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Sage Institute Inc.

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C.M. Florence, AICP
Oasis Associates, Inc.
3427 Miguelito Court
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SUBJECT: Excelaron LLC Porter Ranch haul road impact analysis for the California red-legged frog.

Dear Carol:

Sage Institute, Inc. (SII) is pleased to provide this analysis of potential impacts to the California red-legged frog (*Rana draytonii*; CRLF) from Excelaron's use of the Porter Ranch road for 24 tanker truck trips per day and additional project related traffic. In preparation of this analysis SII Principal Biologist David Wolff reviewed available biological resources information you provided on the Excelaron project, reviewed relevant species information and studies regarding CRLF movement to and from aquatic sites, queried the California Natural Diversity Data Base (CNDDDB), and conducted a windshield survey of the Porter Ranch haul road with the use of an aerial photograph on October 13, 2008.

The purpose of this study was to evaluate the potential for impacts on the CRLF from dispersal onto the proposed haul road that could result in mortality from encounters with truck traffic (road kill). Special attention was paid to looking at CRLF dispersal opportunities from the Huasna River to areas of suitable habitat across the proposed haul route. The following presents my findings of this study.

CRLF Background and Existing Conditions

- The CNDDDB CRLF occurrence is a May 2006 record at a culvert outfall plunge pool in Cat Canyon Creek just upstream of the confluence with the Huasna River to the northeast of the Huasna Townsite Road bridge crossing of the river at the northern area of the haul road alignment. No other CNDDDB occurrences are along the Porter Ranch road. As you know, this is not a definitive absence determination only that it may have not been surveyed or CRLF occurrences have not been entered into the CNDDDB record.
- The CRLF is a highly aquatic species rarely found too far from perennial water or very moist conditions.
- Movement of the CRLF to and from one aquatic habitat to another over what otherwise appears to be inhospitable conditions (a variety of dry upland habitats) for this amphibian are common.
- While not completely understood, CRLF movement appears to be in response to seeking breeding habitat, or dispersing from breeding areas that are subject to seasonal drying. For example, movement from a seasonal creek to a stock pond or visa-versa.

- Most importantly, the majority of CRLF movement to and from aquatic habitats is presumed to be done at night, during rains or other high moisture events like summer fog, and during the wetter winter months. Some movement has been documented in the May to October timeframe in moist coastal areas. It is a fair assumption that CRLF and amphibians in general are not going to move away from moist aquatic habitat in hot dry conditions.

Huasna River and Proposed Haul Road Existing Conditions

- The field reconnaissance windshield survey and review of aerial photography shows the Huasna River to be a broad floodplain of coarse alluvium with a low-flow channel that had a small amount of flow observed on October 13, 2008.
- The river floodplain supported a varied composition, structure, and density of riparian habitat on or below the upper banks of the river.
- After the wooden bridge crossing of the river north of the Porter Ranch gate, the Porter Ranch road parallels the river but does not cross it again.
- The road is a well established and maintained road with compacted base. This existing road currently supports local resident/ranch traffic.
- The road follows an upland route beyond (outside of) the top of the eastern bank of the Huasna River. The eastern river bank was mostly very steep and ranged from approximately 10 to 20 feet high above the river bottom and low-flow channel.
- The broad river floodplain extends more to the west of the low-flow channel supporting riparian tree and riparian scrub vegetation towards the toe of the oak woodland hillside.
- The road travels above the eastern bank through annual grassland with scattered oaks used for grazing with several fields presumed to be in annual crop cultivation on both sides of the river (fallow at the time of the survey) and alfalfa.
- There were four tributary drainages with established channels that crossed the proposed haul route. These tributary drainages were mostly swale like features with earthen banks and a smaller scoured low-flow channel in the swale bottom. All the tributary drainages were dry at the time of the field survey suggesting there were no springs nearby. Based on the swale form of the drainages it appears that they are either ephemeral flowing for short durations after rainfall events, or intermittent flowing during the wet season but drying down when rain fall stops.
- Three of the tributary drainages had culverts under the road (two 24" cmp and one 10" pvc). Based on the size and position of the culverts, and the well maintained road, it is reasonable to assume that except under the most severe storm conditions that most flows pass through the culverts and not over the road.
- The fourth tributary drainage crossing at the southern end of the Porter Ranch road where it turns eastward away from the river, there is an "earthen bridge" that does not currently have a culvert. It is my understanding that the Porter family is in the process of repairing this road section and plans on reinstalling the culvert. Similarly to the other crossings, I would assume that it would be sized in a manner to pass most flows under normal/average rainfall conditions.
- Based on aerial photography, there appears to be a large stock pond well to the west of the river and bridge crossing. Otherwise, aerial photography (presumed to be relatively recent) does not show any stock ponds along the Porter Ranch Road that borders the river. There are many side drainages but there does not appear to be any impoundments along any of these. No

stock ponds or other impoundments were observed along or near the Porter Ranch road during the field survey.

Haul Road CRLF Analysis

- Given the recent CNDDDB record near the confluence of a tributary to the Huasna River, and the presence of suitable aquatic and riparian habitat along the river, this analysis presumes that the CRLF could occur throughout the Huasna River where suitable conditions persist through the Porter Ranch.
- It is my understanding that the Excelaron truck traffic would operate only during the daytime and would not operate under extreme rainfall conditions that would create an impassable situation, as agreed upon with the landowner. This practice would avoid any trucks driving through active flows from any of the tributary crossings. As stated above, the culverts under the road appear to be positioned and sized to accommodate all but the most extreme storm event flows. Therefore, trucks would not operate in any active flows thereby avoiding any localized or downstream water quality impacts.
- Given the location of the road well away from any riparian habitat, any road improvements to accommodate the Excelaron trucks would not need to remove any riparian habitat. Therefore, use of the existing road would not in and of itself result in the alteration of habitat for CRLF.
- Potential adverse effects of the proposed project on the CRLF would be mortality of dispersing CRLF from encounters with trucks (road kill). Given the high likelihood that CRLF movement would be at night during rains, and the low likelihood for movement at other times, it seems reasonable to assume that the additional proposed daytime haul truck traffic is not likely to adversely affect the CRLF.
- Assuming CRLF movement away from the river corridor, should they occupy that area of the river, would be in response to the availability of other attractive aquatic habitat, there does not appear to be many reasons/opportunities to do so. As mentioned above there is only one stock pond to the west of the bridge crossing and the side drainages do not have impoundments that are creating ponds. Based on field observations of the size and form of the tributary drainages, they likely dry faster than the river so would become less attractive during the dry season. However, should the tributary drainages have suitable habitat further up the watershed that was not observed during the windshield survey, movement would likely be at night when moisture (fog/rain) is available. Once at a location away from the river during the dry season (assuming some perennial aquatic habitat persists during the dry season) the CRLF would likely stay put until breeding movements were triggered with fall/winter rains.

Conclusions

- Given that the CNDDDB CRLF occurrence is near the one river crossing, and that the crossing is a bridge, there would not be any direct impact from truck traffic on the Huasna River aquatic habitat.
- Given that tributary drainage crossings have and/or will have culverts under the roads, and that trucks would not operate during extreme rainfall conditions, no trucks would be operated in flowing water. Therefore, potential impacts on CRLF aquatic habitat from road kill or water quality degradation would be avoided.

- Given the haul trucks would operate during the day time hours and not during extreme rainfall events, encounters with dispersing CRLF are highly unlikely. Therefore, it is a reasonable assumption that the proposed haul route would not adversely affect the CRLF.
- Therefore, based on a project description that stipulates trucks would operate during the day and not during extreme rainfall events, and the existing conditions of the proposed haul road being outside of the Huasna River floodplain with culvert crossings of tributary drainages thereby not directly impacting aquatic habitat, potential direct and indirect impacts on the CRLF from the haul route traffic would be considered a less than significant impact.
- Given a less than significant finding based on the existing conditions and analysis above, no mitigation for the CRLF is recommended.

Thank you for the opportunity to assist with the environmental review process for this project. Please call me directly if you have any questions or need additional information.

Very truly yours,

David K. Wolff
Principal Ecologist
Certified Professional Wetland Scientist