

**RESULTS OF SURVEYS FOR
CALIFORNIA RED-LEGGED FROGS
LOMPOC BIKEPATH, ALLAN HANCOCK SEGMENT
LOMPOC, SANTA BARBARA COUNTY, CALIFORNIA**

Prepared for:

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INTRODUCTION

The City of Lompoc (City) plans to extend its existing bikepath to the Lompoc campus of Allan Hancock College near the northern City limits. Currently, the northernmost extent of the bikepath is just north of the H Street (Highway 1) Bridge over the Santa Ynez River. That portion of the bikepath is known as the Santa Ynez River Bridge Bikepath. The planned extension will begin there and proceed to a terminus at the college.

In 2001, Thomas Olson Biological Consulting (TOBC) and Rincon Consultants conducted field surveys for biological resources and prepared a site assessment letter report (TOBC 2001). In the letter report, recommendations were made to minimize impacts to sensitive biological resources that could potentially occur in the project vicinity. One of the recommendations was that a survey for California red-legged frogs (*Rana aurora draytonii*) be conducted according to agency-developed protocol in the vicinity of a detention basin on Allan Hancock property near the terminus of the planned bikepath extension. This report presents the results of the red-legged frog surveys.

STUDY AREA

The Allan Hancock Segment of the bikepath is slightly over one mile in length, beginning at the northern extent of the existing bikepath. The terminus of the existing bikepath occurs at the eastern edge of a U.S. Penitentiary agricultural field just north of the Santa Ynez River and directly across Highway 1 from Valley Rock Landscape and Building Supply and the old drive-in theater. The endpoint of the Allan Hancock Segment is the southern edge of the parking lot on the Lompoc campus of Allan Hancock Community College (AHCC) campus at the northern edge of the City limits. Much of the bikepath will be located within or at the outer edge of existing access roads. Vegetation in the immediate vicinity of the bikepath alignment is a mix of ruderal and non-native grassland/coastal scrub.

The detention basin is just north of the bikepath terminus. It is enclosed by a chain-link fence. Because construction of the bikepath will occur only on the outside of the chain-link fence, the detention basin will not be directly affected. Erosion-control measures will be implemented to minimize the likelihood of offsite impacts, such as erosion and sedimentation, affecting the basin.

During the surveys, surface water occurred in two locations in the basin. The closest pool of water was about 60 feet inside the chain-link fence. The pool was approximately 20 feet by 6 feet. The surveys were conducted from outside the fence, so a precise measurement of water depth was not possible. However, based on observations of vegetation and objects in the water, the depth appeared to vary from 2 to 6 inches. The other pool of surface water was about 90 feet inside the chain-link fence. The dimensions of the pool were 40 feet by 60 feet. Depth of water was similar to the other pool: 2 to 6

inches, however there were areas of exposed soil. The surface water was not continuous across the pool.

Vegetation on the southeast side of the basin was relatively dense. Dominant species were cattails (*Typha* sp.) and white sweetclover (*Melilotus alba*). In addition, there was a small stand of bulrush (*Scirpus* sp.). The vegetation throughout the remainder of the basin was substantially sparser and appeared to be periodically trimmed. Other common plant species observed were:

- Common aster (*Aster chilensis*)
- Black mustard (*Brassica nigra*)
- Ripgut brome (*Bromus diandrus*)
- Tall nut sedge (*Cyperus eragrostis*)
- California everlasting (*Gnaphalium californicum*)
- Slender tarplant (*Hemizonia ramosissima*)
- Telegraph weed (*Heterotheca grandiflora*)
- Plantain (*Plantago* sp.)
- Sheep sorrel (*Rumex acetosella*).

METHODS

Field Surveys

Following U.S. Fish and Wildlife Service (USFWS) protocol, Biologist Tom Olson conducted two day and two night surveys. The day surveys were conducted on September 3, 2002 from 5:00 p.m. to 6:00 p.m., and on September 5, 2002 from 3:30 p.m. to 4:30 p.m. Weather conditions during the September 3, 2002 day survey included a temperature of 26°C (81°F), no cloud cover, and a slight breeze from the west. Conditions during the September 5, 2002 day survey included a temperature of 24°C (75°F), 100% cloud cover, and a breeze from the southwest. A small amount of rain had fallen earlier in the day.

During the day surveys, the bikepath alignment in the vicinity of the detention basin was examined on foot. The basin was examined from outside the chain-link fence using 8x40 binoculars and a 15-45x spotting scope. Habitat conditions in and around the basin were described in notes, and plants and animals observed were recorded.

The first night survey was conducted on September 3, 2002 from 7:45 p.m. to 8:45 p.m. Weather conditions included temperatures ranging from 16°C to 20°C (61°F to 68°F), no cloud cover, and wind from the west gusting to 10 miles per hour (mph). There was no moonlight because the moon had not yet risen at the time. The second night survey was conducted on September 5, 2002 from 7:50 p.m. to 8:50 p.m. Weather conditions included temperatures ranging from 18°C to 21°C (64°F to 70°F), 90% cloud cover, and virtually no wind. The moon was obscured by the cloud cover.

During the night surveys, the basin and surrounding areas, including the adjacent portion of the bikepath alignment, were examined for red-legged frogs. A 6-volt night light was used, in conjunction with 8x40 binoculars. All animals observed were noted. Similar to the day surveys, observations of the basin were made from outside the chain-link fence. The ability to observe the basin was quite good; aquatic invertebrates could be observed on the surface of the water during the night surveys.

Professional Contacts

Biologists with recent experience in the Lompoc area were contacted about red-legged frog occurrences in the Lompoc area. The contacts included:

- Paul Collins, curator of the Vertebrate Section of the Santa Barbara Museum of Natural History;
- John Storrer, consulting biologist in Santa Barbara; and
- Larry Hunt, herpetologist in Santa Barbara.

RESULTS

Direct Observations

No California red-legged frogs were observed during the two day and two night surveys. No other listed or sensitive species, such as two-striped garter snake (*Thamnophis hammondi*) or southwestern pond turtle (*Clemmys marmorata pallida*), were observed. The following observations of wildlife were made:

- Western fence lizard (*Sceloporus occidentalis*)
- Turkey vulture (*Cathartes aura*)
- California quail (*Callipepla californica*)
- Killdeer (*Charadrius vociferous*)
- Mourning dove (*Zenaida macroura*)
- Barn owl (*Tyto alba*)
- Anna's hummingbird (*Calypte anna*)
- Black phoebe (*Sayornis nigricans*)
- Cliff swallow (*Petrochelidon pyrrhonota*)
- Western scrub-jay (*Aphelocoma californica*)
- American crow (*Corvus brachyrhynchos*)
- California thrasher (*Toxostoma redivivum*)
- Oak titmouse (*Baeolophus inornatus*)
- Wrentit (*Chamaea fasciata*)
- Bewick's wren (*Thryomanes bewickii*)
- Marsh wren (*Cistothorus palustris*)
- Red-winged blackbird (*Agelaius phoeniceus*)
- Western meadowlark (*Sturnella neglecta*)

- California towhee (*Pipilo crissalis*)
- Coyote (*Canis latrans*) – scat
- Gray fox (*Urocyon cinereoargenteus*)
- Botta's pocket gopher (*Thomomys bottae*) – burrows
- Black-tailed (mule) deer (*Odocoileus hemionus*) – shed antlers

Professional Contacts

Paul Collins (personal communication, 2002) has assembled information about recent red-legged frog observations in the Lompoc vicinity. The reports of red-legged frogs closest to the detention basin are:

- Reaches of the Santa Ynez River west of the wastewater treatment plant – 2 miles to the southwest of the detention basin;
- A small wetland adjacent to Central Avenue and west of Floradale Avenue (possibly hydrologically connected to the Santa Ynez River in the past) – 3.5 miles to the southwest;
- Roadkills collected in recent years in the vicinity of North Vandenberg Village, as well as reports from Marion Creek (a tributary of Davis Creek) – 2 miles to the northwest;
- A drainage west of the Lompoc-Casmalia Road and west of North Vandenberg Village – 2 miles to the northwest; and
- Two locations in Santa Lucia Canyon – at least 4 miles northwest.

Neither John Storrer (personal communication, 2002) nor Larry Hunt (personal communication, 2002) had additional occurrence records in the Lompoc vicinity.

Potential for Occurrence at the Detention Basin

The potential for red-legged frogs to occur in the detention basin is low. None were found during two day and two night surveys. The basin contains marginal habitat for this species. Although there are patches of suitable vegetative cover, the depth of water in the basin does not appear to consistently be of sufficient depth (2 to 3 feet minimum) to represent good-quality habitat. The basin appears to have deeper water at other times of the year, presumably during the rainy season.

The basin would have a higher potential of occurrence of dispersing juvenile red-legged frogs if a known source was located closer. As described above, the two nearest known occurrences of red-legged frogs are 2 miles to the southwest and northwest, respectively. It should be noted that there is a stream course that runs from the latter occurrence (to the northwest) to a point about a half-mile west of the detention basin. As such, there is a potential movement corridor for juvenile frogs to approach within a half-mile of the basin. However, even with the presence of the movement corridor, the basin still does not represent breeding habitat, or good-quality dispersing habitat. The depth of water is not consistently adequate and the patches of vegetation that provide cover are not extensive enough.

CONCLUSION

Adverse effects to red-legged frogs are not expected due to construction of the Allan Hancock Segment of bikepath. Results of field surveys indicate that the basin contains only marginal habitat. The basin is separated by at least two miles from the nearest known locations of red-legged frogs, and by a half-mile of the nearest stream course that could act as a movement corridor. Moreover, construction activities will occur in upland habitat adjacent to, but out of, the basin and associated surface water and vegetative cover. The chain-link fence will act as a barrier between the basin and construction equipment and vehicles. Prior to the start of construction, a worker education program will be presented to individuals building the bikepath. The objective of the program will be to further reduce the likelihood of adverse effects to listed and sensitive species known or with potential to occur in the vicinity of the project area, including the California red-legged frog. Principal points of discussion will include an explanation of measures designed to lessen impacts to biological resources in general, as well as contact points and procedures to follow if a listed or sensitive species is observed in the project area.

REFERENCES

- Collins, P. 2002. Personal communication. Curator, Vertebrate Section of the Santa Barbara Museum of Natural History.
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