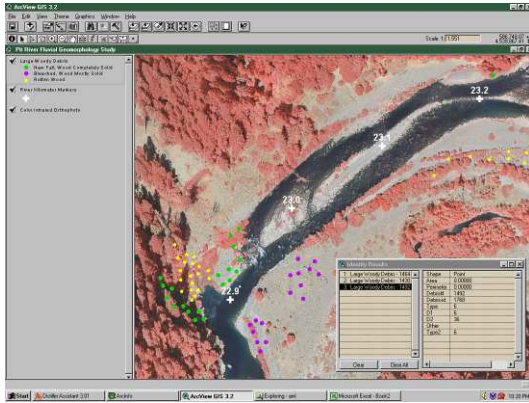




# Pit River Hydroelectric Relicensing GIS Services

## Pit River, California



To determine habitat-flow relationships for fish and eagle foraging within the Pit River, R2 created ArcInfo and ArcView compatible vector datasets using digitized field maps, a descriptive microhabitat database, and over 350 mapping products depicting five fish species/lifestage guilds at instream flows of 100 cfs to 1,800 cfs. Newly acquired color digital orthophotography covering seven representative sample sites in Reaches 3, 4, and 5 served as the base GIS data layer for R2's on-site habitat mapping effort.

R2 also performed a reconnaissance level evaluation of the Pit River geomorphology and the effects of historic and ongoing operations of the Pit 3, 4, and 5 Project. To support the focus of the study on hydrology, channel morphology,

### Project Elements:

- Instream Flow
- Geomorphology
- Hydroelectric Relicensing
- Rare and Special Status Taxa
- ESRI ArcGIS Software Tools

and sediment transport, R2 used existing PG&E GIS data in conjunction with R2 field data to create report maps identifying the landforms, riparian substrate, and dominant channel substrate of the project.

In support of PG&E GIS staff and consultants, R2 produced an array of maps showing dominant substrate categories, macrohabitat classifications, distribution of springs, potential trout spawning habitat, aquatic vegetation communities, woody debris, terraces, talus slopes, aquatic gastropods, bivalves, amphibians, northwestern pond turtles, and terrestrial mollusks. All mapping products were published in *River Corridor Habitat Mapping and Biota Surveys, with Emphasis on Special-Status Species for Pacific Gas and Electric Company's Pit 3, 4, and 5 Hydroelectric Project* by Spring Rivers Ecological Sciences.

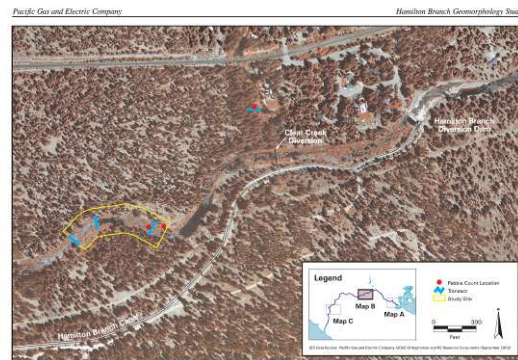


Figure 4-6. Map identifying location of Hamilton Branch Survey Site 2 (Map B).

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1998.08 Hamilton Branch Report\_11.D

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ERAPP

Other GIS tasks include data assimilation and the creation of presentation-quality graphics for R2's Hamilton Branch geomorphology study, and North Fork Feather River tributary spawning channel evaluation and design.