

Chapter 6

Cumulative and Growth-Inducing Impacts

6.1 Introduction

This chapter evaluates the cumulative and growth-inducing impacts associated with implementing the ILRP and the potential contribution of the program to those impacts. The impact assessment discusses each resource topic evaluated in this EIR.

6.2 Cumulative Impacts

State CEQA Guidelines require that the cumulative impacts of a proposed project be addressed in an EIR when the cumulative impacts are expected to be significant and when the project's incremental effect is cumulatively considerable (State CEQA Guidelines Section 15130[a]). If an environmental effect is not "cumulatively considerable," a Lead Agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. (Id.) Cumulative impacts are impacts on the environment that result from the incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions (State CEQA Guidelines Section 15355[b]). Such impacts can result from individually minor but collectively significant actions taking place over time.

The cumulative impact analysis determines the combined effect of the proposed project and other closely related, reasonably foreseeable, projects. This section describes the methods used to evaluate cumulative effects, lists related projects and describes their relationship to the proposed program, identifies cumulative impacts by resource area, and recommends mitigation for significant cumulative effects. Section 15130 of the State CEQA Guidelines states that the discussion of cumulative impacts need not provide as much detail as the discussion of effects attributable to the program alone. The level of detail should be guided by what is practical and reasonable.

According to the State CEQA Guidelines (Section 15130), an adequate discussion of significant cumulative impacts should contain the following elements:

- An analysis of related future projects or planned development that would affect resources in the project area similar to those affected by the proposed project,
- A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and
- A reasonable analysis of the cumulative impacts of the relevant projects. An EIR must examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

To identify the related projects, the State CEQA Guidelines (Section 15130[b]) recommend either the "list" or "projection" approach, the use of which must be guided by the standards of practicality and reasonableness. Because of the unidentified location of potential impacts, the Lead Agency has not identified any projects or programs adequately similar in nature, location, and type to result in a meaningful comparative analysis. To the extent feasible, the possible impacts of each resource area

are considered cumulatively in light of similar possible impacts, without reference to specific contributing projects.

6.2.1 Significance Determinations and Mitigation

Implementation of program alternatives has been determined to result in potential cumulatively considerable impacts for several resources. While suggested mitigation is provided for each potential cumulatively considerable impact, much of the mitigation cannot be enforced by the Lead Agency, as enforcement requires actions by third parties over which the Central Valley Water Board has no decision-making authority. Where impacts cannot be feasibly mitigated, a Statement of Overriding Consideration will be necessary.

6.2.2 Cumulative Impacts by Resource

6.2.2.1 Cultural Resources

Use of ground-disturbing management practices under the program alternatives could result in cumulatively considerable effects to cultural resources in concert with other, non-program-related agricultural enterprises and non-agricultural development in the program area. Agricultural operations in the Central Valley, in fact, have been a catalyst for archaeological resource destruction for more than 100 years (Riddell 2002:56). Implementation of **Mitigation Measure CUL-MM-1** would reduce the program's contribution to this impact to a level that is not cumulatively considerable, by ensuring identification of cultural resources and minimization of impacts to identified resources.

6.2.2.2 Noise

Noise associated with construction activities would be highly localized. Because noise-sensitive land uses are sparsely located throughout the program area, it is unlikely that noise from construction activities would result in a substantial cumulative effect in association with other noise sources at any given area. Accordingly, no cumulatively considerable noise impacts are predicted to occur as a result of construction activities.

Noise from vehicle trips would not be localized and would occur on roads throughout the program area where the cumulative noise from traffic may exceed local noise standards. Noise from vehicle trips therefore may contribute to traffic noise in these situations. However, because program-related vehicle trips would be limited to occasional trips for site inspections and monitoring, noise from operation of the program alternatives would not be cumulatively considerable.

6.2.2.3 Air Quality

Construction emissions associated with the program alternatives would be short term. Because cumulative impacts, by definition, are long-term, construction emissions are not anticipated to result in a cumulatively considerable impact on air quality. As explained in Section 5.5, Air Quality, because operational emissions associated with program alternatives would be minimal, they are not expected to result in cumulatively considerable emissions. In addition, implementation of **Mitigation Measures AQ-MM-1, AQ-MM-2, and AQ-MM-3**, described in Section 5.5, Air Quality, would further reduce any criteria air pollutants generated as a result of program implementation.

6.2.2.4 Climate Change

Unlike criteria pollutant impacts (see Section 5.5), which are local and regional, climate change impacts occur at a global level. The relatively long lifespan and persistence of GHGs (as shown in Table 5.6-1) require that climate change be considered a cumulative and global impact. As stated above, it is unlikely that any increase in global temperature or sea level could be attributed to the emissions resulting from a single project. Rather, it is more appropriate to conclude that the proposed program GHG emissions would combine with emissions across California, the United States, and the globe to cumulatively contribute to global climate change.

Given the magnitude of state, national, and international GHG emissions (see Tables 5.6-2 through 5.6-4), climate change impacts from implementation of program alternatives likely would be negligible. However, scientific consensus concludes that, given the seriousness of climate change, small contributions of GHGs may be cumulatively considerable. Because it is unknown to what extent, if any, climate change would be affected by the incremental GHG emissions produced by the program alternatives, the impact to climate change is considered cumulatively considerable. Implementation of **Mitigation Measures CC-MM-1** and **CC-MM-2**, described in Section 5.6, Climate Change, would result in lower GHG emissions levels than had they not been incorporated, but they would not completely eliminate program GHG emissions.

6.2.2.5 Vegetation and Wildlife

The Central Valley of California has been subjected to extensive human impacts from land conversion, water development, population growth, and recreation. These impacts have altered the physical and biological integrity of the Central Valley, causing loss of native riparian vegetation along the river system, loss of wetlands, and loss of native habitat for plant and wildlife species. While **Mitigation Measures BIO-MM-1** and **BIO-MM-2** presented in Section 5.7 are sufficient to mitigate any program-related impacts to rare or endangered plant or wildlife species, and to habitat for these species, the cumulative impact of the reduction in quality habitat and the take of individual listed plants or wildlife species is potentially cumulatively considerable.

6.2.2.6 Fish

The ongoing impacts of impaired water quality from irrigated lands are likely to cumulatively affect fish, in combination with contaminants that remain in the program area from past activities. Such activities include mining (e.g., heavy metals from Iron Mountain continue to affect Sacramento River winter-run Chinook salmon [Moyle et al. 2008:142]) and past use of pesticides such as DDT that remain within sediments. Because many of the existing effects discussed in the section “Existing Effects of Impaired Water Quality on Fish” are cumulative, it is difficult to determine the relative contribution of irrigated lands and other sources. For example, low DO in the Stockton Deepwater Ship Channel is a result of contamination from upstream nonpoint sources (possibly including agricultural runoff) and discharges from the Stockton sewage treatment plant (Lehman et al. 2004; Central Valley Water Board 2005). Application of pesticides to non-agricultural lands such as urban parks and the resultant contaminant runoff also cumulatively contribute to impacts of inputs from irrigated lands.

Given the ongoing ESA consultation process for pesticides as a result of recent court orders, it is reasonably foreseeable that further reasonable and prudent measures would be required by NMFS and USFWS that would improve water quality within the program area. Revision of water quality

control plans and TMDLs also can be expected to improve water quality. These and other measures, in combination with the likely beneficial effects of the various program alternatives, suggest that the cumulative effects of the program alternatives are not cumulatively considerable with implementation of **Mitigation Measures FISH-MM-1, FISH-MM-2, and FISH MM-3**, described in Section 5.8, Fisheries.

6.2.2.7 Hydrology and Water Quality

Program alternatives 2 through 5 would not result in adverse cumulative impacts on surface water quality, groundwater quality, or hydrology in the program area. Combining one of the program alternatives with other local state programs, such as the CV-SALTS program and the existing dairy program, could result in a cumulative beneficial water quality improvement over time. Similarly, Alternative 1 would not result in adverse cumulative impacts on surface water quality or hydrology in the program area and could result in a cumulative beneficial water quality improvement for surface waters. However, Alternative 1 does not address issues pertaining to groundwater quality and therefore could contribute to cumulatively considerable impacts to groundwater quality as a result of discharges from irrigated lands.

6.2.2.8 Agriculture Resources

Since 1984, the average biennial net conversion of prime and unique farmland, and farmlands of statewide importance in California has been 28,344 acres (CDC 2008). However, conversion has increased substantially since 2000, with an average biennial net conversion of 114,003 acres (CDC 2008). During the 2002–2004 period, prime farmland, unique farmland, and farmland of statewide importance was reduced by 133,024 acres (CDC 2006). The trend continued during the 2004–2006 period, with a net reduction of 125,495 acres (CDC 2008). Figure 6-1 provides a summary of important farmland conversion in California from 2000 to 2006.

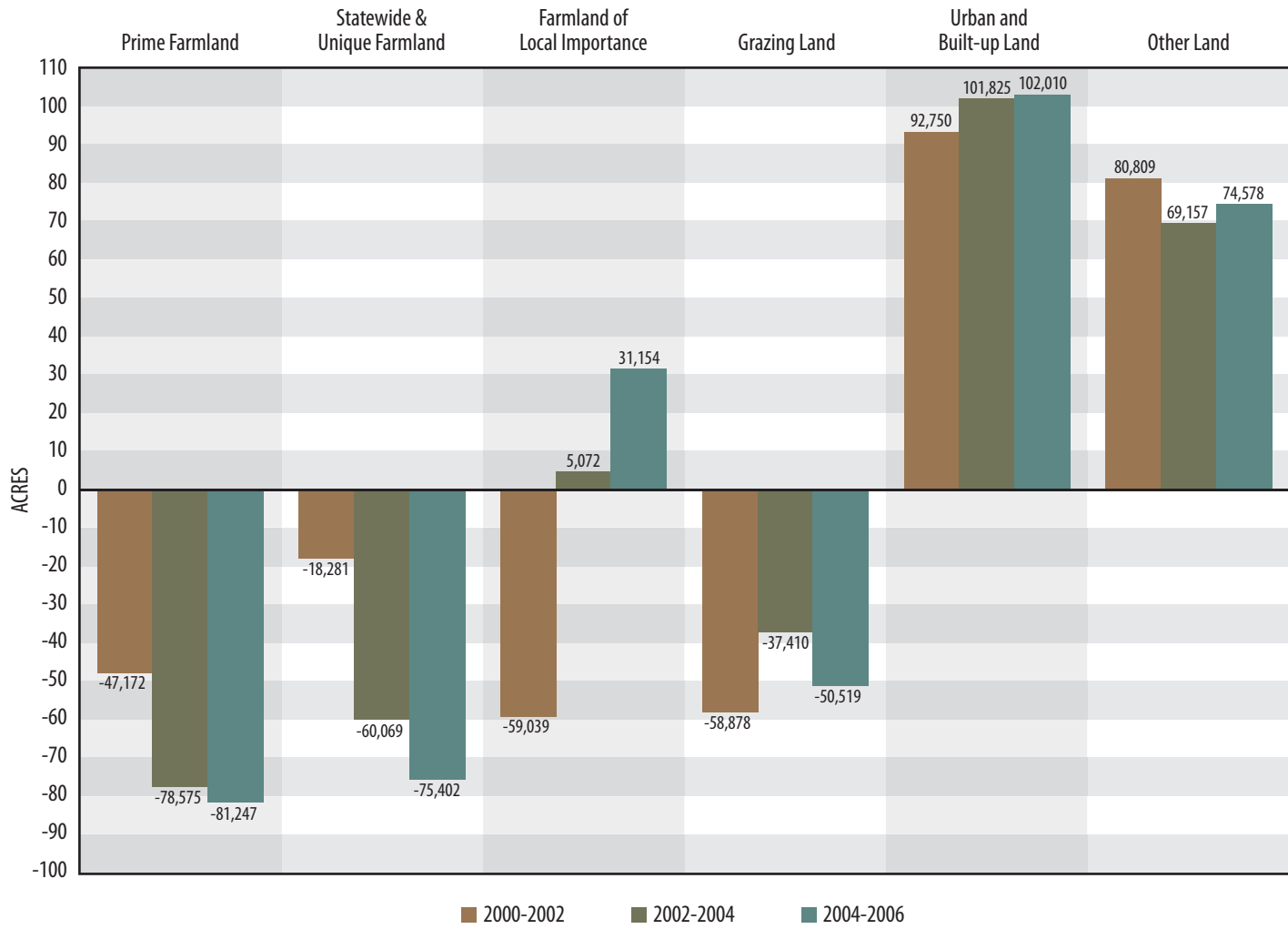
While conversion of important farmland may not continue at the accelerated rate of the past 10 years due to decreased demand for new housing, it is reasonably foreseeable that it will continue at a rate comparable to that seen since 1984. Given the magnitude of important farmland conversion expected from implementation of the ILRP, the program could result in considerably cumulative impacts to agriculture resources. However, implementation of AG-MM-1, described in Section 5.10, Agriculture Resources, could reduce these impacts to a level that is not cumulatively considerable.

6.2.2.9 Other Resources

No cumulatively considerable impacts have been determined to be associated with any other resource areas.

6.3 Growth-Inducing Impacts

Section 21100(b)(5) of CEQA requires an EIR to discuss how a proposed program, if implemented, may induce growth and the impacts of that induced growth (see also State CEQA Guidelines Section 15126). CEQA requires the EIR to discuss specifically “the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment” (State CEQA Guidelines Section 15126.2[d]).



Source: California Farmland Conversion Report 2000-2002, 2002-2004, 2004-2006

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Figure 6-1
California Farmland Conversion Summary 2000-2006

As the Agriculture Resources section discusses at length, it is anticipated that the increased costs associated with program alternatives will result in conversion of some acres of irrigated agricultural lands from present use to other purposes. While urbanization is an important component of agricultural land conversion, economic and resource availability factors also lead to more intensive farming or removal from irrigated uses. Irrigated agricultural land leaving its present use could be converted in a variety of ways, including to different agricultural uses—such as conversion from grasslands to orchards; urbanization through development for residential, commercial, or industrial purposes; or temporary or permanent land idling or dry cropping (CDC 2008).

Clearly, conversion of irrigated lands to urban uses would result in a growth-inducing program impact. As the Draft ILRP Economics Report shows, any acres of irrigated lands converted under the ILRP likely would leave present use as a direct or indirect result of an increasing cost burden; reduced profit margins could cause continued production under the present use to become infeasible. Growth-inducing impacts could occur if the converted acreage enters into more productive use, fostering economic growth and resulting in a potential population growth.

Due to the programmatic nature of this analysis, it is not possible to determine the location or quantity of irrigated lands that ultimately may be converted as a result of the ILRP. It is also not possible to determine what the resulting land use may be. Thus, the location or nature of any possible growth-inducing impacts is too speculative to quantify. It is reasonable to assume, however, that an increase in conversion of irrigated lands could remove a barrier to growth in some areas by providing lands for development previously unavailable for that purpose.