senior Planner
Tahoe Regional planning Agency
P.O. Box 5310
Stateline, NV 89449-5310

Dear Mr. Landry;

- 1 | The Nevada Division of State Parks appreciates the opportunity to comment on the DEIR for the Heavenly Mountain Epic Discovery Park. Nevada State Parks supports the concept of a summer use facility on the USFS system property described in the report, however; the proximity and connection to portions of the proposed project will impact current trails and current use at Van Sickle Bi-State Park.

Our management partners, the NV Tahoe Resource Team, the Tahoe Rim Trail Association, and the California Tahoe Conservancy will be providing comments under separate letter.

Draft Comments – Epic Discovery EIR/EIS/EIS
From Nevada Division of State Parks

Executive Summary

- 2 | Page 2, Summary of Alternatives to be considered
Unlike many environmental reports or statements, only one trail option was proposed.
- Were alternatives for either: 1) no Panorama Trail; or 2) a contained loop system (no connection to town) considered? If not, NDSP/NDSL would like to see these as possible alternatives.
- 3 | Page 12, 3.7, Trans 3
- If this is a publicly accessible, bi-directional trail, what are impacts to trailhead parking within VSBSP?
- 4 | Page 17, 3.13, Rec 2
- Project may degrade the quality of the existing Tahoe Rim Trail Connector experience by changing the nature of the use from a passive, low-impact, bi-directional route to one which is lift assisted - with a use focused on downhill access, at volumes that exceed trail design and intent. Does the proposed project and/or mitigation plan include maintenance/other operational needs on affected properties that are not within Heavenly's SUP?
- 5 | Page 17, 3.13, Rec 3
- Project will potentially conflict with the established recreational use on the Tahoe Rim Trail Connector by changing the nature of the use from a passive, low-impact, bi-directional route to one which is lift assisted - with a use focused on downhill access, at volumes that exceed trail design and intent. Does the proposed project and/or mitigation plan include maintenance/other operational needs on affected properties that are not within Heavenly's SUP?

- 6 | Page 17, 3.13, Rec 4
- Project will likely result in the need for increased maintenance and/or expansion of existing facilities within Van Sickle. Does the proposed project and/or mitigation plan include maintenance/other operational needs on affected properties that are not within Heavenly's SUP?

Chapter 1

- 7 | Page 1-2
- Map is incorrect. SUP Boundary encompasses lands owned by the State of Nevada and State of California. This map needs to be revised to accurately depict the SUP boundary.
- 8 | Page 1-4, 1st paragraph: "During the summer it attracts tens of thousands of people."
- This volume may translate into significant impact when proposing a direct connection to the park?
- 9 | Page 1-6/1-7
- Where is the discussion of recreational impacts to Van Sickle Bi-State Park? Discussion needs to be added.

Chapter 2

- 10 | Page 2-3
- Map should be revised to illustrate the entirety of the proposed Panorama Trail.
- 11 | Page 2-32
- The language in this section lacks specificity in identifying mitigation for impacts that may occur within VSBSP based on similar use patterns that have been identified elsewhere in the Reno/Tahoe region. As they pertain to impacts to VSBSP, mitigation options need to be identified, evaluated and incorporated into the final project design, with the approval of NDSP and its California partner.
- 12 | Page 2-37
- Were alternatives for either: 1) no Panorama Trail; or 2) a contained loop system (no connection to town) considered?
- 13 | Page 2-61, Trans 3
- Has visitor parking demand generated within the park to access the trail uphill (as has been indicated by HSR/USFS staff as a planned use) been considered?
- 14 | Page 2-73, Rec-1
- See comments Page 17 3.13 Rec 2, 3.13 Rec 3.
- 15 | Page 2-73, Rec-1: "Additional use of the TRT/VST resulting from the...connector trails would be consistent with the intended use and management of these trails and is not anticipated to degrade the recreational experience."
- A lift assisted, downhill linkage to the village is not consistent with the current use and management of the Tahoe Rim Trail Connector and may degrade the quality of the existing experience for Park users.

16 | Page 2-74, Rec-2

- See page 2-73 Rec-1

17 | Page 2-74, Rec-3

- See page 2-73 Rec-1

Chapter 3.7 Transportation

18 | Page 3.7-11

- What about VS Trailhead parking? If the proposed Panorama Trail is a bi-directional publicly accessible trail, with uphill access to the trail desired by users, it must be assumed that users will drive to the trailhead. Impact needs evaluation.

19 | Page 3.7-19, Trans 3

- See Page 2-61 Trans 3/3.7-11

Chapter 3.12 Land Use

20 | Page 3.12-10, second paragraph

- If Panorama Trail will provide access to HMR through existing VSBSP trails, what is the impact on VSBSP parking?

21 | Page 3.12-12, first paragraph: "Heavenly...attracts more than 100,000 visitors each summer... The purpose of this proposal is to engage a larger segment of summer visitors..."

- Regardless of chosen route, numbers of this magnitude will likely mean a portion of those visitors will have a downstream impact to VSBSP via the proposed Panorama Trail, which provides a direct connection to Van Sickle Bi-State Park. The proposed project/mitigation plan needs to recognize and identify maintenance, and/or additional facilities/staffing that will be required within VSBSP should the project's projected visitation be met or exceeded.

22 | Page 3.12-13, first paragraph: "...clarifying the authority the FS has regarding recreational uses within ski area special use permits. The proposed projects have been determined to be consistent with SAROE..."

- VSBSP is NOT within the SUP boundary. The proposed use and potential traffic on the Panorama Trail is not consistent with the original, intended use of Van Sickle. Mitigation may be necessary to accommodate the current, short-term, passive recreation activities.

Chapter 3.13 Recreation

23 | Page 3.13-4, last paragraph: "Hiking and mountain biking trails on surrounding NFS lands can be accessed through Heavenly's SUP area (refer to the Recreation Context Figure 3.13-1, below)."

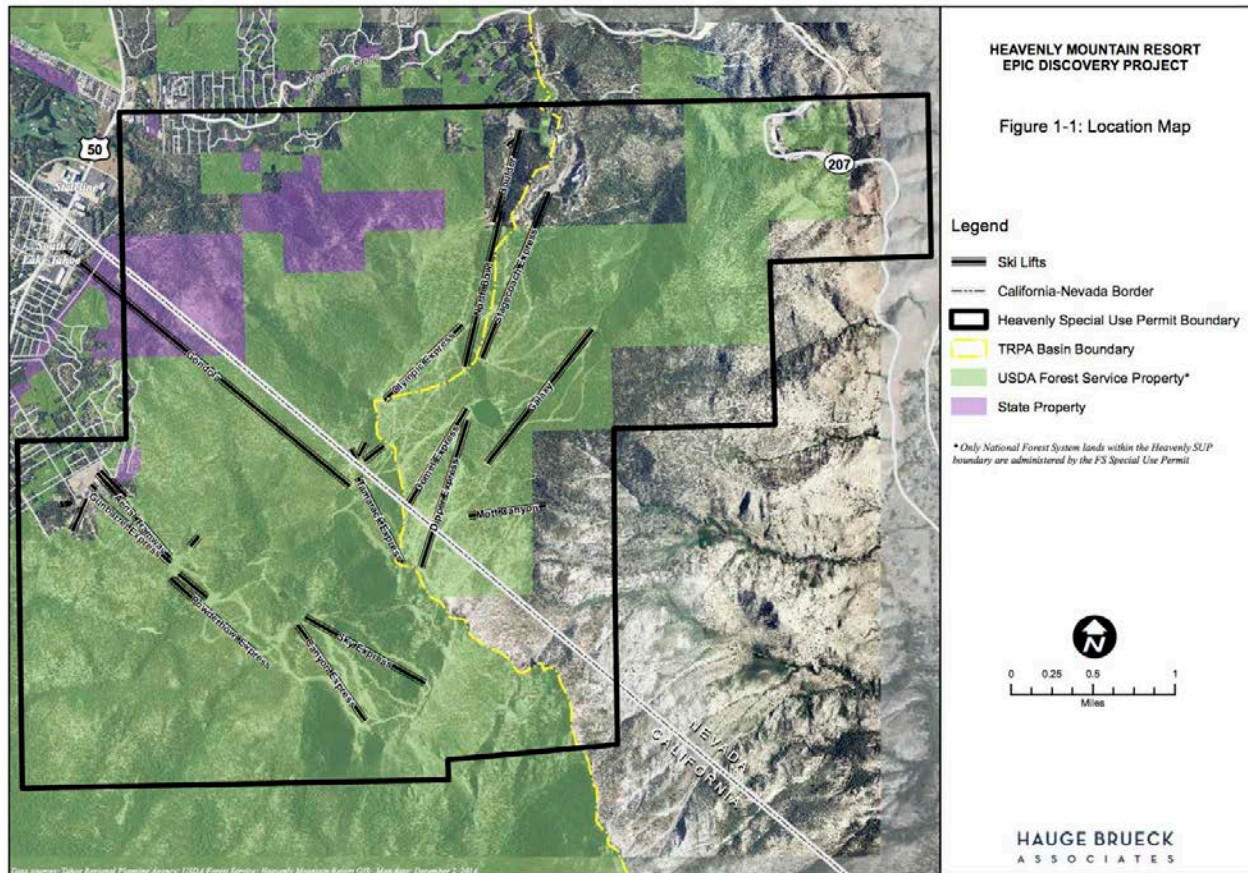
- e • The SUP boundary depicted in the referenced figure incorporates Van Sickle Bi-State Park (both Nevada
x and California properties). This is incorrect and gives a false impression to the public about access from lands to which Heavenly is contracted by the USFS. This issue was brought to light during the Douglas County Master Plan Update process, but was not addressed. This boundary needs to be revised to accurately depict the lands incorporated within the SUP.

- 24 | Page 3.13-7, second paragraph: "...the Van Sickle Connector Trail and Tahoe Rim Trail traverse Heavenly's SUP."
- This is an accurate statement – but not to the extent depicted in Figure 13.3-1. The SUP boundary depicted in the referenced figure incorporates the Van Sickle Bi-State Park (both Nevada and California properties). This is incorrect and gives a false impression to the public about access from lands to which Heavenly is contracted by the USFS. This boundary needs to be revised to accurately depict the lands incorporated within the SUP.
- 25 | Page 13.3-9, Figure 13.3-1: Recreation Context
- SUP boundary is incorrect and needs to be revised to accurately depict the lands incorporated within the SUP (see comments, above).
- 26 | Page 13.13-14, last paragraph
- This paragraph states HMR summer use over the past six seasons was 109,000, with the proposed project expected to increase annual summer visitation by 50,000 users annually, based on Table 3.13-4. This is in comparison to 900,000 skiers annually. See comments Page 3.13-26.
- 27 | Page 3.13-25, first paragraph: "The recreational experience of these trails would be similar to that on hiking and mountain biking trails throughout NFS lands."
- This may be an inaccurate supposition, as NFS trails generally do not have lift assisted access.
- 28 | Page 3.13-26, fourth paragraph: "With full build out of the proposed activities, the proposed action is anticipated to result in approximately 50,000 new summer visitors to HMR."
- This number may be low as this projection is based solely on existing Gondola use. Are figures available that are based the potential increases created by the improvements and number of additional activities that will be available to visitors?
- 29 |
- Will the Panorama Trail be subject to capacity limits similar to other proposed activities? Will adjacent impacted properties/facilities have a role in determining these capacity limits?
- 30 | Page 3.13-27, third paragraph: "This trail (Panorama) would provide an additional access point to the Tahoe Rim Trail and the network of mountain trails surrounding Heavenly's SUP and would create lift access and numerous loop opportunities, thereby increasing use of existing recreational resources." and "As a central access point...the improvement of trail resources at HMR would likely have a positive impact on recreation in the area so long as monitoring, maintenance and operations adjust to the additional use."
- Once these trails are open to this type of access/use, it will be very difficult to change that access/use pattern, permissible or otherwise. As they pertain to impacts to VSBSP, mitigation options need to be identified, evaluated and incorporated into the final project design, with the approval of NDSP and its California partner.
- 31 | Page 3.13-4, last paragraph: "This trail (Panorama) would provide an additional access point to the Tahoe Rim Trail and the network of mountain trails surrounding Heavenly's SUP and would create lift access and numerous loop opportunities, thereby increasing use of existing recreational resources." and "As a central access point...the improvement of trail resources at HMR would likely have a positive impact on recreation in this area so long as monitoring, maintenance and operations adjust to the additional use."
- Creating lift access, and then stating that monitoring, maintenance and operations need to adjust to any negative impacts may not be a sound approach. Once these trails are opened to this type of use, it will be very difficult to change that expectation.

- 32 | Page 3.13-28, first paragraph: "a large volume of local use is anticipated" and "The greatest increase is anticipated on the proposed Panorama Trail and existing Van Sickle Connector Trail. This is the most direct route from the top of the Gondola to the base of the Gondola and nearly entirely downhill."
- Once these trails are opened to this type of use, it will be very difficult to change and/or mitigate public expectation of the ability to access the village.
 - The existing Tahoe Rim Connector Trail was never intended to accommodate the volume of users and impacts potentially generated by lift-assisted mountain bike use, which would result from the proposed project.
- 33 | Page 3.13-28, third paragraph: "Increased use of the Van Sickle Connector Trail is anticipated as many intermediate to advanced riders in the proposed mountain bike park would likely choose to ride down to Heavenly Village via this trail rather than downloading in the Gondola." and "Lift access to the top of the Van Sickle Connector could also attract downhill mountain bikers"
- Once these trails are opened to this type of use, it will be very difficult to change and/or mitigate public expectation of the ability to access the village/use the Tahoe Rim Connector as a downhill trail.
 - The existing Tahoe Rim Connector was not intended to accommodate the volume of users and impacts potentially generated by lift-assisted mountain bike use, which would result from the proposed project.
- 34 | Page 3.13-29, first paragraph: "...any additional use of the Tahoe Rim Trail and/or the Van Sickle Connector Trail resulting from the proposed project would be operated consistent with the intended use and management of these trails."
- The existing Tahoe Rim Trail Connector was not intended to accommodate the volume of users and impacts potentially generated by lift-assisted mountain bike use, which would result from the proposed project.
- 35 | Page 3.13-31: "The proposed mountain bike park and connector trails could result in additional use of the Tahoe Rim Trail and Van Sickle Connector."
- Revise language to "will likely result in additional use of the Tahoe Rim Trail and TRT Connector"; "could" does not represent the potential for impact on this section of trail.
- 36 | Page 3.13-31: "Any additional use...would be consistent with the intended use and management of these trails and is not anticipated to degrade the recreational experience."
- The existing Tahoe Rim Trail Connector was never intended to accommodate the volume of users and impacts potentially generated by lift-assisted mountain bike use, which would result from the proposed project.
- 37 | Page 3.13-32, Impact section
- This section, (third paragraph in section) does not adequately outline the potential impacts from the proposed connection of the Panorama Trail to the Tahoe Rim Trail Connector.
- 38 | Page 3.13-32, CEQA section: "The mountain bike park and connector trails, included in all action alternatives, could result in additional use of the Tahoe Rim Trail and Van Sickle Connector..."
- Revise language to "will likely result in additional use of the Tahoe Rim Trail Connector"; "could" does not represent the potential for impact on this section of trail.
- 39 | Page 3.13-33, NEPA Analysis section: "The mountain bike park and connector trails, included in all action alternatives, could result in additional use of the Tahoe Rim Trail and Van Sickle Connector..."

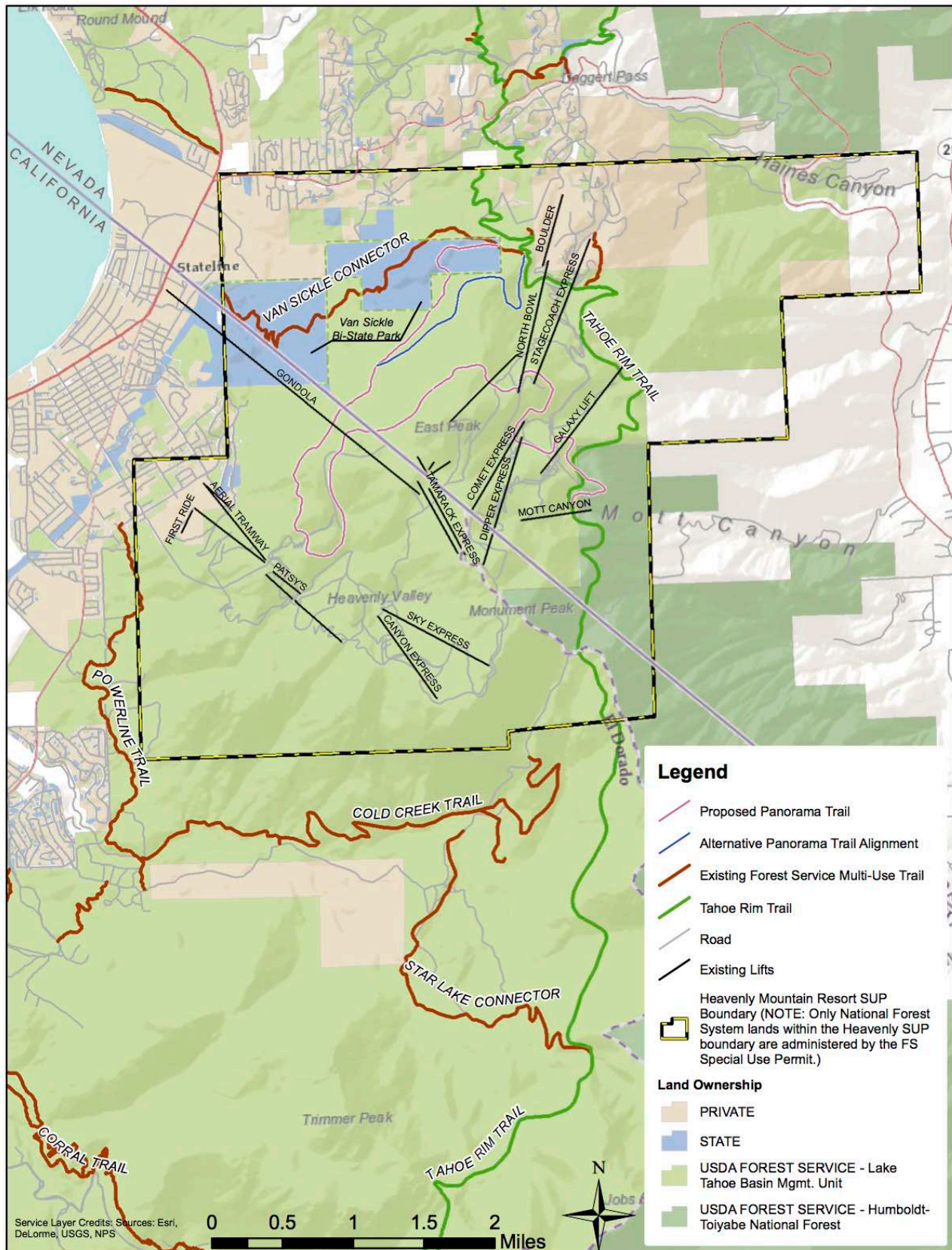
- 39
- Revise language to "will likely result in additional use of the Tahoe Rim Trail Connector"; "could" does not represent the potential for impact on this section of trail.
- 40
- Page 3.13-33, NEPA Analysis section: "However, any additional use of the Tahoe Rim Trail and/or Van Sickle Connector Trail resulting from the proposed projects would be consistent the intended use and management of these trails and is not anticipated to degrade the recreational experience."
- The existing Tahoe Rim Trail Connector was not intended to accommodate the volume of users and impacts potentially generated by lift-assisted mountain bike use, which would result from the proposed project.
 - Based on the above comments, there may be adverse effects.
- 41
- Page 3.13-35, CEQA/TRPA Analysis: "The mountain bike park and connector trails, included in all action alternatives, could result in additional use of the Tahoe Rim Trail and Van Sickle Connector trail in the vicinity of HMR."
- Revise language to "will likely result in additional use of the Tahoe Rim Trail Connector"; "could" does not represent the potential for impact on this section of trail.
- 42
- Page 3.13-35, CEQA/TRPA Analysis: "However, any additional use of the Tahoe Rim Trail and/or Van Sickle Connector Trail resulting from the proposed projects would be consistent the intended use and management of these trails and is not anticipated to degrade the recreational experience."
- The existing Tahoe Rim Trail Connector Trail was not intended to accommodate the volume of users and impacts potentially generated by lift-assisted mountain bike use, which would result from the proposed project.
- 43
- Page 3.13-35, CEQA/TRPA Analysis: "Additionally, the recreational experience on these trails would be monitored and if a reduction in the quality of the experience or degradation of the facility were observed, improvements would be required."
- As they pertain to impacts to VSBSP, mitigation options need to be identified, evaluated and incorporated into the final project design, with the approval of NDSP and its California partner.
- 44
- Page 3.13-35: "The MP 96 Final EIR/EIS/EIS and MPA 07 Final EIR/EIS/EIS did not identify the needs for new parks or recreational facilities as a result of the MP build-out. Therefore new or expanded park facilities would not be required to serve new direct or indirect population growth for the proposed action of action alternatives."
- Construction of the proposed Panorama Trail will have an effect on the facilities at Van Sickle Bi-State Park, including restrooms and day use facilities and, potentially, parking. Therefore, NDSP and its California partner anticipate that new or expanded facilities will be required to serve the expanded use within the park that will occur as a direct result of the proposed project. This need, however, may or may not be related to population growth.

- Comment 3-1 Thank you for taking the time to review our project. Please refer to the following detailed responses to the specific comments included in your letter regarding impacts to existing trails and Van Sickle Bi-State Park.
- Comment 3-2 Chapter 2, Section 2.5, page 2-41 of the DEIR/EIS/EIS provides a discussion of the alternatives considered but eliminated from detailed study. Alternatives considered but eliminated include: No Mountain Coaster, Construction of Two Mountain Coasters, Panorama Trail within Maggie's SEZ, Panorama Trail Connection to Heavenly California Base, Mountain Bike Park in the Sky Meadows Basin Watershed, and Mountain Bike Park Access using Dipper Lift instead of Comet Lift.
- The Panorama Trail Connection to Heavenly California Base would have provided a connection to the California base area instead of the Van Sickle Bi-State Park. This alternative was eliminated because: the Epic Discovery project doesn't preclude a California base area connection as a future option; biological surveys have not included this route; the connector would not mitigate an impact of the project; and a trail user can currently access the California base using existing bike facilities located in town.
- Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-3 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-4 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-5 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-6 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-7 DEIR/EIS/EIS Figure 1-1 has been revised and includes the following note in the legend, "Only National Forest System lands within the Heavenly SUP boundary are administered by the Forest Service Special Use Permit." While the boundary for Heavenly's SUP was not changed on Figure 1-1, property ownership is more clearly labeled in color to better illustrate the location of Forest Service property and State property. The figure also more clearly shows the TRPA basin boundary and Heavenly's ski lifts. With improved clarity provided in Figure 1-1 (see figure below) and the addition of the note regarding National Forest System lands and the Special Use Permit, the map accurately depicts the boundary while clarifying the applicability of the SUP.



- Comment 3-8 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-9 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-10 DEIR/EIS/EIS Figure 2-1 is unable to show the entirety of the Panorama Trail while also showing each of the proposed activities within Adventure Peak, East Peak Reservoir Basin, and Sky Meadows Basin. If the map were enlarged to accommodate the extent of the Panorama Trail, the other proposed activities would become unreadable. Figure 2-5 depicts the Panorama Trail in its entirety and has been revised to show the location of the Alternative Panorama Trail Alignment located southeast of the proposed alignment near the Van Sickle Trail. Refer to Figure 2-5 (see Master Response 1), which provides a clear illustration of the entire extent of the Panorama Trail as well as the Alternative Panorama Trail Alignment.
- Comment 3-11 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-12 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-13 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-14 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-15 Refer to Master Response 1 for a discussion of potential trail conflicts.

- Comment 3-16 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-17 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-18 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-19 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-20 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-21 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-22 Only National Forest System lands within the Heavenly SUP boundary are administered by the Forest Service Special Use Permit. The Panorama multi-use trail partnership commitment provides further detail on management and monitoring methods which would protect the recreational experience on the Van Sickle Connector Trail. The reader is referred to Section 2.3.5 of the revised DEIR/EIS/EIS for additional information.
- Comment 3-23 DEIR/EIS/EIS Figure 3.13-1 (see below) has been revised and includes the following statement, “Only National Forest System lands within the Heavenly SUP boundary are administered by the Forest Service Special Use Permit” to clarify that not all land shown within the SUP boundary is subject to the permit. Other changes to Figure 3.13-1 include the addition of lines demarcating the Proposed Panorama Trail, Alternative Panorama Trail Alignment, and existing lifts. Figure 3.13-1 also uses color-coding to illustrate the following land ownership categories: Private, State, USDA Forest Service – Lake Tahoe Basin Management Unit, and USDA Forest Service – Humboldt-Toiyabe National Forest. These changes and clarifications clearly delineate which lands are subject to the SUP with the Heavenly Mountain Resort SUP boundary while depicting the location of existing and proposed trails in relation to one another.
- Comment 3-24 Refer to response to comment 3-23 regarding the SUP boundary in Figure 3.13-1.
- Comment 3-25 Refer to response to comment 3-23 regarding the SUP boundary in Figure 3.13-1.
- Comment 3-26 Refer to the response to comment 3-28.
- Comment 3-27 The referenced discussion on DEIR/EIS/EIS page 3.13-25 relates to the recreation experience on the East Peak Lodge hiking trail and the Panorama Trail. These trails would be constructed to modern design standards—accommodating both hikers and bikers with proper widths and drainage to ensure a quality and sustainable recreational experience. While these trails would be accessible from lifts at Heavenly, this would not impact the nature of the recreational experience on these trails. The experience on these trails would be similar to trails on NFS lands in relatively well-used areas. That is, users could expect to encounter man-made infrastructure and other users, but users would explore the area under their own power and at their own pace.



- Comment 3-28 Visitation estimates associated with Heavenly's summer activities take into account the capacities of individual activities (existing and proposed) as well as historic/anticipated use of Heavenly's SUP area as summer and multi-season activities at ski areas become more popular.
- Comment 3-29 The proposal does not include capacity limits for the Panorama Trail. The capacity limits of many other proposed activities are based on operational and manufacturer limitations. Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-30 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-31 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-32 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-33 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-34 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-35 The text of DEIR/EIS/EIS Chapter 3.13 (Recreation) has been revised to reflect that increased visitation to Heavenly Mountain Resort resulting from the proposed projects *would* likely result in some additional use of the Tahoe Rim Trail and Van Sickle Connector Trail. Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-36 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-37 By design, the proposed multi-use Panorama Trail would establish a link between the ski area, Heavenly Village and surrounding public lands—including the Tahoe Rim Trail. Impacts of the proposed connection between the Panorama Trail and Tahoe Rim Trail are discussed in the DEIS and FEIS under "Adjacent and Connecting National Forest System Lands" (DEIR/EIS/EIS, p. 3.13-27).
- Comment 3-38 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-39 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-40 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-41 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-42 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-43 Refer to Master Response 1 for a discussion of potential trail conflicts.
- Comment 3-44 Refer to Master Response 1 for a discussion of potential trail conflicts.

**Comment Letter 4 – Harrison, Elizabeth, Nevada Department of Conservation and
Natural Resources, Division of State Lands, 10/20/14**

LEO DROZDOFF
Director

Department of Conservation
and Natural Resources

CHARLES DONOHUE
Administrator

BRIAN SANDOVAL
Governor



State Land Office
State Land Use Planning Agency
Nevada Tahoe Resource Team
Conservation Bond Program -Q1

Address Reply to

Division of State Lands
901 S. Stewart St. Suite 5003
Carson City, Nevada 89701-5246
Phone (775) 684-2720
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Web www.lands.nv.gov

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Division of State Lands

October 20, 2014

Heavenly Epic Discovery Project
Attention: David Landry
Senior Planner
Tahoe Regional Planning Agency
P.O. Box 5310
Stateline, NV 89449

RE: NEVADA STATE CLEARINGHOUSE NOTICE E2015-032, DEIS-HEAVENLY EPIC
DISCOVERY PROJECT

Dear Mr. Landry,

The Nevada Tahoe Resource Team, which is comprised of individuals from the Division of State Lands, the Department of Wildlife, the Division of Forestry and the Division of State Parks are herein providing comments in response to the above referenced notice of the DEIS- Heavenly Epic Discovery Project. Please note that additional comments specific to the project's potential impact to the Van Sickle Bi-State Park, which is jointly managed by the Nevada Division of State Parks and the California Tahoe Conservancy, are being provided under a separate letter.

- 1 | 1. Page 3.9-6
Pallid bat and fringed myotis have both been recently detected in the east Tahoe Basin, between elevations 7,000 – 7,600 ft, north of Spooner Summit. Therefore, suitable habitat for those species could occur within the project boundary, and the species could be present during project implementation. Since these species are especially sensitive to human presence, measures should be taken to avoid roost sites, especially maternity roosts, whenever possible. Acoustic surveys should be conducted around project activity sites to determine whether roost sites exist in the area. If active roost sites are found, efforts should be made to direct human activity at least 100 ft. away from roost sites to avoid impacts to pallid bats and fringed myotis.
- 2 | 2. Page 3.9-14
Blue grouse have recently been observed within Heavenly's operations area, in the Edgewood Creek drainage. This was one mile from the project boundary, near the water storage tanks past the end of Tramway Dr. Therefore, the species could be present within the project boundary during project implementation. To avoid impacting this species, riparian vegetation

should be disturbed as little as possible, and surveys conducted under mitigation measure BIO-3 on page 3.9-44 should include this species.

- 3 | 3. Page 3.9-19
Bald eagles have nested along the Carson River for years, on TNC property at River Fork Ranch. This is an active and successful nest that is only 5 miles from the project boundary. Therefore, the potential exists for East Peak Lake to be used as a foraging area for bald eagles. If bald eagles are observed using the area as a roost site or feeding area, mitigation measures to avoid impacts should include protecting large diameter trees, limiting development near the shore, and even reducing boating activities on East Peak Lake. Typically, buffer zones are recommended for important eagle foraging areas.
- 4 | 4. Page 3.9-20
Many of the structures proposed as a part of this project, including the zip lines and roller coaster, could impede wildlife movement (per TRPA Code of Ordinances Chapter 82.3.2). Data from Nevada Department of Wildlife show frequent migration through the project area during mid-May and late October (+/- two weeks). An increase in human activity in these migration corridors (i.e., the project area) during these time periods should be avoided as to not deter mule deer migration, and permanent structures should be designed as to not impede mule deer migration. There are also resident deer within Heavenly's operation area. Please evaluate possible mitigation measures to accommodate mule deer migration during the above-stated timeframes. Possible measures include designing structures with large gaps or high clearance that will allow unimpeded passage for deer, dismantling structures during the migration season, and short-term closures to reduce the number of people in the area during migration. These measures relate to impact BIO-5 on page 3.9-47.
- 5 | 5. Page 3.9-34
Sightings of threatened or endangered species during annual surveys should also be reported to Mark Enders at Nevada Department of Wildlife
- 6 | 6. Page 3.9-44
Mitigation measure BIO-3 is very important and critical for implementation. Performing annual nesting bird surveys at all project locations and creating a 300-ft inactivity buffer around active nests is the only way to eliminate the chances of violating the Migratory Bird Treaty Act of 1918. Please provide survey data to Mark Enders at Nevada Department of Wildlife.
- 7 | 7. Page 3.9-47
Mitigation measure BIO-4 is very important and critical for implementation. Ceasing activity within a 100-acre buffer around marten den sites is the best way to avoid affecting this state sensitive species.
- 8 | 8. Page 3.9-47
Citing data from 1975 is inadequate for evaluating current mule deer migration corridors. Current NDOW data show frequent migration through the project area during mid-May and late October (+/- two weeks). This impact, BIO-5, must be re-evaluated with current data.
- 9 | 9. Page 3.9-53
Nevada's Wildlife Action Plan was not consulted during this analysis, even though half of the proposed project will take place in Nevada. The EIS needs to be amended as appropriate to include Nevada's Wildlife Action Plan.

- 10 | **10. Page 3.9-55**
Mitigation measure BIO-8 is extremely important and should be implemented as strictly as possible. Heavenly has had bear problems in the past due to a lack of bear-resistant trash containers (BRCs) and not fully utilizing containers that were available. This particular mitigation measure is the only way to prevent numerous human-bear conflicts in the project area.

Thank for you the opportunity to comment. If there are any questions, please contact me at (775) 684-2736 or at eharrison@lands.nv.gov.

Sincerely,

Elizabeth Harrison
Lake Tahoe Coordinator
Nevada Tahoe Resource Team
Nevada Division of State Lands

- Comment 4-1 Impacts to pallid and fringed myotis are discussed in DEIR/EIS/EIS Impact BIO-2. A new design feature (Section 2.3.5, measure WL-10) has been added to the project that requires annual surveys of proposed structures and facilities to minimize disturbance to sensitive bat species that may be present.
- Comment 4-2 Blue grouse are covered by the Migratory Bird Treaty Act of 1918 and therefore are included in the surveys required under EIR/EIS/EIS Mitigation Measure BIO-3.
- Comment 4-3 Impact BIO-2 includes new language concerning bald eagle: “The bald eagle has been delisted as of 2007. While suitable habitat exists within the Special Use Permit Boundary, no observations of bald eagle have been recorded during wildlife surveys performed 1991-2014. However, due to the suitable roosting habitat in the area surrounding East Peak Lake, the possibility exists for use of the area by bald eagle. The habitat for bald eagle in the East Peak Lake area is of low suitability due to the existing development that lines the west shore of the man-made reservoir, roadways and associated traffic along the north and east sides of the lake and the lack of fish in the lake that would be necessary for forage. Based on the historical absence of this species from the project area and low habitat suitability, there would be no impacts resulting from implementation of the Proposed Action or the Alternatives.”
- Comment 4-4 New language has been added to Impact BIO-5 regarding mule deer: “Mule deer have been observed within the existing and proposed operational boundary of Heavenly Mountain Resort during the spring, summer and autumn months. Nevada Division of Wildlife has mapped the migration corridors of the resident Carson River Deer Herd (NDOW 1975 and NDOW 2014). Nevada Division of Wildlife was contacted to receive recent telemetry data that has been obtained for mule deer within the project area. The data received, confirmed and further supported observations

that mule deer are present within the project area. NDOW also provided a map showing the location of the major movement corridor that lies to the east of the operational boundary of Heavenly in the lower elevations toward the Carson Valley. The telemetry also shows the movement of some individuals through the resort (NDOW 2014). Construction of the proposed projects will not result in any impediment to the movement of mule deer either through structural blockage or from human activity. This map shows the closest mapped migration corridor to the south of the operational footprint of the resort through the High Meadows area. No projects are proposed which would impact or modify this migration corridor.”

- Comment 4-5 Future sightings of threatened, endangered or candidate species will be reported to Mark Enders at Nevada Division of Wildlife.
- Comment 4-6 Future results of migratory bird surveys will be reported to Mark Enders at Nevada Division of Wildlife.
- Comment 4-7 Thank you for taking the time to review Mitigation Measure BIO-4 and for your concurrence on its implementation.
- Comment 4-8 Refer to response to comment 4-4.
- Comment 4-9 The Nevada Wildlife Action Plan is included in the analysis and is described on EIR/EIS/EIS page 3.9-30.
- Comment 4-10 Thank you for taking the time to review Mitigation Measure BIO-8 and for your concurrence on its implementation..

**Comment Letter 5 – Bartlett, Tina, California Department of Fish and Wildlife,
10/20/14**



State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
North Central Region/Region 2
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95667
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EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director



October 20, 2014

David Landry, Senior Planner
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128 Market Street
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dlandry@trpa.org

RECEIVED
OCT 23 2014
TAHOE REGIONAL
PLANNING AGENCY

Subject: Comments on the Environmental Impact Report/Statement for the Heavenly Mountain Resort Epic Discovery Project (SCH No.2013112051)

Dear Mr. Landry:

- 1 The California Department of Fish and Wildlife (Department) is providing comments on the Environmental Impact Report/Statement (EIR/S) for the Heavenly Mountain Resort Epic Discovery Project (project) as both a trustee agency and responsible agency under the California Environmental Quality Act (CEQA). As trustee for the State's fish and wildlife resources, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species (Guidelines § 15386). The Department may also be a responsible agency for a project affecting biological resources where we will exercise our discretion after the lead agency to approve or carry out a proposed project or some facet thereof (CEQA Guidelines § 15096).

The US Forest Service (USFS), Lake Tahoe Basin Management Unit (LTBMU), the Tahoe Regional Planning Agency (TRPA), and the California Regional Water Quality Control Board – Lahonton Region have directed the preparation of a joint environmental document for the project. The project proponent proposes to improve year-round recreation opportunities within the developed portions of the ski area on National Forest System lands using existing facilities and infrastructure to include, but is not limited to, zip-lines, trails, ropes course, coaster, and boat dock. The project site is located partially inside and partially outside the Lake Tahoe Region on the south shore of Lake Tahoe in El Dorado County, California and Douglas County, Nevada.

- 2 The Department has concerns that the EIR/S does not adequately analyze impacts to biological resources nor provide mitigation measures that would reduce these impacts to a less-than-significant level. The EIR/S focuses on the impacts associated within the footprint of the project and not the impacts associated with the ongoing use of the facilities that may have significant impacts to sensitive resources. Although the site is currently heavily used in the winter months, the spring and summer may provide valuable habitat for resident and migratory species. In addition, the EIR/S does not provide figures showing the extent of the impacts overlaid on sensitive resources and relies on future surveys to identify locations of sensitive resources.
- 3

Conserving California's Wildlife Since 1870

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Sierra Nevada Yellow-Legged Frog

4 A California Natural Diversity Database (CNDDB) search of the eight 7.5-minute United States Geologic Survey (USGS) quadrangles surrounding the project site revealed that the federally endangered and State-threatened Sierra Nevada yellow-legged frog (*Rana sierrae*) have been recorded within a five-mile radius of the project (see **Attachment A**). The EIR/S states that breeding habitat for the federally endangered and State-threatened Sierra Nevada yellow-legged frog (SNYLF) was determined not to occur in the project area; however, the document does not describe the rationale for this conclusion as there are wetlands, creeks and ponds throughout the project area. SNYLF inhabits lakes, ponds, meadow streams, isolated pools, and sunny riverbanks in the Sierra Nevada. If suitable habitat exists within the area of impact, the Department recommends that a minimum of three (3) amphibian surveys are conducted during July and August in accordance with the Amphibian Visual Encounter Surveys (VES) protocols (see references below and **Attachment B**).

5 In addition, the impact analysis is confusing and does not provide adequate mitigation for this species, if found. The analysis does not meet standards as identified in the CEQA Guidelines §§ 15140, which states that "EIRs shall be written in plain language... so that the public can rapidly understand the documents." Although the document states that Sky Meadows Basin and East Peak Reservoir may contain habitat, the document also states that no waters suitable for breeding occurs in the project area or vicinity (see Table 3.9-1, page 3.9-4). Then on page 3.9-35, the document states that these areas are associated with projects. The EIR/S references "mapped suitable habitat" but does not show a map of the habitat.

6 The impact assessment should include the reasonably foreseeable direct and indirect changes (temporary and permanent) that may occur with implementation of the project. The impact analysis does not take into account the disturbance from increased human activities in the area, which may disrupt breeding and migratory behavior. Mitigation BIO-1 defers mitigation through consultation with the United States Fish and Wildlife Service (USFWS). The Sierra Nevada yellow-legged frog is a State-listed species and therefore the Department recommends that the project proponent consult with Department as well as the USFWS regarding impacts to this species and update the EIR/S as appropriate. Even so, consultation is not mitigation. CEQA Guidelines §15126.4 (a)(1)(B) states that formulation of mitigation measures should not be deferred until some future time. Mitigation measure BIO-1 relies on future approvals or agreements with USFWS as a means to bring identified significant environmental effects to below a level that is significant. Because there is no guarantee that these approvals will ultimately occur, the Department believes that the above mitigation measure is unenforceable and does not bring the impacts to biological resources to below a level that is significant.

Great Gray Owl

8 The EIR/S does not describe the rationale for the conclusion that breeding habitat for the State-endangered great gray owl (*Strix nebulosa*) is not located in the project area (see Table 3.9-1, page 3.9-5). The Department requests additional evaluation of this conclusion. According to the document, the use of the area by the great gray owl is uncertain (page 3.9-12). Recent surveys throughout California have indicated that great gray owls can occur in different habitats than previously thought (CNDDB records; Kevin Roberts at SPI pers. comm.). Surveys for great gray owl were not conducted in the project area and suitable habitat may be present within the project area or vicinity. There is a record less than three (3) miles to the south of the project area (Stermer 2014) and a CNDDB record approximately 14 miles from the project area (CDFW 2014). If great gray owls occur in the area, the increase of recreational activities may have a significant effect on this State-listed species. Although great gray owls were not detected during surveys for spotted owls, protocol-level surveys for great gray owls were not conducted;

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- 8 therefore, it is not logical to conclude that this State-listed species is not present or that it could not be impacted by the proposed project. The Department recommends that protocol-level surveys are conducted, the impact analysis address reasonably foreseeable direct and indirect changes (temporary and permanent) that may occur with implementation of the project, and that the CEQA document include enforceable mitigation measures.

9 **California Endangered Species Act**

The Department has regulatory authority pursuant to California Endangered Species Act (CESA) over projects that have the potential to result in the take¹ of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species. Take of species protected pursuant to CESA is prohibited (Fish and Game Code [FGC] § 2080). However, the Department, may authorize the take of these species by permit if the conditions set forth in FGC Section 2081, subdivisions (b) and (c) are met (See also Cal. Code Regs., title 14, § 783.4).

The Department has concern that the project may adversely affect and may have the potential to take a State-listed species' as there is potential for listed species to occur on the site. If the project may result in the take of any species protected pursuant to CESA, an incidental take permit, issued by the Department, should be obtained before the take occurs. If the Department issues an incidental take permit, the Department must rely on the CEQA document to prepare and issue its own findings regarding the project (CEQA Guidelines §§15096 and 15381). The Department will only use the CEQA document if it adequately addresses the effects of those project activities, including all avoidance, minimization and the mitigation required for the take authorization.

The project will increase the extent of recreational activities in the summer time increasing human-wildlife interactions during this sensitive time. Any activity resulting in loss of habitat, decreased reproductive success, or other negative effects on population levels of species protected pursuant to CESA should be addressed, avoidance and minimization measures proposed, and mitigation measures proposed to reduce impacts to a level of less than significant.

10 **Nesting Birds and Raptors**

The project has the potential to disturb bird species or nests protected under the Migratory Bird Treaty Act (MBTA), FGC §3503 and 3503.5. If the project activities occur during the nesting season (determined by region, species, and climate), construction activities could result in disturbance to nesting raptors and other migratory birds. Raptors and other migratory birds are protected under the MBTA and FGC §3503.5; therefore, potential impacts may be considered potentially significant unless avoidance, minimization and/or mitigation is incorporated. Construction activities should avoid the nesting season or propose mitigation measures to comply with the MBTA and FGC §3503.5. If nests of special-status species are identified on or adjacent to the project site, implementation including on-going operation of the project may have long-term effects on the success of the nest site. The proposed increase in recreational opportunities may result in on-going nest disturbance, if nests are located within or near those activities. Although Mitigation Measure BIO-3 states that annual nest surveys will be conducted in certain areas and a 300-meter buffer will be maintained if a nest is found, for particularly sensitive birds, 300 meters may not be the appropriate distance depending on the activity and level of disturbance. The project may have long-term effects on species that nest in the area. If project activities are proposed in an area with a sensitive resource (such as a raptor nest or

¹ Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

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- 10 nursery site) that was not identified in the EIR/S, the extent of the impacts to that resource was not identified, analyzed or mitigated by the CEQA document.

The Department recommends identifying the resources, siting the project activities to avoid those resources, or mitigating to the extent feasible to reduce the impact to a less-than-significant level. For some small migratory birds, where nest site fidelity is not an issue, regular nest surveys and avoidance would be appropriate. Avoidance may include requiring signs to warn visitors of the sensitive nature of the area or to close certain areas or trails when sensitive species are nesting.

11 **Riparian Habitat**

The EIR/S does not clearly state the extent and impacts to riparian or stream environments. Section 3.2 (Stream Environment Zones) references Section 3.1 (Water Resources), but does not explicitly state whether jurisdictional features are present. According to the California Streams layer in BIOS, several small streams/drainages crisscross the area (**Attachment C**). The construction of trails and the other recreational features have the potential to impact these drainages. The analysis for Water-6 indicates that there will be minimal impacts to Heavenly Valley Creek. The EIR/S does not state what, if any, jurisdictional features will be removed, disturbed, or otherwise altered by the project. An entity (any person, State, local government agency, or public utility) should consider and analyze whether implementation of the proposed project will result in reasonably foreseeable potentially significant impacts subject to regulation by the Department under Section 1600 et seq. of the FGC. In general, such impacts result whenever a proposed project involves work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel, including ephemeral streams and watercourses. As a responsible agency under CEQA, the Department must rely on the CEQA analysis for the project when exercising our discretion after the lead agency to approve or carry out some facet of a proposed project, such as the issuance of a Lake and Streambed Alteration Agreement (LSAA). Therefore, the EIR/S should include specific, enforceable measures to be carried out onsite or within the same stream system that will avoid, minimize and/or mitigate for project impacts to the natural resources.

12 **Carson River Deer Mule Deer Herd**

The EIR/S does not analyze the impacts to the Carson River Deer herd from the ongoing human disturbance that will result from the proposed project. The analysis on page 3.9-37 to 38 discusses the potential impacts to deer herds based on the footprint of the structures and not the activities and level of disturbance that will result from the proposed project. The continued or increased presence of humans significantly reduces deer use of any area. Fawning habitats are particularly vulnerable to human disturbance as it may cause significant reductions in herd productivity. The EIR/S states "there is no high quality fawning habitat in project area." The justification for classifying the quality of the habitat is not described in the document and therefore the Department cannot verify its conclusions. In addition, the document states operation "may" directly or indirectly affect the deer but "likely" the effect is small. The Carson River Deer herd is extremely fragile and continues to decline (Shelly Blair pers.comm.). The increased human activity in the Spring and Summer, a vulnerable time for fawns and does, may have significant effects on this declining deer herd as development continues in surrounding areas, even in fawning areas that may be considered medium or low-quality. The Nevada Department of Wildlife (NDOW) has recorded telemetry data showing deer use in the project area (**Attachment D**). The Department recommends revising the analysis to include maps of the potential fawning and migratory habitat for mule deer and demonstrate the avoidance or minimization of impacts to this sensitive deer herd from construction and ongoing implementation of the project.

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13 **Summary**

In summary, the Department finds that the EIR/S may not adequately analyze the impacts to biological resources from the proposed project. An adequate impact analysis and formulation of any necessary mitigation measures should be provided prior to project approval.

Thank you for considering our comments. Department personnel are available for consultation regarding biological resources and strategies to minimize impacts. If you have questions please contact Angela Calderaro, Senior Environmental Scientist (Specialist), by e-mail at Angela.Calderaro@wildlife.ca.gov or by phone at (916) 358-2920.

Sincerely,



Tina Bartlett
Regional Manager

ec: Jeff Drongesen, Jeff.Drongesen@wildlife.ca.gov
Jennifer Nguyen, Jennifer.Nguyen@wildlife.ca.gov
Angela Calderaro, Angela.Calderaro@wildlife.ca.gov
Shelly Blair, Shelly.Blair@wildlife.ca.gov

State Clearinghouse

Attachments:

Attachment A - Eight-quad search of the California Natural Diversity Database (CNDDB)
Centered on *South Lake Tahoe, California* USGS 7.5-minute quadrangle.

Attachment B – Amphibian Visual Encounter Surveys

Attachment C – BIOS map

Attachment D – NDOW telemetry data

References:

California Department of Fish and Wildlife (CDFW). 2014. Nine-quad search of the California Natural Diversity Database (CNDDB) Centered on *South Lake Tahoe, California* USGS 7.5-minute quadrangle. Wildlife and Habitat Data Analysis Branch, Rarefind Version 3.1.1. Government version dated August 1, 2014. Data expires February 1, 2015.

Stermer, Chris. 2014. "Great Grey Owl Observations [ds18]". Calif. Dept. of Fish and Wildlife. Biogeographic Information and Observation System (BIOS), Government Edition. Retrieved October 9, 2014 from <http://bios.dfg.ca.gov>.

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Landscape
Heavenly Mountain Resort Epic Discovery Project

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
1 Accipiter gentilis	northern goshawk	ABNKC12060			G5	S3		SC
2 Astragalinus austiniae	Austin's astragalus	PDFAB0F120			G2G3	S2S3	1B.3	
3 Boechera tularensis	Tulare rockcress	PDBRA40130			G2	S2	1B.3	
4 Botrychium ascendens	upswamp moonwort	PPOPH010S0			G3	S2	2B.3	
5 Botrychium crenulatum	scalloped moonwort	PPOPH010L0			G3	S2	2B.2	
6 Botrychium minganense	mingan moonwort	PPOPH010R0			G4G5	S2	2B.2	
7 Botrychium montanum	western goblin	PPOPH010K0			G3	S2	2B.1	
8 Brasenlia schreberi	watershield	PDCAB01010			G5	S2	2B.3	
9 Bruchia bolanderi	Bolander's bruchia	NBMUS13010			G3	S3?	4.2	
10 Capnia lacustris	Lake Tahoe benthic stonefly	IPLD03200			G1	S1		
11 Carex davyl	Davy's sedge	PMCPY033H0			G2	S2	1B.3	
12 Carex lasiocarpa	woolly-fruited sedge	PMCPY03720			G5	S2	2B.3	
13 Carex limosa	mud sedge	PMCPY037K0			G5	S3	2B.2	
14 Chaenactis douglasii var. alpina	alpine dusty maidens	PDAST20065			G5T5	S2	2B.3	
15 Cryptantha crymophila	subalpine cryptantha	PDBOR0A0R0			G3	S3	1B.3	SC
16 Cypseloides niger	black swift	ABNUA01010			G4	S2		
17 Draba asterophora var. asterophora	Tahoe draba	PDBRA110D1			G2T2	S2	1B.2	
18 Draba asterophora var. macrocarpa	Cup Lake draba	PDBRA110D2			G2T1	S1	1B.1	
19 Empidonax traillii	willow flycatcher	ABPAE33040		Endangered	G5	S1S2		
20 Epilobium howellii	subalpine fireweed	PDONA06180			G4	S4	4.3	
21 Epilobium palustre	marsh willowherb	PDONA060R0			G5	S2	2B.3	
22 Eriogonum luteolum var. saltuarium	Jack's wild buckwheat	PDPGN083S4			G5T1	S1	1B.2	
23 Erythranthe carsonensis	Carson Valley monkeyflower	PDPHR01020			G1	S1	1B.1	
24 Fen	Fen	CTT51200CA			G2	S1.2		
25 Glycyrrhiza grandis	American manna grass	PMPOA2Y080			G5	S2	2B.3	
26 Gulo gulo	California wolverine	AMAJF03010	Proposed Threatened	Threatened	G4	S1		
27 Haliaeetus leucocephalus	bald eagle	ABNKC10010		Endangered	G5	S2		
28 Hellsoma newberryi	Great Basin rams-horn	IMGASM6020			G1Q	S1		
29 Helodermis blanfordi	Blanford's bog moss	NBMUS3C010			G5	S1	2B.3	
30 Lepus americanus tahoenensis	Sierra Nevada snowshoe hare	AMAEB03012			G5T3T4Q	S2?		SC
31 Lepus townsendii townsendii	western white-tailed jackrabbit	AMAEB03041			G5T5	S3?		SC
32 Lewisia longipetala	long-petaled lewisia	PDPOR040K0			G3	S3	1B.3	

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Information Expires 02/01/2015

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Landscape
Heavenly Mountain Resort Epic Discovery Project

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
33 Lithobates plerps	northern leopard frog	AAABH01170			G5	S2		SC
34 Martes caurina sierrae	Sierra marten	AMAJF01014			G5T3	S3		
35 Meesia triquetra	three-ranked hump moss	NBMUS4L020			G5	S4	4.2	
36 Meesia uliginosa	broad-nerved hump moss	NBMUS4L030			G4	S3	2B.2	
37 Myotis thysanodes	fringed myotis	AMACC01090			G4	S4		
38 Myotis volans	long-legged myotis	AMACC01110			G5	S4?		
39 Ochotona princeps schisticeps	gray-headed pika	AMAEA0102H			G5T2T4	S2S4		
40 Oncorhynchus clarkii henshawi	Lahontan cutthroat trout	AFCHA02081	Threatened		G4T3	S2		
41 Pandion haliaetus	osprey	ABNKC01010			G5	S3		
42 Pekania pennanti	fisher - West Coast DPS	AMAJF01021	Candidate	Threatened	G5T2T3Q	S2S3		SC
43 Peltigera gowardii	western waterfern lichen	NLVER00460			G3G4	S3	4.2	
44 Picoides arcticus	black-backed woodpecker	ABNYF07090			G5	SNR		
45 Potamogeton robbinsi	Robbins' pondweed	PMPO03020			G5	S3	2B.3	
46 Rana sierrae	Sierra Nevada yellow-legged frog	AAJ2BH01340	Proposed Endangered	Threatened	G1	S1		SC
47 Riparia riparia	bank swallow	ABPAU08010		Threatened	G5	S2S3		
48 Rorippa subumbellata	Tahoe yellow cross	PDBRA270M0	Candidate	Endangered	G1	S1	1B.1	
49 Schoenoplectus subterminalis	water bulrush	PMCYP00Q1G0			G4G5	S3	2B.3	
50 Scutellaria galericulata	marsh skullcap	PDLAM1U0J0			G5	S2	2B.2	
51 Speyeria nokomis carsonensis	Carson Valley silverspot	ILLEP J6056			G3T1	S1		
52 Sphagnum Bog	Sphagnum Bog	CTT131110CA			G3	S1.2		
53 Stuckenia filiformis ssp. alpina	slender-leaved pondweed	PMPO03091			G5T5	S3	2B.2	
54 Stygobromus laticolus	Lake Tahoe amphipod	ICMAL05970			G1	S1		
55 Stygobromus tahoensis	Lake Tahoe stygobromid	ICMAL05A70			G1	S1		
56 Taxidea taxus	American badger	AMAJF04010			G5	S4		SC
57 Utricularia ochroleuca	cream-flowered bladderwort	PDLNT020E0			G4?	S1	2B.2	
58 Viola purpurea ssp. aurea	golden violet	PDVIO04420			G5T2T3	S2S3	2B.2	
59 Xanthocephalus xanthocephalus	yellow-headed blackbird	ABPEX83010			G5	S3		SC

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2013 Sierra Nevada Fish and Amphibian Inventory Protocols

Version 2.52 May, 10 2013

California Department of Fish & Wildlife
HML-Fish/Amphibian Survey Protocols

Overview

Fill out a separate data sheet (substitute "Palm entry" for "data sheet" as necessary) for every lake and pond that has a Site ID, regardless of how un-lake like the site is. If the site is dry, frozen, inaccessible, not found or on private property indicate why a full datasheet was not filled out on the map portion of the datasheet or the condition field and comment field of survey main (e.g., "pond was dry"). Some data subforms will still need to be filled out in the Palm unit (see below). If you encounter ponds not shown on the 7.5' maps, fill out a complete data sheet and assign the site a new ID# from the site IDs list. Meadows, marshes, and spring seeps should always be surveyed, even if they do not have Site IDs. When you visit non-lake habitat such as marshes that contain extensive ponded water, complete a single survey for the entire area. It is critical that all relevant portions of each data sheet be filled out, and that non-relevant portions be indicated as such, not simply left blank. Remember, if the data sheet is improperly filled out, the visit was a complete waste of time and money. At the very least a VES should be conducted, an overview photo (with GPS location) taken and sketch made and recorded in the appropriate portions of the datasheet. If you are using a Palm, enter ALL survey data in your notebook. Digital data is not infallible.

When you complete surveys in habitats that do not contain ponded water (e.g., streams), record the start and end UTM coordinates in the amphibian/reptile visual survey section and complete all other pertinent sections. Many stream sections that will be surveyed are associated with other Site IDs (e.g., 200 m of each inlet and outlet) and the survey data should be entered on the associated Site ID's data sheet. Record all observations in ball point pen.

Recording Numbers: Use the dot-line method for recording the number of "hits" in fields that require a count (4 hits: . . . ; 8 hits: . . . ; 10 hits: . . . , instead of the more typical four vertical lines and a slash. The dot-line method is much more space-efficient and is easier to read. In addition to categorizing the substrate type at each spot, record the presence or absence of aquatic vegetation at each spot (record hits using the dot-line method).

Gen. Lake Descript ('Review/Update Lake' and 'New Lake' Buttons/'New Survey' Button

Site ID: This is a critical number, as it will be used to link the data sheet to a particular body of water and to identify all samples. This ID is written on the 7.5' maps available for crews to take into the field. Check the Site ID carefully before recording it on the data sheet. If you encounter a lake or pond that is not shown on the 7.5' map or a marsh, meadow or spring seep that does not have a Site ID, its Site ID will be taken from a list of available IDs. Each crew member will have a list of unique numbers issued to them. Keep track of your list and do not use numbers more than once.

Location: This description should always be provided, and must be detailed enough to allow someone not familiar with the area to pinpoint the lake on a topographic map. This information is particularly critical for unnamed lakes because the GPS point is the only other reference for the location of the water body. Do not leave this space blank, no matter how obvious the lake feature is. At a minimum, give the distance and the compass direction from the site to two nearby prominent named geographical features (e.g., lakes, peaks, etc.). Lake and peak names, distances, and compass directions should be taken from 7.5' maps. Palm - Use the survey main comment field to note location.

Date: Write as month-day-year (Aug-10-01) and always use the three letter abbreviation for month. Palm- ensure this field auto-populates correctly. If your palm's date is incorrect this field will also be incorrect. If entering data in a palm after the survey was conducted, be sure to change the value of this field to the appropriate survey date!

Lake name: Lake names generally originate from the 7.5' topo map. However, CDFW has also implemented its own naming system for the stocking program. Field crews should have a pre-generated field lake checklist with the proper CDFW lake name and corresponding Site ID. Use this list to populate the Lake name field (data sheet only).

Palm - Lake names should be auto-populated based upon the names from the high_mountain_lakes.shp in the GIS data framework.

Note – consecutively numbered lakes (i.e. Big Pine Lake 1, Big Pine Lake 2, etc.) are numbered starting from lowest elevation and ending at the highest elevation lake.

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Water type: Make a comment in the "Survey Main" comment field listing water type as one of these ONLY: Lake, Stream, Marsh/meadow, Spring seep, POAW, Snowfield or Reservoir).

Lakes should always receive the full protocol and have all applicable fields filled out.

Any unmapped lentic water body that is surveyed, regardless of size, falls under the category of LAKE. Unmapped ponds should be completely surveyed as lakes. Visual fish surveys are **not** acceptable if fish are present even if the site is small and unmapped. A GPS track of the entire perimeter and all inlets and outlets should be recorded.

Stream sites (lotic) should have a complete VES (with GPS track), visual fish survey, shrimp survey, sketch and photo, but do not require littoral and shoreline habitat surveys or inlet and outlet surveys. Palm - Remember to record the start and end GPS points of the stream reach surveyed in the amphibian header subform. The auto populated GPS point in the palms refers always to the downstream start point. Survey upstream and record in the survey comments where you ended the reach. Note that the crew leader should have a list available showing the end reach GPS point. If fish are seen a fish data subform should be filled out to indicate fish presence on a GIS coverage. If possible record fish species and an estimated length for one fish of each species identified. If fish species is unknown record as UKN. Remember to include a descriptive comment on fish numbers and type. (IE: "Saw one unknown trout species."; "Pool filled with BK".)

Marsh/Meadow sites should be surveyed as a single site. Collect a GPS track of the perimeter of the site and any surveyed areas. These will be used to generate a GIS polygon for the site. Alternatively, record as many points as needed to characterize the general shape of the marsh/meadow and enter these into the comment field. Usually less than 10 points will suffice. Complete a VES, visual fish survey, shrimp survey, sketch, and photo. Littoral and shoreline habitat surveys do not apply. If fish are seen a fish data subform should be filled out (see above-stream sites).

Spring seep sites should have a VES (with GPS track), visual fish survey, shrimp survey, sketch and overview photo. Littoral and shoreline habitat surveys do not apply. If fish are seen a fish data subform should be filled out (see above-stream sites).

Seasonality: The determination of whether a water body is perennial or ephemeral should be made based on field determination. Cues such as grass or terrestrial vegetation on the lake bottom; undecomposed duff; obvious bath tub ring; or low lake level can be used to assess status. 7.5' maps may help the surveyor make a call. Perennial lakes and ponds are shown in dark blue, ephemeral lakes and ponds are shown in white with blue diagonal lines, and marshes are indicated by a marsh symbol.

Condition: If the water body indicated on the map is frozen, dry, not found, inaccessible, or on private property your sampling will be limited. Circle the appropriate reason from the list above why the water body was not fully sampled.

Frozen water bodies of two types can be encountered. Completely frozen sites offer little to no opportunity to survey for animals, thus indicate the site is frozen in the appropriate check box and comment fields, take an overview photo with GPS point and move on. Partially frozen sites may offer some opportunity to VES for amphibians, furthermore, this is often the time when high mountain species begin breeding. List the condition as "surveyable" and indicate in the comments that the site is partially frozen (%), take an overview photo with GPS point, and conduct a VES.

Dry sites can often have newly metamorphosed Bufo species and Hyla regilla. VES the site, including any tributaries, and take an overview photo with GPS point.

Sites that are not found should have only the top box of the data sheet filled out, indicating that the site was not found in the "Location" box. Palm - fill out a survey main and choose "not found" from the pick list for condition. If you are navigating to a site with given GPS point and find no evidence that a site exists at this location you should reconnoiter a circular area of 50m from this point to attempt to locate the site. GPS accuracy may be as poor as 30m or more due to satellite locations, tree cover, steep canyons, etc.

Stream widenings are those water bodies shown as perennial ponds but that have more than 10% of their surface area with noticeable current, i.e., these are more like stream pools than ponds. A VES and photo should still be taken.

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If the water body of interest is actually part of another water body (POAW), sample and complete a data sheet for the larger water body, and fill out only the top box of the data sheet for the smaller water body, indicating that it is actually part of the larger water body in the "Location" box. In other words, the site that is considered part of another waterbody will receive a full survey under the Lake ID of the larger site. Palm – fill out a survey main for the site but indicate in the comments that the full data set is associated with a different site and list the site ID in the comments of the survey main. Example: Survey main for site 123.00 states in the comments, "This site is POAW with 127.00, all data associated with site 127.00". Survey main for site 127.00 states in the comments "Includes data for site 123.00, site is POAW with 127.00".

Planning Watershed: The watershed name for all lakes is given on the "Lakes Checklist." Do not use the name of the outlet creek given on the 7.5' map as the drainage name, as this may not be a complete description. Palm - The watershed name should be auto-populated for all pre-identified site IDs. If a new site is being surveyed, use your survey map to identify which planning watershed the new site is located in, and pick the appropriate watershed name from the picklist.

County: For NEW SITES ONLY record the county (from 7.5' map) in which the lake feature lies into the Ref Lakes Subform".

Elevation: For NEW SITES and BASELINES ONLY record the elevation from the 7.5' map, or a calibrated altimeter (such as the altimeter feature in the Garmin GPS) into the Ref Lakes Subform (NewLake button on Palm). When using the map look for labeled contour lines to determine contour interval distance and units. Be aware that maps generated in the office by GIS software that span multiple 7.5' quads may display intervals in both meters and feet. The lake elevation is the average of the contour line below the lake and the contour line above the lake. Thus, if a lake is between the 9860' contour and the 9900' contour, the lake elevation should be recorded as 9880'. A common mistake is to assume that the proximity of a lake to a contour line indicates that the elevation of the lake is close to the value of that contour line. The horizontal distance between two points on a topographic map bears no relationship to the vertical distance between those same two points.

If the lake has a water level elevation (i.e. WL 9832), use this number. (note- water level elevations are a good source to calibrate an altimeter).

UTM Coordinates: This is a pair of numbers that are basically x and y coordinates. In our area, they are North and East. These numbers need only be obtained for lakes not shown on the 7.5' maps or for those lakes lacking a Site ID. Use a GPS unit to obtain the UTM coordinates. Also record the UTM zone that you are in. **Make sure your GPS is setup in UTM NAD83.** These coordinates are critical as they will be used to map the lake.

Maximum lake depth: Measure maximum lake depth with the Speedtech SM-5 Depthmate Portable Sounder. Do not spend inordinate amounts of time sounding every part of the lake to find exactly the deepest part. By sounding the deepest-looking area of the lake, you will quickly get a feel for where the deepest spot actually is. Precise measurements of "maximum depth" are not very important in large deep lakes. However, in shallow lakes (< 5 m) a precise depth (± 0.5 m) is very important. Plan to take maximum depths when setting or retrieving gill nets, but the data must still be collected even when nets are not set. **This data field was ignored too often in the past but is very important for determining future management options!** Enter this value on the Fish Data Form at the top of page 3, or at the bottom on page 2 if no gill net fish survey was completed for a site. In the Palms the Max Depth field is located in the Ref Lakes Subform under the Review/Update Lakes tab. Maximum lake depth should be measured even when field crews are not equipped with a depth sounder. There are many methods to improvise and collect depth measurement, but the simplest is often a known length of cord and a rock.

Team Members: Palm - All crew involved in data collection should be recorded in the Surveyors Subform. Only crew members involved in the VES should have the VES box checked.

Lake Characteristics

The habitat characterization is perhaps the most subjective of the measurements made using this protocol and we hope to reduce the potentially high observer bias by stressing the need for survey consistency. In other words, it is important to practice the protocol, calibrate visual estimates with real measurements, check each other's data, and maintain consistent survey methods.

Littoral zone substrate composition: While walking around the lake perimeter during the VES survey (see Amphibian/Reptile Surveying, below), stop after a set number of paces (see below) and categorize the **dominant** substrate at the lake edge as one of the following: silt, sand (<2mm), gravel (2-32mm), small cobble (32-64mm),

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large cobble (64-256mm), boulder (>256mm), bedrock, or woody debris (pine needles and pine cones = "woody debris").

Categorize the substrate along an imaginary transect line starting at the lake edge, extending perpendicular from shore, and lying along the first 3 meters (10 feet) of the lake bottom. Record the number of hits for each substrate category in the appropriate field. Record a "0" for categories with no hits. Only record aquatic vegetation hits on transect with at least 10% coverage. This avoids over-representing aquatic vegetation in the lake characterization. Record this information under "Substrate transects with aquatic vegetation". Only GSF vegetation should be counted; it does not matter if the vegetation is aquatic or terrestrial. Increase the number of paces between transects when surveying large lakes and decrease the number of paces for small ponds. Shoot for fifty transects, as this is a sufficient number to provide an accurate description of the littoral zone of lakes. Lake perimeter (auto-populated in survey main for existing sites, or estimated) can be divided by 50 for number of meters between transects.

For very small sites where you can observe the entire littoral zone substrate from a single location, it is permissible to estimate the littoral substrate composition by size category visually, and then to record your estimates as percent values for each size category (make sure the total of all substrate categories equals 100%). If the lake contains large numbers of amphibians, conduct the amphibian/reptile survey first and then walk around the lake a second time to measure substrate composition.

Littoral zone depth: At each of the littoral zone transects, also record the water depth at one meter from the shoreline and record in one of the following depth categories (in centimeters): 0-15, 16-30, 31-45, 46-60, >60. As with the littoral zone substrate composition for very small sites, it is permissible to estimate the water depth at one meter visually, and then to record your estimates as percent values for each size category (make sure the total of all depth categories equals 100%).

Shoreline terrestrial substrate composition: At each of the littoral zone transects, also record the dominant substrate along an imaginary line starting at the lake shore (or the top of the "bath tub ring" if the lake's water level is below full pool) and running for 1.5 meters (5 feet) perpendicular and away from the lake shoreline. The substrate categories are silt-64mm, 65-256mm, bedrock, grass/sedge/forb, brush and woody debris. As with the littoral zone substrate composition for very small sites, it is permissible to estimate the terrestrial substrate composition by size category visually, and then to record your estimates as percent values for each size category (make sure the total of all substrate categories equals 100%). Note: brush = willows and other woody plants; forbs = non-woody plants.

Percentage Method: if you are able to stand in one spot and view the entire lake shore, substrate, etc. you may estimate the above categories using percentages of the entire lake, rather than the transect method. This can save time on small water bodies. Make sure the percentage check box is checked on your datasheet or palm and that the numbers for one category add up to 100%. If you use this method you should be looking at all littoral zone habitat, not just habitat 3 meters from shore.

Tributary Characteristics

Each significant tributary to the water body should be surveyed for 200 meters for fish and amphibians. In addition general characteristics of each tributary should be recorded, see below.

Any tributary displayed on a 7.5' map should generally be surveyed and inlet/outlet information completed. Small rills should be surveyed for amphibians, but not necessarily included as a distinct tributary. Within the continuum of tributary sizes and complexities, field crews will be required to distinguish "significant" tributaries from those which do not warrant full tributary surveys. Keep in mind the primary purpose of tributary information is to assess important habitat for fish and amphibians, but not to be bogged down with intense micro-habitat analysis.

Palm – It is very important that palm users realize there is no inherent method of tracking barrier photo data to a specific tributary. Thus, ALWAYS assign a number for each tributary (i.e. Inlet 2, or Outlet 1) even if there is only one tributary. It is important to make sure the same tributary number is listed on the barrier photo subform. Also, tributary numbers must be recorded on lake sketches.

Tributary GPS points: Record a GPS point where each tributary joins the lake. Also record a GPS point at the end of your tributary survey. This will help to match inlet/outlet data to the correct tributary.

Tributary number: Record number assigned for each tributary (i.e. Inlet 1, Inlet 2, or Outlet 1). This same number is to be recorded on lake sketch and included in barrier information, so that the correct barrier can be

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associated with the correct tributary. NOTE: Tributaries ARE NOT meadow rills, snowmelt rills, or anything that might in good conscious be called a rill.

Width and depth of inlets & outlets: While conducting the VES of inlets and outlets estimate the average width and depth of each tributary **at bank full**, even if dry. Inlets generally are widest at the point at which they enter the lake, so obtain the average width and depth upstream of this point. If there are no inlets, circle "no inlets". If inlet is dry check "Dry" and continue to survey for barriers and amphibians. If there are no outlets, circle "no outlets". If outlet is dry enter "Dry" and continue to survey for barriers and amphibians.

Palm – The presence or absence of inlets and outlets will need to be entered into the "Ref Lakes Subform" (Found by hitting "Review/Update Lake" button). Use your reference Lakes spreadsheet to determine if opening the Ref Lakes subform is necessary.

Presence of fish in inlets and outlets: Record whether there are fish present in the first 200 m of each inlet and outlet stream by circling "Y" or "N" for each feature. If there are no inlets or outlets, leave this section blank. If inlets and outlets are dry, fish may be present in isolated pools and this is data that needs to be captured.

Distance to first barrier on inlets and outlets: Pace off 200 meters of each tributary, recording the distance from the lake to the first impassable barrier. Dry tributaries should still be surveyed. The barrier location should be recorded as the number of meters from the lake. Barriers are falls >0.75 m high if there is no pool at the base, falls >1.5 m if there is a pool at the base, or steep cascades higher than approximately 1.5 m. Logjams can float during high water, and should generally not be considered barriers. Because fish can often get over remarkable obstacles, be conservative in what you call a barrier. Provide a description of each barrier on page 2 of the data sheet (see Detailed lake and inlet/outlet description, below) or in the barrier subform in the Palm. If there are no barriers check the "Barriers not present" box.

Description of fish barrier(s), UTM coordinates, photo number: Provide GPS UTM coordinates, photo number, and a brief description of each barrier in the spaces provided. If additional space is needed, use page 2 of the data sheet (see Detailed lake and inlet/outlet description, below). In the Palm enter all photo data (photo #, camera #, Time and photo type) into the "Photo Documents Subform". It is important to read the appropriate protocols for camera setup and file naming information. Make sure your GPS is setup with the proper settings referenced in the appropriate protocol.

Spawning habitat in inlets and outlets: Up to the first barrier of each inlet and outlet or to the end of the survey reach if no barrier exists, make a visual estimate of the amount of the streambed **between the lake and the first barrier** that is suitable trout spawning habitat. The amount of spawning habitat should be recorded in terms of the **number of square meters** of stream bottom with the following characteristics: gravel 0.5-4 cm in diameter and not cemented into the streambed, water depths of 10-50 cm, and water velocities of 20-60 cm/s for successful spawning.

Spawning habitat data is used to estimate whether fish populations are self-sustaining. Use good calibration techniques and real measurements as necessary to assure accuracy.

Evidence of spawning in inlets and outlets: Check each inlet and outlet for evidence of spawning **between the lake and the first barrier**, if a barrier is present. This could be spawning trout, redds (nests), or newly-hatched fry (20-30 mm). Redds are often very obvious, being patches of freshly cleaned gravel 0.5-1 m in length. If you aren't sure if what you are seeing is in fact a redd, dig into the downstream portion of the disturbed gravel while holding a net downstream. If it is a redd, you should find eggs in the net after disturbing the gravel. For each inlet and outlet, circle all types of evidence that you find. If you don't find any evidence of spawning, circle "None".

Area of in-lake spawning habitat: Estimate the amount of suitable spawning habitat (using the spawning habitat criteria given above) in the lake at the mouth of each inlet and outlet. Look for the presence of spawning trout and completed redds. Note any significant habitat of this sort in the Fish Header comments.

Description of other in-lake spawning habitat: Restrict your description of "other in-lake spawning habitat" to areas where you observe spawning fish, redds, or large numbers of fry in areas of the lake away from inlets and outlets.

Fairy Shrimp

During the amphibian survey, be on the look out for schools of fairy shrimp. The distribution of these 2-3 cm crustaceans is poorly known for the Sierra Nevada, so we are interested in describing localities. Look for them in all

Sierra lake sampling protocol -6-

bodies of water you sample. When walking around a lake, take a few minutes to also look in small pools and ponds adjacent to the lake.

If you find fairy shrimp either in your samples or during the survey of lake characteristics, indicate this on the data sheet by circling "Y" or "N" to the questions about fairy shrimp locations ("Present in lake?", "In lake-associated pools?", "Other locations?"). "Lake associated pools" are pools within 2 m of the lake. Be specific in your location descriptions, and provide a brief description of these locations (e.g., "1 m² pool 0.5 m from lakeshore on N side of lake 70675, pool is 10 cm deep"). Information on the fairy shrimp populations should include, at a minimum, location, surface area, and depth of the habitats.

Palm – If fairy shrimp are not found open the subform and write "NO SHRIMP" in the comment field.

Amphibian Surveying

Introduction: We will be conducting amphibian surveys at all bodies of water shown on 7.5' topographic maps, streams, and at sites not shown on the map but found during surveys and while traveling between sites. Each surveyor should have a timepiece to record the duration of time spent surveying, a notebook to record data, a dipnet and GPS unit. Be aware that many sites have more areas of potential habitat or inlets than are shown on a map. Generally we are not targeting reptiles but are identifying species and recording garter snake sightings. These animals are amphibian predators and may indicate amphibian presence when none are seen.

To conduct an amphibian survey, walk slowly around the perimeter of the site, or along the stream, counting the number of adults, sub-adults, metamorphs, larvae, and egg masses you find of each species. Pause often to look ahead for basking animals. Use your dip net to sweep habitat and banks in an effort to spook animals. When surveying a lake, VES all inlets and outlets (see above) and lump with the lake VES data. Meadow/marsh sites should be surveyed systematically with multiple surveyors in an effort to survey the entire site. As needed, use the sterilized D-net or aquarium net to catch amphibians and reptiles for identification. Consult the field guide provided for adult and larval identification.

Record total numbers of individuals observed by species and life stage in the appropriate field. If no animals are seen during the VES, record "none" in the field. Species abbreviations are given on the data sheet. Palm- use the pick lists for species abbreviations. If no animals are seen make sure that the "Amphibians NOT Present" checkbox is checked on the amphibian header subform and do not fill out an amphibian data subform.

Under "Comments", record any interesting observations made during the survey (e.g., mountain yellow-legged frog larvae found only in shallow lagoon on NW side of lake). Also record locations of interesting observations on the map of the lake that you draw (see below). If you are surveying inlets or outlets of a lake and encounter amphibian species, record your observations on a separate line on the data sheet and note the approximate locations and species on the inlet and/or outlet diagrams on page two. Palm – use the comment field in amphibian header to note interesting or important observations, or the numbers of animals seen in inlets/outlets, or numbers of multi-age class tads observed.

Time of day, temperature, and weather are important factors affecting the quality of any VES survey. Time your surveys to be during the warm portions of the day (roughly 9am – 5pm, however time window can vary depending upon time of year and local conditions). If the weather is too cold or stormy, VES surveys can be very inaccurate and should not be conducted.

Survey start time and end time: Record the time at which the survey began and ended. The start time is the time the amphibian survey began, not the time you arrived at the site. The end time is the time you finished the VES. Palm – Times MUST be in 24 hour format. Double check them since the palms auto populate to current time.

Total survey duration: Record the total time spent searching for amphibians/reptiles. Do not include time spent surmounting lake-side obstacles (e.g., cliffs), identifying specimens, or recording notes. If two people survey the same site by walking in opposite directions around the lake perimeter, the total survey duration should include the time spent surveying by each person. This data tells how much effort went into the survey.

Weather/wind/color/turbidity: Circle the appropriate descriptor for each.

Stream survey: Using the GPS unit, record the UTM locations at the beginning and end of your stream survey.

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Stream order: Stream order is a classification based on branching of streams. On a map showing all intermittent and permanent streams, the smallest unbranched tributaries are designated order 1. Where two first order streams meet, a second order stream is formed. Where two second order streams meet, a third order stream is formed (and so on...). Using your 7.5' topo map, identify which order of stream you are surveying, and record it in the box provided.

Calling?: Were any frogs calling during your survey? Circle yes or no.

Chytrid Swabs/Toe Clips: Will be collected from populations of mountain yellow-legged frogs. Note that this is done on a population basis and not for each site. Use best judgment in determining the parameters of the population. Up to 20 swabs from different individuals, usually adults, will be taken at the sites that support each population.

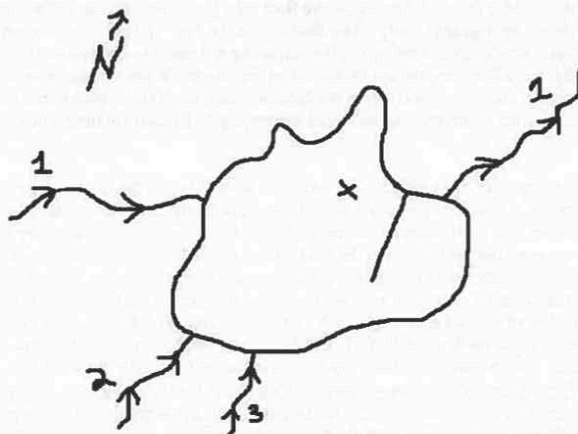
Survey Method: Circle the method used. Note: Mountain yellow-legged frogs do not have a significant call, so aural surveys will not apply.

Air and Water Temperatures: Measure the air temperature from the lake shore at 1 meter above the lake surface. Measure water temperature approximately 0.5m out from shore and 10cm under the water surface. Record the time that temperatures were measured after the @ symbol and the temperature units (C).

Detailed Lake and Inlet/Outlet Sketches

Drawing of lake perimeter, inlets, outlets and areas of special interest: Draw the lake perimeter as best you can, use the shape on the 7.5' map if necessary. The most important information that should be included on the sketch is the inlet and outlet locations and corresponding tributary number, max depth location, net set location, North arrow (see symbology below). If there is room, note any important Mountain yellow-legged frog habitat features, such as egg mass or larvae clusters. Add a second sketch if needed. The Palms do not have a lot of room for clutter on the sketch, so keep sketches simple and not cluttered with unnecessary information such as locations of trees, boulders, small islands, good cliff jumping locations, snow fields or talus fields.

Sketch symbology: North arrow = an N with a little arrow at the top; max depth = X ; net set location = a line from the shore; Inlets and Outlets should have tributary number and can be simplified to In1 or In2 for inlets and O1 or O2 for outlets. Also include arrows <<< for directional flow (i.e. either towards or away from lake). See example below:



Overview Photos

Introduction: All surveyed sites should have an overview photo taken. Try to find a location that allows you to capture the entire site and the habitat provided by that site. Thus a lake overview photo should capture the entire lake as well as the shoreline and any inlet or outlet marsh complexes that may be present. Use the panoramic photo functionality of the camera as needed and note how many photos were taken (Palm - in photo comments). Often forests or flat terrain inhibit good overview photos. In these cases, do the best you can.

Photo Document Type Subform:

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Photo Device: Record the device number of the camera – generally the serial number

Photo Type: Choose from the selection the reason or subject of the photo.

Photo Numbers: Record photo file number. See Appendix for camera setup and additional file naming information.

Photo GPS: Record GPS location data. (UTM NAD 83)

Photo Times: The times are used to reference a photo to a particular site. It is important to record these times accurately and to ensure that both the camera and Palm date and times are properly set up.

Fish Surveying

Introduction: We will be conducting fish surveys at all bodies of water shown on 7.5' topographic maps and at sites not shown on the map but found during surveys and while traveling between sites.

Our fish survey methods are designed to provide an accurate representation of fish species composition and size structure in lakes and ponds, as well as provide an estimate of catch per unit effort (CPUE) at each location. In order to quantify the size structure of each fish species present at a particular location, we need a sample of at least 20 fish, and preferably not more than 50. Obviously, in lakes that have a very small fish population, capturing even 10 fish may not be possible.

We will set one net in each lake for 8-12 hours. Nets can be set at any time of day. To minimize logistical problems and safety hazards, do not pull nets at night. Time your net sets appropriately. For example, don't set a net at 5 PM, since this would mean either pulling the net at 1-5 AM or waiting until morning and exceeding the 12 hour maximum set duration. You should plan on setting nets in the late evening or early morning.

If you are setting a net in a lake with an extremely dense trout population (typically lakes with brook trout), you may want to paddle over the net with a float tube after 4 hours and get a rough count of the number of fish captured. If you have 40 or more fish after 4 hours, pull the net to avoid capturing an inordinate number of specimens. Use this 4 hour net set duration only when absolutely necessary. If gill-netting a lake that contains amphibians, you need not worry that the net will trap them. If turtles are present, set the gill nets during the day only and check the nets frequently to ensure that these species are not getting entangled.

Before setting a gill net, submerge the entire net (still contained on the handle); dry nets are much more susceptible to tangling. Get in your float tube and wedge the bag between rocks at the lake shore and pull on it gently to ensure that it is firmly anchored. With the net lying across the float tube (lead-line on your left and net handle in your right hand or vice versa), paddle backwards slowly while feeding out the net. The net should be set perpendicular to the shore. If you encounter a tangle while feeding out the net, shake the net. Do not pull on the net as this will often tighten the tangle. Shaking will nearly always rid the net of the tangle. When you get to the end of the net, attach a float to the handle and then clip the second bag to the bottom of the net. Paddle backwards until the net is taught, and then drop the bag. Use the depth sounder to record the net depth. Record the time when you finish setting the net.

After 8-12 hours, retrieve the net by pulling the net up by the float. Detach the float and the rock bag. Pull the net toward you, placing the float line on the needle/handle in approximately 2 foot intervals (every second "float"). Continue pulling in the net until you reach the shore. Remove the second bag. To carry the net to an area for fish removal, cradle the net over your arms keeping the lead line on one side and the float line on the other. Lay the net down in a meadow or on a sandy flat (a meadow is preferable, but nearly any place will work; stay away from areas with lots of woody vegetation, pine needles, pine cones, and sharp rocks since they will get snagged in the net). Spread out the first 10 feet of net and remove the fish. After removing all fish from the first 10 feet of net, spread the next 10 feet of net and fold up the first 10 feet. Continue until you have removed all fish from the net. Restring the net onto the handle, rinse the net in the lake, dry the net in the shade, tie the net in a knot to prevent tangling, and stuff it into a sack. The net may be set again without sterilization if the receiving water is located downstream from the previous netting site. If the next netting site is located above the previous site, or in a separate drainage (even a small side drainage within the same basin) then the net must be sterilized (see sterilization protocol).

Fish survey method: If fish are observed, generally set a net. Record whether fish were surveyed visually or using gill nets. Except for small, shallow (<2 m) bodies of water in which the surveyor can see the entire lake bottom, we typically sample fish populations using gill nets. If there is any question as to whether fish are present in a lake, set a net. The decision whether to set a gill net in a shallow pond is up to the crew leader, but keep in mind that fish can live in some very marginal habitats. If only a visual fish survey is needed (e.g., because the lake is < 2m deep and you can see the entire bottom and there are positively no fish), you need not fill out the third and fourth pages of the

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datasheet. (For Palms the "Fish Header" is all you need fill out if there are no fish. The "Fish Data Subform" must be fill out when fish are seen or caught.)

Visual Survey Justification: If you surveyed for fish visually, provide a brief justification as to why you chose this method (Use the pick list values only; Stream, Meadow/marsh, Entire Bottom Visible). Remember, if fish are seen you should almost always set a net.

Net set time and date: Record the time when you completed the net setting process, not the time when you started setting the net. Record the time as 24 hr time. Record the date on which the net was set. Palm – Times MUST be in 24 hour format. Double check them since the palms auto-populate to current time.

Net pull time and date: Record the time when you began pulling the net. Record the date on which the net was pulled. Palm – Times MUST be in 24 hour format. Double check them since the palms autopopulate to current time.

Site ID: If you are setting a gill net to survey a fish population, fill out pages 3 and 4 of the datasheet. First, record the Site ID again. This identifier will ensure that both sheets of the datasheet are associated with the correct lake. Make sure that the Site ID you record is the correct one and matches the Site ID on the first page of the datasheet.

Description of net location/setting nets: Circle the appropriate location and provide a brief description of the area in which the net was set ("Comments"). Gill nets should always be set at the lake outlet, if present and if conditions allow. If an outlet does not exist, or is located in an area that is difficult to net (water <2 m deep, log jams, etc.), set nets at the inlet. If an inlet is not present or is not suitable, set the net in a suitable location anywhere along the lake shore. If possible, choose an area that is 3-8 m deep.

Fish Data: If no fish were captured, write "no fish" across the fish portion of the data sheet. If fish were captured, record the species, length, and weight of all fish. Species abbreviations are given at the bottom of the data sheet. Measure fish using the vinyl tape laid out on the ground. Measure fish total lengths to the nearest mm. Weigh fish using a Pescola spring scale. Before weighing fish, ensure that all debris (small rocks, etc.) are removed from the fish. Use the 60g scale for all fish <100 g, and the 300g or 1000g scale for larger fish. Outliers may need to be weighed in parts.

All fish will need to be cut open to determine sex. If someone on your crew is able, also note the general contents of fish stomachs (e.g., chironomid pupae, terrestrial insects, etc.). If you encounter a lake that contains both fish and amphibians, look through the fish stomachs very carefully for amphibian remains. Female fish will have eggs ranging from very small (early) to large and flaccid (late, deflated looking). Make a check mark in the appropriate box for each female fish sampled.

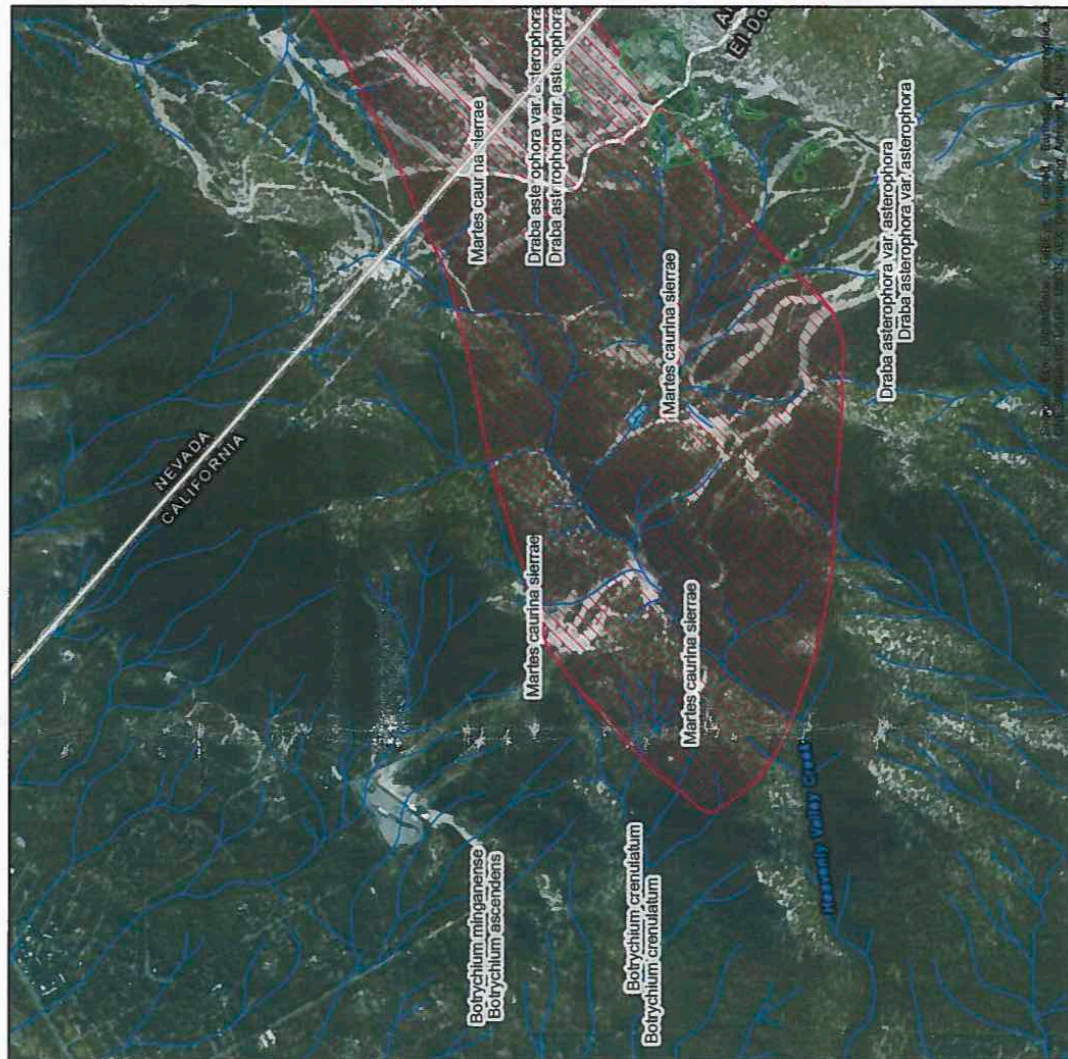
Be careful about disposing of fish carcasses, as we don't want the carcasses attracting the attention of backpackers or bears. The best disposal method is to pop the fish's swim-bladders, paddle out into the lake until you reach a relatively deep area, and dump them. Burial of fish on land should generally be avoided, as animals can smell the fish and will dig them up (no matter how deep you bury them).

Net sterilization: When moving to a different drainage or when one site does NOT flow into the next site gear (float tube, waders, fins and gill nets) must be sterilized. Sterilize using 5 ml of Quat 128 per 1.5 gallons of water (this gives 0.09% quat mixture). Gear must be soaked for at least 20 minutes and then dried for at least 20 minutes. Dispose of Quat 128 on rocks or soil away from waterways. Consider rinsing gear in water from the next survey site away from potential amphibian sites before next use.

Field review of datasheets/palm entries

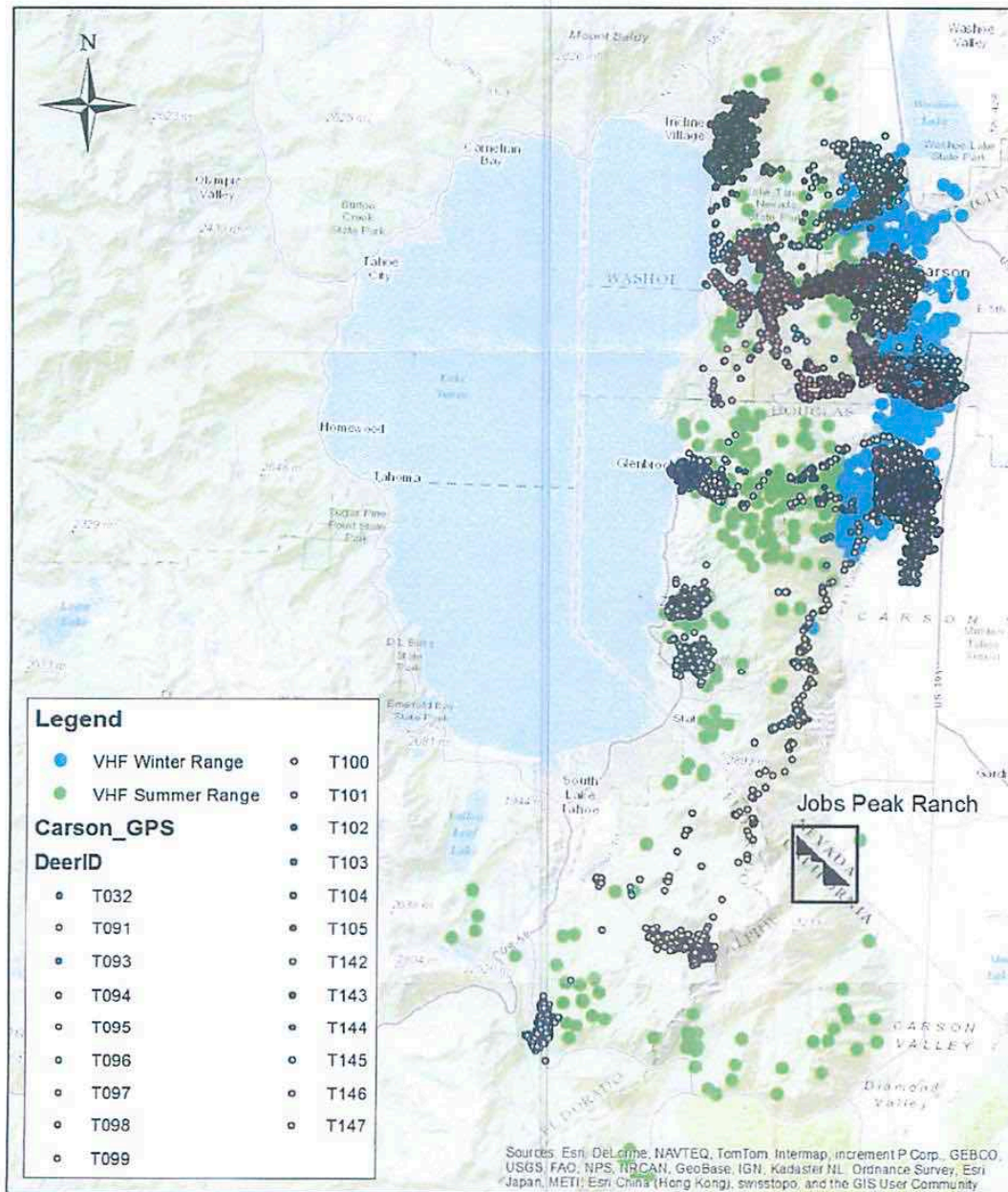
At the end of each day, crew members should review each others datasheets/palm entries for completeness and clarity. For palm entries the reviewer should review each subform and complete the reviewer field with their name from the pick list. Once review of a datasheet is completed, the crew leader should initialize the field review box on pages 2 and 3 of the datasheets. Make sure all of the spaces on the data sheets have been filled in. These data sheets are all the state has to show for the time and money that went into each survey. Protect the data sheets as if they were your most prized possession!

Map of Project Area



Author: acalderaro
Printed from <http://blogs.dfg.ca.gov>

Mule Deer VHF (104 individuals) and GPS (21 individuals)
locations between 2010-2014. Nevada Department of Wildlife.



- Comment 5-1 This comment summarizes the CEQA directives for the California Department of Fish and Wildlife and their responsibilities as a trustee agency and responsible agency. This comment also summarizes the Project. This is not a comment on the content or adequacy of the DEIR/EIS/EIS. Please refer to the following responses to the specific comments in Comment Letter 5.
- Comment 5-2 The DEIR/EIS/EIS evaluates impacts from both construction and operations of the proposed facilities. Impact BIO-2 evaluates impacts to sensitive species as a result of implementation of the proposed project and operations. BIO-3 also evaluates impacts to migratory bird species through loss of nesting habitat as well as operations. Mitigation BIO-3 requires the annual breeding bird survey to alleviate impacts to migratory nesting birds from operational activities.
- Comment 5-3 Figures 3.9-1 and 3.9-2 have been added to the DEIR/EIS/EIS to identify the locations of Sierra Nevada yellow-legged frog habitat and how it intersects with proposed project activities.
- Comment 5-4 DEIR/EIS/EIS Impact BIO-1 has been updated to include a discussion of impacts to SNYLF habitat that is present onsite. A total of three surveys have been performed within the mapped suitable habitat within the Project Area. The document states: *“Three surveys have been performed in the Sky Meadows Basin and East Peak Lake areas in 2013 (one survey) and 2014 (two surveys) by USFS personnel. No Sierra Nevada yellow-legged frog were observed in either area or survey year. East Peak Lake supported sierran tree frog (Pseudacris sierra) adults and tadpoles in both surveys, while only Long-toed salamander (Ambystoma macrodactylum) was observed in the Sky Meadows Basin in the pond behind the California dam. Three surveys have been performed in the last 10 years, however USFS protocol has not been met to classify the habitat as Unutilized Potential in accordance with Region 5 direction (USDA 2014) due to the fact that one of the surveys did not occur within 3-5 weeks of snowmelt within a year where the winter snowpack was 80% or above normal. As one additional survey is required that meets these criteria, the existing suitable habitat is classified as Utilization Unknown.”*
- Comment 5-5 This discrepancy has been fixed and DEIR/EIS/EIS Table 3.9-1 now reflects there is suitable habitat within the project area. Figures 3.9-1 and 3.9-2 identify the locations of Sierra Nevada yellow-legged frog habitat and how it intersects with proposed project activities.
- Comment 5-6 A discussion of increased human activities has been added to DEIR/EIS/EIS page 3.9-43: *“Increased human presence in the areas surrounding the suitable habitat for SNYLF will not have an impact on the species if present due to the controlled nature of access and where the public and staff will be allowed to be present. All walking and vehicle traffic will be confined to existing and proposed walkways that are outside the suitable habitat and located in the upland areas. No dispersed walking or hiking activities will be allowed in association with these projects in the vicinity of SNYLF habitat.”*
- Comment 5-7 DEIR/EIS/EIS Mitigation Measure BIO-1 has been updated to include consultation with CDFW and now includes the statement: *“If it is determined that protection measures cannot be implemented to reduce impacts to the species [SNYLF], each activity proposed in the delineated habitat area that will result in new disturbance*

and human interaction will be eliminated from the Project (e.g., Sky Basin Coaster, Sky Meadows Challenge Course, East Peak Lake Dock)."

- Comment 5-8 A discussion of great gray owls has been added to DEIR/EIS/EIS BIO-1: "*Great gray owl, a State of California Endangered Species, does not contain large amounts of suitable habitat within the project area. Great gray owls are strongly associated with meadows as this habitat type is used for hunting voles, gophers and other prey (Sears 2002) up to an elevation of 8,000 feet. Great gray owls tend to spend the majority of their time within 200 m of a meadow edge, within suitable habitat containing dense canopy cover, large trees and numerous snags. Breeding and wintering habitat is strongly correlated with healthy wet meadow systems (Van Riper and Wagtendonk. 2006). Great gray owls are also sensitive to human presence, as observed in Yosemite National Park (Van Riper and Wagtendonk. 2006).*
- The only wet meadow in the project area is located at Sky Meadows Basin, where the elevation is 8,500 feet and the area is heavily developed with the presence of a ski lodge, two lift base stations, a snowmaking pond and associated pump house and auxiliary buildings. Additionally, the meadow is bordered on three sides by existing roadways utilized all seasons for vehicle travel over the snow and summer usage. Due to the limited meadow area, existing level of disturbance in the Sky Meadow Basin and surrounding area and the high elevation of the proposed project (above the elevation range of great gray owls) the likelihood of great gray owls being present in the project area is extremely unlikely. As such, the project will not adversely affect this species."*
- Comment 5-9 The only two species that are covered by the California Endangered Species Act are the great gray owl and SNYLF. Refer to response to comment 5-8 above for a discussion of great gray owl and response to comment 5-7 for revised mitigation for SNYLF.
- Comment 5-10 DEIR/EIS/EIS Mitigation Measure BIO-3 has been modified to include the potential for increased avoidance zone/buffer as necessary to meet the demands of individual species. Additionally, annual surveys for nesting birds are included in the mitigation to prevent impacts on an ongoing basis.
- Comment 5-11 DEIR/EIS/EIS Mitigation Measure 7.4-10 (Avoid and/or Restore Future Disturbed Jurisdictional Waters and Wetlands) has been amended to include the requirement to obtain a permit from CDFW for impacts to Section 1600 of the FGC that may result from removal of riparian vegetation.
- Comment 5-12 Refer to response to comment 4-4.
- Comment 5-13 Thank you for taking the time to review our project as well as the responses to your comments provided above

**Comment Letter 6 – Port, Patricia, United States Department of the Interior,
Pacific Southwest Region, 10/21/14**



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
333 Bush Street, Suite 515
San Francisco, CA 94104

IN REPLY REFER TO:
(ER 14/0571)

Filed Electronically

21 October 2014

David Landry
Senior Planner
Tahoe Regional Planning Agency
128 Market Street
P.O. Box 5310
Stateline, NV 89449

Subject: Draft Environmental Impact Statement (DEIS) USDA US Forest Service (USFS)
Heavenly Mountain Resort Epic Discovery Project, NV

Dear Mr. Landry:

1 The Department of the Interior has received and reviewed the subject document and has no
comments to offer.

Thank you for the opportunity to review this project.

Sincerely,

PatriciaSandersonPort
Regional Environmental Officer

cc: OEPC-Staff Contact: Lisa Chetnik Treichel, (202) 208-7116; Lisa.Treichel@ios.doi.gov

Comment 6-1 Thank you for taking the time to review our project.

Comment Letter 7 – Thomaselli, Lauren, City of South Lake Tahoe, 10/23/14



City of South Lake Tahoe
"making a positive difference now"

October 23, 2014

To: David Landry, Senior Planner
Tahoe Regional Planning Agency

From: Lauren Thomaselli, Recreation Manager
1180 Rufus Allen Blvd.
City of South Lake Tahoe, CA.

Re: Support for Heavenly Mountain Resort Epic Discovery Project

Dear Mr. Landry,

As the project manager for the first ever comprehensive parks, trails and recreation master plan being conducted in collaboration with El Dorado County, I am writing to express our support for the proposed Epic Discovery Project. Epic Discovery aligns beautifully with many of the recommendations identified in the South Lake Tahoe Parks, Trails and Recreation Master Plan currently in the final phase of development.

First, as a result of an extensive community engagement process four key elements were identified as important to expanding recreation opportunities all of which are evident in the proposed Epic Discovery Project. They include: Reflecting the needs and priorities of the community; Include strategies to sustain existing environmental assets and protect ecological resources; Identify recreation facilities and programs that will support tourism and the economic vitality of the region; Support, direct, and enhance recreation opportunities for both residents and visitors. Epic Discovery and SLT Parks, Trails and Recreation Master Plan both seek to strike a balance between these four key elements.

Secondly, consistently ranking as a top priority for residents and visitors is a desire for better trails, connectivity to recreation amenities, and bike park additions. Epic Discovery proposes a mountain bike park complete with connecting trail systems. The City is proposing additional trail connections and a bike park in Bijou Community Park as part of the recreation master plan priority projects. These are only a few examples of how two completely separate recreation plans are very much complimentary in project planning priorities and in meeting community needs and desires with a common goal to enhance the recreation experience for residents and visitors.

Finally, Epic Discovery proposes nature trails and interpretive programs consistent with our master plan findings indicating the largest visitor market to South Lake Tahoe is

Community Services Department • 1180 Rufus Allen Blvd. • South Lake Tahoe, California 96150-8211 • (530) 542-6056 • (530) 542-2981 FAX