COMMENTS: SHASTA LAKE ENLARGEMENT

The Service agrees that the special status plant and animal species mentioned in the Shasta Lake Enlargement proposal warrant additional consideration before the project proceeds. Analysis of the potential effects of the project on each of these species is appropriate. Therefore, the Service recommends thorough and adequate biological surveys be conducted to determine the effects of the project on the species mentioned in the proposal as well as on the animal species discussed below.

The Service is concerned about the effects of the Shasta Lake Enlargement on several animal species whose ranges are restricted to areas of northern California in the vicinity of Lake Shasta. These federal species of concern include Shasta salamander (*Hydromantes shastae*), Shasta sideband snail (*Mondenia troglodytes*), Siskiyou ground beetle (*Nebria gebleri siskiyouensis*), Trinity Alps ground beetle (*Nebria sahlbergii triad*) and Shasta crayfish (*Pacifastacus fortis*). In particular, because the Shasta sideband snail's range is apparently restricted to the area immediately around Shasta Lake, the species may be especially threatened by lake enlargement. The Trinity Alps ground beetle has only been found in the Trinity Alps. The Shasta crayfish is endemic to the Klamath River drainage and now occurs only in the Pit River and its drainages.

The Service recommends that botanical surveys for federal species of concern be conducted well before any project construction efforts are undertaken. Federal species of concern include all listed, proposed, and candidate species as well as species of concern that have been identified in species lists that have been generated by the Sacramento Field Office. Botanical surveys need to be conducted as per Service protocols which are attached. Timing of botanical surveys is crucial to ensure that species are present and qualified botanists are able to make determinations to species (or subspecies) level.

In reviewing the proposed projects that have been identified in the CALFED process, an adequate biological assessment of the impacts to any of the proposed projects needs to include an effects analysis. At a minimum, the effects analysis needs to include direct, indirect, and cumulative effects. Additionally, growth-inducing, interrelated and interdependent effects should be clearly and concisely described and analyzed in terms of what projects have been completed in the past, what other projects are proposed, and what the individual and collective effects of these projects are likely to be.

Attachment 3