

Status of the Sierra Nevada

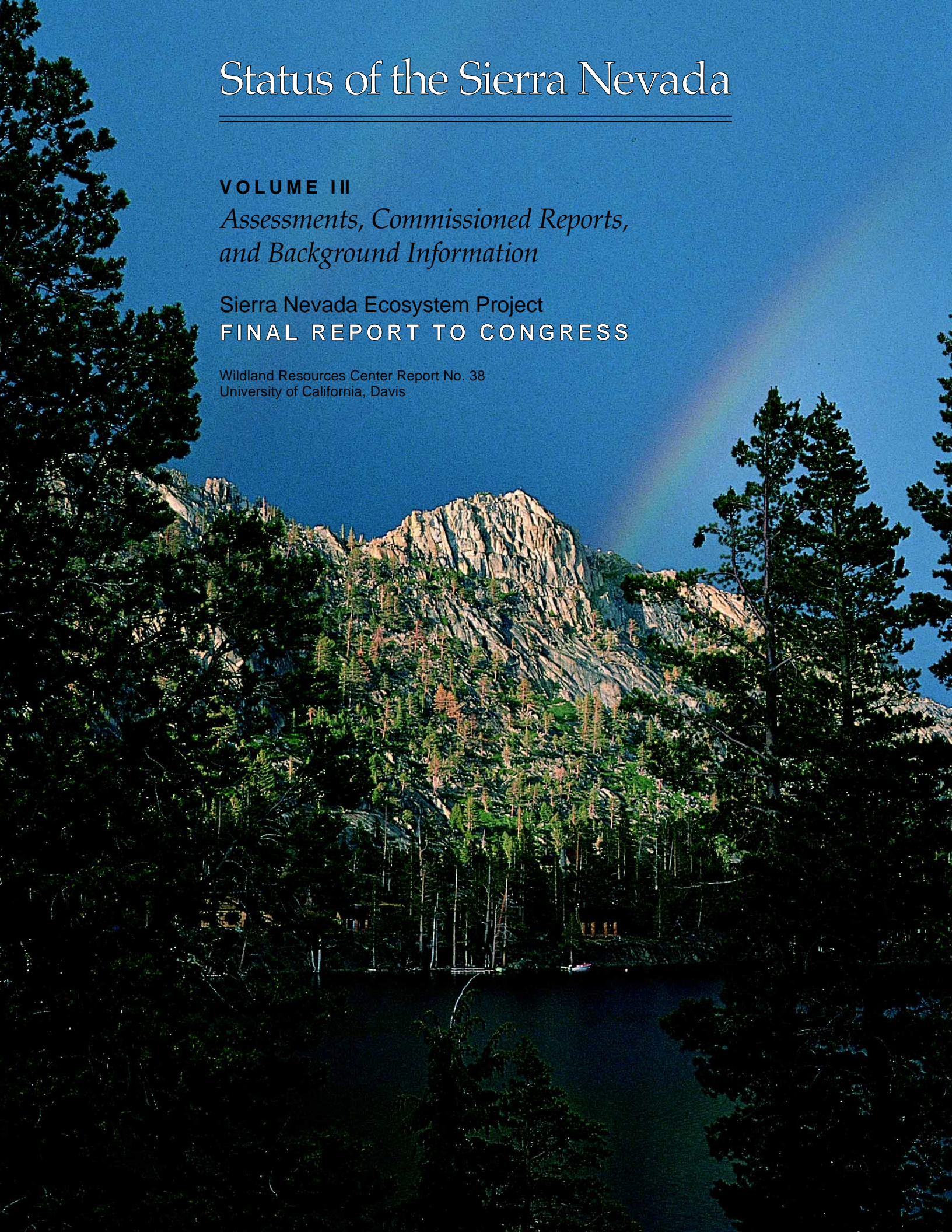
VOLUME III

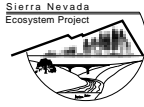
*Assessments, Commissioned Reports,
and Background Information*

Sierra Nevada Ecosystem Project

FINAL REPORT TO CONGRESS

Wildland Resources Center Report No. 38
University of California, Davis





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CENTERS FOR WATER AND WILDLAND RESOURCES
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*Peer reviewed

Preface

This volume contains the commissioned background reports, assessment chapters received too late to include in volume 2, Science Team workshops, and other background materials for the Sierra Nevada Ecosystem Project (SNEP). Several of the reports have been peer reviewed and are so noted in the table of contents.

Three of the larger reports (Elliott-Fisk and colleagues; Ustin and colleagues) in this volume are special case studies. Part of the congressional guidance for the SNEP included direction to examine the mediated settlement agreement for giant sequoia groves (see preface, volume 1). A review and assessment of the substantial body of information on giant sequoia and mapping of groves needed for the examination of the agreement is presented in this volume. Management implications and recommendations for giant sequoia ecosystems are summarized in volume 1 and ecology of giant sequoia is reported in volume 2. Another major case study review included the Lake Tahoe ecosystem. This region is remarkable for the scope and duration of scientific research and policy development. Our case study could not cover adequately all of this enormous body of knowledge and experience but it does review some of the important lessons and information from this long-term attempt at ecosystem management.

Two other chapters in this volume represent major peer reviewed assessments that because of their scope and extensive data collection could not be completed until late in the process. These reports—economic conditions by Stewart and colleagues and rangeland conditions by Menke—bring together for the first time basic information on conditions and trends for the Sierra Nevada region.

The project also chose to examine a few areas in greater detail than elsewhere in the Sierra in order to develop and test improved models. The Camp Creek/Clear Creek basin, largely within the Eldorado National Forest, was selected as one of the areas. Several of the reports in volume 2 use this region, and a new generation ecohydrological model presented here in volume 3 by Ustin and colleagues used the spatial data from this watershed. This model can be used to simulate hydrologic processes at time intervals from seconds to days and at a spatial scale of 30 m by 30 m. Such modeling and resolution will become a new means of examining the possible consequences of alternative land use, vegetation modification, and climate change on hydrologic processes.

Other reports in volume 3 provide additional background for the aquatic sections of the project and for forest management. Here, too, extensive analyses of particular areas, such as the compilation of all known records of salmon distribution prior to major dams, the record of tree plantations on Sierran national forests, and the results of experimental forest management on the UC Blodgett Experimental Forest are significant summaries.

The final section of this volume lists the topics and participants in our major workshops. These and many other less formal meetings and workgroups were essential to our work and contributed to our understanding of the system. Because of this substantial body of additional work, no single summary report can adequately cover the depth and richness of information developed by the contributors; we urge our readers to give these chapters and those in Volume 2 careful study.

Don C. Erman
Team Leader

