# CHAPTER I

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The Draft Programmatic Environmental Impact Statement (PEIS) summarizes the evaluation of the direct and indirect impacts of implementing a wide range of actions identified in the Central Valley Project Improvement Act (CVPIA). Details of the information used in the definition of the affected environment and analysis of the environmental consequences are presented in the technical appendices of the Draft PEIS.

This technical appendix presents a summary of vegetation and wildlife resources background information that was used during the PEIS preparation, and the results of the impact analyses for conditions that occurred throughout the study area, shown in Figure I-1.

The vegetation and wildlife resources analysis was primarily based upon changes in water levels at reservoirs and rivers, changes in refuge conditions, and changes in crop patterns. Information from the Agricultural Economics and Land Use and the Surface Water and Facilities Operations technical appendices was used in the vegetation and wildlife resource analyses.

Information from this technical appendix was used in the Recreation and Fish, Wildlife, and Recreation Economic technical appendices.

The assumptions and results of the analyses for Alternatives 1, 2, 3, and 4 and of Supplemental Analysis 1h are presented in this technical appendix and summarized in the Draft PEIS. The assumptions and results of Supplemental Analyses 1a through 1g, 1i, 2a through 2d, 3a, and 4a are summarized only in the Draft PEIS. The assumptions related to the vegetation and wildlife resources analyses for Alternatives 1, 2, 3, and 4 and Supplemental Analysis 1h are presented in Table I-1. The results of the analyses are presented in Table I-2.


**FIGURE I-1**
**STUDY AREA**



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## TABLE I-1

## SUMMARY OF ASSUMPTIONS FOR VEGETATION AND WILDLIFE ANALYSES

| Alternative or Supplemental Analysis | Assumption |
|---|---|
| No-Action Alternative | CVP Conservation Program implemented |
| 1 | Changes in reservoir operations and river flows per (b)(2) on the Sacramento, American, and Stanislaus rivers<br>Retirement of up to 30,000 acres of lands with drainage problems, limited revegetation for erosion control<br>18,000 acres of agricultural land fallowed, with proportional reductions in pesticide use<br>No conservation easements purchased on fallowed land<br>CVP provides Level 2 water supply to refuges, with maximum 25% shortages per Shasta Index<br>Implementation of AFRP physical habitat restoration actions including 50,000-acre meander belt on the upper Sacramento River<br>Approximately 80,000 acres of field flooding per (b)(22)<br>(b)(1) "other" Program is implemented |
| 1h | Same as Alternative 1, except:<br>Retired land is restored to native habitat |
| 2 | Same as Alternative 1, except:<br>Acquisition of additional water on the Stanislaus, Tuolumne, and Merced rivers leads to substantially higher spring flows<br>55,000 acres of agricultural land fallowed, with proportional reductions in pesticide use<br>Level 4 water supply for refuges acquired by CVP with shortages per water source |
| 3 | Same as Alternative 2, except:<br>Acquisition of water on the Stanislaus, Tuolumne, Merced, Calaveras, Mokelumne, and Yuba rivers leads to higher spring flows<br>137,000 acres of agricultural land fallowed, with proportional reductions in pesticide use<br>Conservation easements purchased on 15% (16,200 acres) of fallowed land in the San Joaquin River Region |
| 4 | Same as Alternative 3, except:<br>160,000 acres of agricultural land fallowed, with proportional reductions in pesticide use<br>Conservation easements purchased on 15% (18,800 acres) of fallowed land in the San Joaquin River Region |

## TABLE I-2

## SUMMARY OF IMPACTS ASSESSMENT OF VEGETATION AND WILDLIFE

| Affected Factors | No-Action Alternative | Alternative 1 | Supplemental Analysis 1h | Alternative 2 | Alternative 3 | Alternative 4 |
|---|---|---|---|---|---|---|
| | | *Change from No-Action Alternative* | | | | |
| Vegetation and Wildlife Species | CVP Conservation Program | Benefits for species not specifically identified in the Act through habitat acquisition, management, restoration, and studies through (b)(1) "other."<br>30,000 acres of retired agricultural land provides potential habitat for special-status species and other species associated with those sites.<br>18,000 acres of fallowed land provides potential habitat for some special-status species and other species.<br>Restoration of 50,000-acre meander belt on upper Sacramento River and riparian restoration on Sacramento and San Joaquin rivers and their tributaries improves habitat for dependent special-status species and other species.<br>Improved fisheries provide additional prey for fish-eating predators.<br>Level 2 water deliveries improve wetland management.<br>80,000 acres of flooded agricultural fields provide additional wetland habitat for migratory water birds and other species. | Same as Alternative 1 except:<br>Increased habitat for special-status species and other species on 30,000 acres. | Same as Alternative 1, except:<br>55,000 acres of fallowed land provides potential habitat for some special-status species and other species.<br>Increased spring flows on the tributaries to the San Joaquin River improve riparian habitat along the San Joaquin River near Vernalis.<br>Level 4 water deliveries improve wetland habitat management.<br>Further improvements in fisheries provide additional prey for fish-eating predators. | Same as Alternative 2, except:<br>137,000 acres of fallowed land provides potential habitat for some special-status species and other species. Conservation easements are acquired on 15% of fallowed land in the San Joaquin River Region.<br>Increased spring flows on the tributaries to the San Joaquin River improve riparian habitat along the San Joaquin River from the Merced River to Vernalis.<br>Further improvements in fisheries provide additional prey for fish-eating predators. | Same as Alternative 3, except:<br>160,000 acres of fallowed land provide potential habitat for some special-status species and other species. Conservation easements are acquired on 15% of fallowed land in the San Joaquin River Region.<br>Further improvements in fisheries provide additional prey for fish-eating predators. |