TASK 5 Data Analysis and Dissemination:

There were three sections of the data management task: data management and support, development of a GIS-based riparian restoration site selection model, and design and implementation of a web site for the Cosumnes Research Group.

The first task, data management and support, was conducted during the entire project and included the gathering and cataloging of existing GIS data for the study area, mapping and standardization of sampling sites, providing data to researchers, assistance with software and training. In addition, spatial analysis was conducted for individual research groups as needed. The analysis included calculation of upstream drainage from each sampling site, variation in upstream land use, numbers of dams and diversions, stream crossings, miles of near stream roads and other landscape characteristics. In addition the analyses were repeated for local areas surrounding the sample sites. Additional analysis included identification of potential barriers to fish passage. For further information see the GIS support section of this report.

The second task was the development of the web site. The initial design was undertaken with funding from the Packard Foundation but the site was greatly expanded during this CALFED grant. The site contains information about the Cosumnes Research Group's projects including posters, papers, and data. The data on the web site is available as summarized statistics by subwatershed, as GIS datasets, and through interactive graphing and maps. For further information see the website section of this report.

The third task was the development of the riparian restoration site selection model. Originally intended to be a refined version of the CARES system available on-line, some modifications were undertaken due to availability of web-to-GIS software. The basic concept from CARES of an additive model using user defined selection criteria was retained in the site selection model. The new site selection model was conducted in two steps. The first step was the development of a potential riparian vegetation dataset. The dataset was developed using logistic regression and a variety of physical characteristics relating to riparian habitats. Then the potential restoration site data set was used with

user-defined selection criteria and additional data sets in order to identify potential restoration sites and prioritize them for restoration. While the logistic regression equation developed for this application is specific to the lower Cosumnes River watershed, the method can easily be repeated for other watersheds. For further information on this method see the site selection section of this report.