

## Draft Individual Review Form

Proposal number: 2001-D201-1

Short Proposal Title: Habitat Acquisition for Riparian Brush Rabbit and Riparian Woodrat

**1a) Are the objectives and hypotheses clearly stated?**

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

The objectives of Phase 1 of the project are clear: to acquire and secure lands appropriate for re-introduction of captive-bred riparian brush rabbits, and appropriate for recovery of riparian brush rabbit and riparian woodrat populations. For the project as a whole (Phases 1 – 5), the objectives seem to be long-term recovery of the riparian brush rabbit and riparian wood rat, and progress toward restoration of the aquatic/riparian/terrestrial ecosystem in the Stanislaus/San Joaquin system.

The hypothesis as written is actually a little confusing (“The hypothesis being tested is that these two highly endangered species that have come to the brink of extinction due to a loss of riparian habitat with adjacent upland refugia along the Stanislaus and San Joaquin Rivers,” p.3). I assume that the second “that” in the sentence should be deleted. As such, the hypothesis makes sense, but perhaps it would be better conceptualized as “The hypothesis being tested for the project as a whole (Phases 1 – 5) is that the riparian brush rabbit and riparian woodrat populations in the vicinity of Caswell Memorial State Park will benefit from a program of habitat acquisition, habitat restoration, and captive breeding and reintroduction of riparian brush rabbits.”

**1b1) Does the conceptual model clearly explain the underlying basis for the proposed work?**

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

The overview of stressors to riparian mammals on the Stanislaus River, such as the narrowness of the riparian corridor, lack of upland refugia, and negative impacts from flooding are adequately addressed. Note that on p. 3, Para. 2, it states that at-risk species listed in Table 1 includes five fish, one amphibian, three reptile and four bird species. Table 1 (p. 4), however, lists one fish, no amphibians, three reptile, four bird, and two mammal species.

The proposal states on p. 2 that the discussion of the conceptual model is for the entire project (Phases 1 – 5). However, it does not provide a good discussion of how habitat acquisition, habitat restoration, and species reintroduction should be used together to form the basis for a successful species recovery effort. The proposal would also have been strengthened by a discussion of the overall philosophy of the desired distribution of reserves for the two species, considering issues of metapopulation dynamics, movement and genetic exchange between reserves or populations, and viability of individual populations and the species as a whole.

The conceptual model would also have been strengthened if survey data on population levels of the riparian brush rabbit and woodrat had been presented. This could include, but not be limited to, data referred to in CALFED 1999a that evidently describes pre- and post-flood levels of riparian brush rabbits and woodrats. Also, information on the causes of decline and suitable conservation measures for the riparian brush rabbit and riparian woodrat, as documented for example in the Federal Register for the listing rule, would have provided more context on the biological status and management of the species, to help the reviewers evaluate the potential benefits of the project.

**1b2) Is the approach well designed and appropriate for meeting the objectives of the project?**

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

Considering Phase 1 only, the approach of negotiating, purchasing lands or easements, and securing the property from development, deforestation, and other threats seems to be appropriate. The argument that the two target species require both riparian and adjacent upland refugia, and thus habitat acquisition should include both elements, is compelling. However, the proposal could benefit from more explanation of the value of the targeted property versus other alternatives for meeting the project goals. The suitability of the Wend property for riparian brush rabbit and woodrat is summarized by stating that the site was determined to have “excellent potential” during an interagency site visit (p.8, Para. 2). Arguments in favor of suitability of the site would be greatly strengthened by qualitative or quantitative descriptions of the existing vegetation, and presence of suitable microhabitats (e.g. presence of openings for brush rabbit foraging habitat). Also, in Task C, it might be advantageous to survey not only for existing rabbits (and the diseases they could carry), but also for potential predators (wild and feral animals) and other risk factors that could jeopardize the success of a re-introduction program. Studying the newly discovered brush rabbit population in Tracy might also provide valuable information on the ecology of this taxon.

Considering the project as a whole (Phases 1 – 5), the phased approach to habitat acquisition, habitat restoration, species re-introduction, and monitoring seems to make sense. The proposal states on p. 9 that “some riparian brush rabbit introduction tasks may occur in the Phase 3 if preliminary results from the ecological management plan development indicate such an action to be feasible,” but it does not explain what would happen if the preliminary results indicate that it is infeasible for some reason. Would reintroduction be cancelled, and if so, would the subsequent phases of the project be cancelled? Would reintroduction be postponed to another phase of the project? How would the problems that could make the reintroduction infeasible be rectified? The proposal could also be improved by a more specific discussion of how levee removal and/or introduction of sediment and large woody debris could be coordinated with the project to accomplish the specific goals of the project and the greater CALFED goals of ecosystem restoration.

If only Phase 1 of the project is funded, and the rest are not, then this project may have limited benefits. The approach may be well designed if the applicants receive monies for all phases described in the proposal.

**1c1) Has the applicant justified the selection of research, pilot or demonstration project, or a full-scale implementation project?**

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

On p. 3, the proposal states that in the context of the greater riparian ecosystem benefits, “the project is a full-scale implementation project,” but also states that “Acquisition of the parcels for reintroduction of riparian brush rabbit is a pilot project.” This distinction seems to make sense, and is appropriate given the dual goals for broad and specific benefits, but I do not know if putting the project in two categories is problematic for CALFED. Given the state of knowledge regarding the need for and benefits of riparian restoration in the region, it is justifiable to take actions at this time to acquire properties for restoration, which would be accomplished in Phase 1. Given that reintroduction of riparian brush rabbits has never been done before, it is justified to consider this a pilot project to gain knowledge (in the later phases of the project) regarding the successful and unsuccessful components of a reintroduction program.

There is a critical need to stabilize and enhance habitat for the riparian brush rabbit and woodrat. Acquisition of the Wend property will greatly expand potential habitat for these species, especially since it is evidently contiguous with the San Joaquin National Wildlife Refuge (p. 6). (However,

Figure 3 would be more useful if it clearly indicated where the Wend property is located. Also, as noted above for (1b2), the proposal would be strengthened if more information or photographs of the Wend property habitat had been provided.)

As stated in the proposal, acquisition and/or conservation easements of lands containing remnant riparian forest and adjacent agricultural lands around Caswell Memorial State Park is an important step to preserve or enhance the currently restricted riparian corridor. Caswell Memorial State Park consists of "... riparian jungle. The overstory consists of huge valley oaks and cottonwoods, festooned with grapevines. The understory is a thicket of brambles, wild rose, and poison oak." (Kemper 1999). In addition to the riparian brush rabbit and riparian woodrat and other at-risk species listed in Table 1, it also supports nesting Swainson's Hawks, a state-threatened species (Kemper 1999, p. 296). Other neotropical landbird species present at Caswell Memorial State Park include black-headed grosbeak, house wren, and ash-throated flycatcher.

[Kemper, John. Birding Northern California. Falcon Press, Helena, Montana. 1999. 408 pp.]

**1c2) Is the project likely to generate information that can be used to inform future decision making?**

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

Information from the reintroduction of brush rabbits in the area in and around Caswell Memorial State Park will facilitate reintroductions in other areas on the San Joaquin River (p. 11). Eventually, it will be important to establish multiple populations of both brush rabbits and woodrats because single populations are highly susceptible to extirpation from disease, flooding, and other factors. Information from the Caswell brush rabbit population may also be helpful in managing the Tracy brush rabbit population.

**2a) Are the monitoring and information assessment plans adequate to assess the outcome of the project?**

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

The primary focus of Phase 1 of the project is to acquire and secure riparian and adjacent upland habitat. The monitoring work is intended to take place in Phase 5 of the project. It is assumed that more information about the type of monitoring and how it will be used for adaptive management will be provided in proposals for the later phases of this project. There is not enough information provided in this proposal to assess the adequacy of the monitoring in the later phases.

Regarding Phase 1 only, as noted above, it might be useful to expand the surveys proposed under Task C to allow information to be gathered on habitat quality and deficiencies and a wider variety of risk factors for the eventual re-introduction. Information on the population levels and species composition of existing rabbit communities, and on habitat use, distribution, and abundance of any existing riparian brush rabbit population would be useful. Similar information should also be gathered on the riparian woodrat. Perhaps this is envisioned as part of Phase 3, but this is not clear.

**2b) Are data collection, data management, data analysis, and reporting plans well-described, scientifically sound and adequate to meet the proposed objectives?**

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

Most of the monitoring and assessment will take place during other phases of the project, with the exception of Task C, the pre-release rabbit survey. Details on this survey are lacking.

More information will be available in the EIR/EIS to be prepared during a later phase of the project.

**3) Is the proposed work likely to be technically feasible?**

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

Yes, although more information on other reintroduction projects involving rabbits might have been helpful. Rabbits are generally considered to be a species that reproduces quickly given suitable habitat. It appears that the project proponents have laid the ground work with the landowner such that acquisition of land or easements is feasible.

**4) Is the proposed project team qualified to efficiently and effectively implement the proposed project?**

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

The team members seem well qualified to participate in the purchase of property, and acquisition of fee titles for conservation easements. The Center for Natural Lands Management specializes in this type of project (pp. 11-12). They will be working jointly with the Sacramento Realty Office of the U.S. Fish and Wildlife Service under the direction of Mr. Howard Stark, a Realty Specialist and Appraiser (p. 12), who has a great deal of experience with land transactions.

The qualifications of the biological team are less clear. The proposal states that the Endangered Species Recovery Program will supply two individuals (p. 13). They will have experience with kangaroo rats and San Joaquin kit fox, which will likely provide a good background in trapping and surveying for small and medium-sized mammals, but evidently have no experience with the genus *Sylvilagus*. The kangaroo rat experience will facilitate work with the riparian woodrat. According to the proposal, the biologist will be under the direction of two individuals "heavily involved in establishing a captive breeding program for riparian brush rabbits since June 1998" (p. 13), but details regarding their background and qualifications were not provided. Having Dr. Williams, the coordinator for the USFWS recovery program, as senior advisor for the project should help ensure that this project coordinates well with overall recovery efforts.

**Miscellaneous comments**

[Note: in the electronic version, this will be an expandable field]

**Overall Evaluation  
Summary Rating**

**Provide a brief explanation of your summary rating**

**X Good** In this review, I have mentioned a few weaknesses of the proposal from a scientific point of view (e.g., regarding the hypothesis, conceptual design, and field surveys). However, Phase 1 of this project (which is the only phase for which this proposal is requesting funds at this point) is largely a land acquisition project. I believe that the premise of the project, that the targeted listed species and the riverine ecosystem are at risk and that protection and restoration of suitable habitat is critical to their recovery, is sound. I think that acquisition of suitable land for the riparian brush rabbit and riparian woodrat is well justified and should happen right away.