

RECLAMATION

Managing Water in the West



San Luis Drainage Feature Re-evaluation

**Final Environmental
Impact Statement**

**VOLUME II. TECHNICAL
APPENDICES**

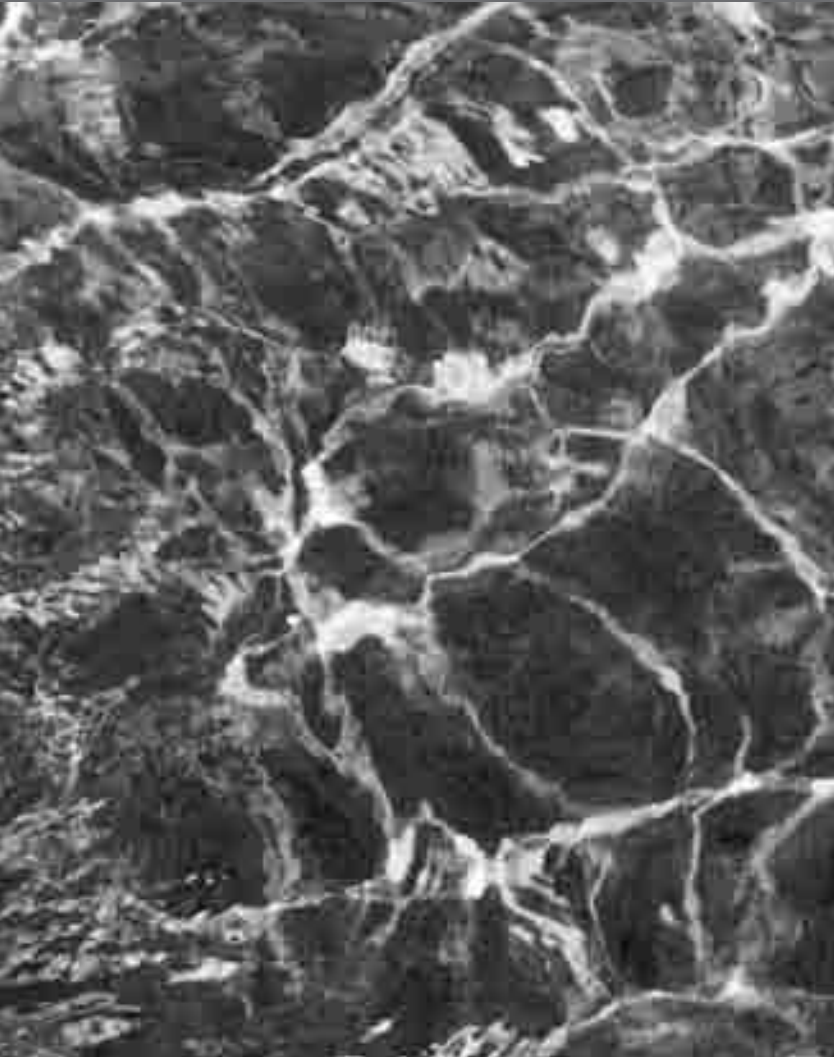
May 2006



U.S. Department of the Interior
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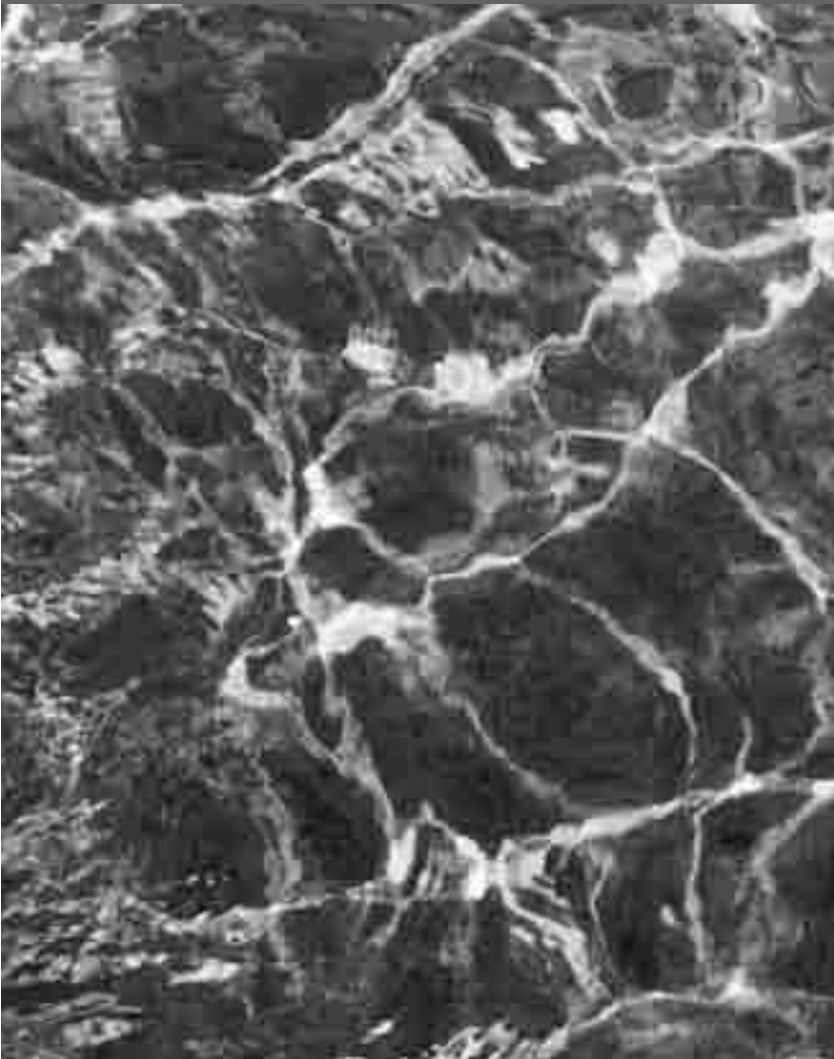
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Scoping Report

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San Luis Drainage Feature Re-evaluation

**Environmental Impact
Statement**

Scoping Report

July 2004



U.S. Department of the Interior
Bureau of Reclamation

Preface

Preparation of the Environmental Impact Statement (EIS) for the San Luis Drainage Feature Re-Evaluation represents an important milestone in providing drainage service to the San Luis Unit (SLU).

Reclamation is preparing the Re-evaluation in response to the District Court's December 2000 Order, under remand from the Ninth Circuit Court of Appeals, stating that the "...Department of Interior...shall without delay, provide drainage to the San Luis Unit, pursuant to the statutory duty imposed by section 1(a) of the San Luis Act." The order also stated that the U.S. Department of the Interior has the authority and discretion to pursue alternatives in addition to an interceptor drain to satisfy its duty under the San Luis Act.

Consistent with the schedule presented to the Court in *Plan of Action for Drainage to the San Luis Unit Central Valley Project*, Reclamation has been preparing the environmental analysis on the proposed action and three other feasible disposal alternatives, identified in the Plan Formulation Report (PFR) released in December 2002. In February 2004, Reclamation submitted to the Court an *Amended Plan of Action* after reaching agreement with the Westlands Water District regarding expanding the scope of the Re-evaluation to include land retirement alternatives. The draft EIS will now assess and compare the environmental impacts of drainage disposal alternatives, including land retirement. Consistent with the Amended Plan of Action, the draft EIS will be available for public review in the summer of 2005.

This **Scoping Report** documents agency and public comments Reclamation received on the scope of the EIS, describes Reclamation's approach to the environmental review process, and responds to questions and comments that will not be addressed in the draft EIS.

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Section 1. Introduction

1.1 SCOPING PROCESS

A major activity of the San Luis Drainage Feature Re-evaluation is compliance with the National Environmental Policy Act (NEPA). Reclamation is preparing an Environmental Impact Statement (EIS) that will assess and compare the environmental impacts of drainage disposal alternatives identified in the Plan Formulation Report (PFR) released in December 2002 and the Plan Formulation Report Addendum released in July 2004.

This scoping report documents agency and public comments received by Reclamation on the scope of the EIS, describes Reclamation's approach to the environmental review process, and responds to questions and comments that will not be addressed in the draft EIS.

What is scoping?

Scoping provides a method for public and agency comment on the environmental impacts of a proposed action and alternatives. It allows stakeholders to suggest potential issues that may require environmental review, reasonable alternatives to consider, and potential mitigation (ways to reduce or avoid environmental impacts) in the event that significant impacts are identified.

Project scoping allows Reclamation to clearly set the parameters of the EIS process by determining which scoping issues will be addressed, those that will not, and the rationale for the determination. Scoping also provides decision-makers with an understanding of the analysis the public feels should be considered as part of the decision making process.

Scoping process

Reclamation initiated the NEPA process by issuing a Notice of Intent to prepare an EIS in October 2001. Following the Notice of Intent, Reclamation convened a set of public scoping meetings to inform interested groups and individuals about the project and to solicit their ideas and comments. Comments received were summarized in the Preliminary Alternatives Report (PAR) in December 2001.

During 2002, Reclamation held workshops, focused outreach briefings, and two additional public scoping meetings to share information on project development and to receive additional input. Stakeholder input has been significant, including numerous written and oral comments. These comments were carefully considered and, in many cases, integrated in to the project approach and analysis and are part of the PFR.

In January 2003, Reclamation held four public scoping meetings (Morro Bay, Fresno, Concord and Sacramento) to solicit responses to the PFR and to receive scoping comments related to the NEPA process.

In response to input received, Reclamation considered and ultimately decided to formulate and evaluate an alternative(s) that includes large-scale land retirement of drainage-impaired lands within the SLU. In order to do this Reclamation and Westlands agreed to: consider an alternative(s) that does not directly provide drainage service to some or all lands in the Unit but provides an alternative to drainage service; and, extend the schedule for the Re-evaluation process to allow additional time to fully assess the impacts of large-scale land retirement in the study area. As a result of this change in scope, Reclamation held an additional round of public scoping meetings in early March, 2004 designed in particular to solicit input on land retirement alternatives and issues. Written scoping comments were also received through the end of March 2004. This report describes the nature and disposition of comments received throughout the scoping process.

Reclamation will continue to consult with the public at key milestones during the EIS process providing project updates and soliciting stakeholder comments. The following graphic shows the environmental review process from the Notice of Intent to the Record of Decision.



1.2 OVERVIEW OF COMMENTS

Approximately 220 people in total attended the scoping meetings in 2001, 2002, 2003, and 2004 and Reclamation has received 73 written comments since issuing the Notice of Intent. The comments reflect regional preferences for drainage disposal, a desire among stakeholders to reduce or eliminate the need for drainage service and concern over the potential environmental impact drainage service may generate.

Ocean and Delta Disposal. Stakeholders from the areas identified as potential outfall locations for either the Ocean or Delta Disposal alternatives suggested that the drainage problem be contained within the San Luis Unit (SLU). Their major concerns were related to safety hazards associated with transporting drainage water, potential biological impacts at the disposal location, and potential water

quality changes for drinking water supplies (Delta Disposal alternatives). Many stakeholders believe that out-of-valley disposal is the only long-term solution that can be sustainable and that eventually the salt must be transported out of the valley.

Evaporation Ponds. Many stakeholders voiced concerns over the operation of large evaporation ponds and expressed a strong desire to minimize the size of evaporation ponds and develop and manage the ponds in a way that avoids impacts to wildlife. Some stakeholders had concerns regarding groundwater contamination from evaporation ponds and regional re-use areas.

Land Retirement. Reclamation received numerous comments requesting that large-scale land retirement of drainage-impaired lands be considered as an alternative in the EIS. Additional comments related to large-scale land retirement proposals addressed the alternate use of the water that otherwise would have been applied to the retired land. Some commenters feel the water should remain in the SLU, some believe it should no longer be exported from its basin of origin, and others suggested that it be used for water users or the environment outside the SLU.

Comments during March 2004 scoping of land retirement alternatives suggested that Reclamation focus on the potential socio-economic implications of land retirement, including both direct impacts (employment losses and income from agricultural output) in the short-term, and indirect impacts of the long-term value of agricultural output versus the cost of land retirement. Reclamation should also clarify the manner in which lands would be retired (mandatory vs. voluntary), post retirement land management (private vs. public ownership), and post retirement land uses (wildlife refuges, dry-land farming, fallowing).

Study Area. Several comments requested that Reclamation consider increasing the size of the study area to include impacts to lands outside the SLU. These comments focused on assessing impacts of selenium and other contaminants from drainage activities to the San Joaquin River, groundwater drinking supplies, and the San Francisco Bay-Delta.

Implementation Schedule. Many comments mentioned that the implementation schedule provided by Reclamation did not provide for timely drainage service. Others suggested that Reclamation apply an adaptive management approach to implementing drainage service. The adaptive management approach should be implemented in such a way the Reclamation can take full advantage of emerging drainage treatment technologies. Some stakeholders also pointed out that an adaptive management approach could also provide timely drainage service, and that the two are not mutually exclusive.

During the 2004 scoping effort, Reclamation was urged to aggressively pursue short-term drainage remedies while the assessment of large-scale land retirement is pursued.

Drainage Reduction. Finally, stakeholders provided numerous comments regarding regulatory compliance, implementation responsibilities, and

development of clear drainage reduction protocols. Included in these comments was a request that Reclamation comply with current water quality regulations as well as consider future regulation, for drainage discharge to the ocean or San Francisco Bay-Delta. Additionally, a number of comments focused on establishing enforceable drainage quality and quantity criteria and determining the optimum level of drainage service based on various levels of on-farm drainage management.

1.3 DOCUMENT ORGANIZATION

Organization of comments

The remainder of this report is organized in two sections. Section 2 characterizes the major issues identified during scoping and Reclamation's approach to the environmental review process. This section includes Reclamation's assessment of the scope of the environmental impact analysis by identifying issues that require major analysis, those that require minor analysis, and those that will not be evaluated in the EIS.

Section 3 summarizes all comments received during the process and responses prepared by Reclamation. Individual comments are not identified in the scoping document; instead Reclamation has grouped like comments together into issue statements, and then developed an appropriate response.

Criteria for addressing comments in the EIS

The EIS assesses potentially significant environmental impacts and, as appropriate, identifies reasonable measures that will mitigate those impacts. Issues that will be assessed in the EIS are those that potentially would cause substantial environmental impact in one or more resource areas, occur within the study area of the project (including pipeline and canal routes and disposal locations for drainage outside of the study area), and are a result of drainage service actions under consideration. Issues that are more appropriately addressed in other environmental documents or programs will not be addressed in this EIS.

Section 2. Major Issues and Approach to Environmental Review

This section describes several major issues raised during scoping that may have a direct impact on the environmental review process, and therefore potentially affect the schedule for delivering the draft and final EIS. These issues relate to the definition of alternatives, and the breadth and depth of impact analyses. The following summaries are intended to give a brief overview of the issue and the approach Reclamation is taking for preparing the environmental review.

2.1

LAND RETIREMENT

Summary of Comments

Several stakeholders have requested that Reclamation include land retirement alternatives in the EIS. Specifically these interests have suggested that Reclamation should consider Westlands Water District's (Westlands) proposed land retirement plan or an alternative that retires sufficient lands to eliminate the drainage problem in the SLU. Such an alternative, commenters said, should include two water use scenarios – delivery of water to the SLU is decreased and delivery of water to the SLU is unchanged. Some comments noted that the Court has not stated that land retirement would not qualify as drainage service.

Reclamation Response and Approach

The District Court concluded in 1995 that Reclamation's failure to provide drainage service violates the San Luis Act and ordered Reclamation to complete the drainage facilities authorized under that act. The Ninth Circuit Court upheld this decision in 2000, but concluded that drainage service alternatives in addition to an interceptor drain could be considered by Reclamation. Reclamation's first priority in the Feature Re-evaluation is to address the court order and provide drainage service to maintain agricultural productivity of the soils in the SLU. Accordingly, Reclamation defined the project purpose to be to provide drainage service to the SLU that achieves long-term, sustainable salt and water balance in the root zone of irrigated lands.

Initially, Reclamation did not consider the inclusion of land retirement within the drainage service alternatives to be appropriate. Reclamation determined that it could be legitimately argued that the action of land retirement would not provide drainage service, nor would it maintain the arability of soils in the SLU to support agricultural productivity. To be consistent with the San Luis Act, and therefore consistent with the Court Order, the project must provide drainage service to meet the entire drainage need in the SLU. Furthermore, any land retirement program that Reclamation would implement would be on a willing seller basis and the magnitude and location of the land to be retired would not be known until the program was completed, which could take years if not decades to complete. In the meantime, it would be impossible to define and implement drainage service for the remaining lands in the SLU that need drainage to continue farming.

Nevertheless, stakeholders including San Luis Unit contractors continued to urge Reclamation to consider land retirement. Additionally, stakeholders provided input on a variety of drainage service alternatives that reduced or eliminated the need for drainage service. Subsequent to publication of the PFR in December 2002, Reclamation received two documents that include descriptions of the drainage options, management strategies, and conservation efforts: *Drainage Without a Drain* (The Bay Institute, Environmental Defense, and Contra Costa Water District), and *The Westside Regional Drainage Plan* (San Joaquin River

Exchange Contractors Water Authority, Broadview, Panoche & Westlands Water Districts).

Considering these proposals and based on public input, Reclamation decided to reexamine alternatives to include a land retirement option that takes all or part of the drainage impaired lands out of irrigated production. In reconsidering, Reclamation initiated discussions with Westlands Water District, the Exchange Contractors, and other affected districts regarding expanding the scope of the Re-evaluation to include a land retirement alternative(s). In order to do this Reclamation, with the concurrence of Westlands and other San Luis Unit Districts, amended its Plan of Action filed with the Court and agreed to: consider an alternative(s) that does not directly provide drainage service to some or all lands in the Unit but provides an alternative to drainage service; and, extend the schedule for the Re-evaluation process to allow additional time to fully assess the impacts of large-scale land retirement in the study area.

In order to receive stakeholder comment on this change to the Re-evaluation process, Reclamation held a third series of scoping meetings in March 2004.

2.2 IMPLEMENTATION RESPONSIBILITY

Summary of Comments

Many commenters wanted Reclamation to identify who would operate and maintain drainage facilities and to be more specific about the point in the drainage cycle where federal responsibility to provide drainage service begins. That is, Reclamation should identify to what degree it is the farmers' or the districts' responsibility to reduce the quantity and improve the quality of drainage before Reclamation assumes responsibility for treatment and disposal. Concern was raised that Reclamation was either unnecessarily taking on responsibility for drainage water that should be controlled on-farm, or that it might be attempting to implement regional drainage standards that it could not enforce.

Reclamation Response and Approach

Reclamation has identified in the PFR reasonable on-farm and in-district actions that could reduce drainage and is continuing to assess source control measures. These source control actions to reduce drainage volume prior to a regional collection system would be a local district and individual farmer responsibility and are assumed to be executed when sizing the collection system. The Federal project is proposed to begin with the regional drainage collection system and includes regional reuse facilities, treatment and disposal facilities. Design and implementation of the collection system is important, as the size of the collection system is the mechanism Reclamation would have to control the allowable drainage volume into the system. This volume ultimately impacts all of the subsequent drainage facilities. The districts would likely carry out the operation and maintenance of the project facilities.

2.3

IMPLEMENTATION PLAN

Summary of Comments

Several comments suggested that Reclamation should review and develop other innovative drainage reduction alternatives to augment the drainage service alternatives detailed in the PFR and provide for drainage relief in the near term. Others suggest that Reclamation develop a specific implementation plan, with defined decision points, that would allow development of additional drainage reduction measures or disposal alternatives and, at the same time, define the complete treatment and disposal plan. For example, Reclamation should commit to research and funding to develop a market for salts. Commenters suggested that the proposed action should contain a menu of on-farm, district, and regional elements that can be implemented as required.

Reclamation Response and Approach

To comply with the court order and to support Congressional authorization and appropriation, Reclamation must define and describe a complete drainage service system, including collection, treatment, and disposal, based on proven technologies. The alternatives described in the PFR are complete alternatives. Reclamation also reviewed a menu of on-farm and in-district actions to reduce the quantity of drainwater and identified those actions that would be reasonably implemented over the life of the project.

The In-Valley Alternative would be implemented over an extended period (approximately 20 years) as farmers install tile drains to collect drainwater. That is, the reuse, treatment, and disposal facilities would be scaled up over time to meet actual drainage service demand. This flexibility allows the opportunity to continue to develop drainage management technologies and incorporate those that prove to be more desirable or cost effective. More definition as to the research and development actions that Reclamation will propose to do throughout the implementation of the proposed action will be described in an implementation plan. Each of the research and development proposals will have an estimated decision point as to whether or not it should be incorporated into the drainage service plan. Reclamation would complete any supplemental environmental review of resulting project changes, as necessary.

2.4

DRAINAGE REDUCTION

Summary of Comments

A number of commenters asked if the estimates of drainage quantity are reasonable based on the selected drainage management actions or can more be done to effectively manage all of the drainage without requiring disposal facilities. Efforts, they said, should focus on minimizing the need for, or forestall the timing, of these regional facilities. Several comments suggested that Reclamation should revisit the logic and costs supporting the drainage reduction assumptions before determining the extent of reuse/evaporation facilities. Other comments suggested that Reclamation should consider on-farm or sub-regional

systems (e.g., Red Rock Ranch) that may have fewer environmental impacts than a centralized collection, treatment, and disposal approach. Reclamation should examine if these on-farm approaches would be sufficient to fully (or substantially) address drainage needs and avoid large centralized evaporation ponds.

Reclamation Response and Approach

The PFR identifies how Reclamation estimated drainage volume (Section 3 and Appendix A) to size the collection, treatment, and disposal facilities. The analysis focuses on the most cost-effective measures to reduce the drainage volume. Farmers and water districts could select any approach or technology to achieve the planned drainage volumes. The reuse, treatment, and disposal facilities are planned as regional facilities to facilitate manageable, efficient control of the operation and regulation of the facilities, and to ensure appropriate locations are selected for the facilities. Reclamation is continuing to evaluate and refine drainage reduction alternatives and determine revised drainage volumes as well as size and location of reuse, treatment, and disposal facilities for the draft EIS.

2.5 PROJECT FINANCING AND REPAYMENT

Summary of Comments

Several commenters expressed concerns about the financing of project facilities and the extent to which farmers would repay the Federal government for the facilities. Specifically, commenters were concerned that the farmers benefiting from those facilities would not pay the full cost of drainage service facilities. Other commenters were concerned that the cost of developing on-farm facilities would be prohibitive, and that Reclamation's cost considerations include methods to mitigate the cost of on-farm/district management costs.

Reclamation Response and Approach

The recommended repayment of any federal facility would be based on current Reclamation repayment policy. The analysis would include existing repayment obligations, on-farm and district costs associated with source reduction measures assumed in sizing of drainage facilities, as well as any new repayment obligations for drainage service facilities. A repayment plan will be included in the report sent to Congress requesting funding for implementation of drainage service.

2.6 SCOPE OF ENVIRONMENTAL IMPACT ANALYSIS

NEPA identifies a list of resource areas for potential assessment in the draft EIS process. NEPA recognizes that not every project will require environmental assessment on every one of the resource areas listed, and allows the lead agency flexibility to determine which areas require major analysis, which minor analysis, and which resources do not require analysis. Scoping allows Reclamation to gauge the level of potential environmental impact to each resource area, and focus the analysis on potentially significant issues.

Through its scoping effort Reclamation has identified the following resource areas that will require major analysis, based on the potential impacts of the proposed action and the comments received:

- ◆ Surface Water Resources (24 comments)
- ◆ Biological Resources (14 comments)
- ◆ Selenium Bioaccumulation (12 comments)
- ◆ Regional Economics (10 comments)
- ◆ Ground Water Resources (8 comments)
- ◆ Geologic Hazards (4 comments)
- ◆ Agricultural Production (2 comments)
- ◆ Social Issues and Environmental Justice (2 comments)
- ◆ Energy Resources (1 comment)

Resources requiring reduced analysis, based upon reduced potential impacts:

- ◆ Air Quality
- ◆ Recreation Resources
- ◆ Cultural Resources
- ◆ Aesthetics

Resources requiring no further analysis, based upon no identified potentially significant impacts:

- ◆ Traffic and Transportation
- ◆ Utilities and Public Services
- ◆ Indian Trust Assets
- ◆ Noise

Section 3. Public Comments and Responses

Following is a summary of the scoping comments along with Reclamation's response (in italics) as of the date of this Scoping Report. Responses fall into three general categories: (1) comments already addressed in the PFR; (2) comments to be addressed in the draft EIS; and (3) comments that are out of the scope of the Feature Re-evaluation and EIS.

3.1 EIS IMPACT ISSUES

Many participants had questions and comments focused on the environmental impacts that may result from implementation of one of the alternatives described in the PFR. Reclamation is evaluating these issues and will address many of them in the draft EIS.

3.1.1 Surface Water Resources

Reclamation should assess the impacts to surface water resources and compliance with water quality standards, and focus on the need to meet existing and reasonably foreseeable water quality standards for any disposal option. Participants requested that Reclamation provide a more detailed explanation in the draft EIS of the origin of the salt and selenium problems in the SLU. The EIS should include the following specific analyses: drinking water quality impacts of nitrates, bromate, or organic carbon and potential selenium contamination from lands that remain in production.

Delta

Reclamation should assess the potential impacts to water quality and compliance with salinity and other contaminant standards in the Contra Costa Canal, the Delta-Mendota Canal, San Francisco-Bay Delta, South Delta, and the San Joaquin River. Many stakeholders requested an assessment of all impacts to habitat and animal species that may be exposed to drainage water. It was recommended to coordinate drainage efforts with current San Francisco Bay-Delta dischargers.

Ocean

Reclamation should determine the impacts, both specific and cumulative, to the ocean environment near the disposal site. Additionally, Reclamation should describe how drainage discharges would be coordinated with other releases, and how the proposed diffuser system operates.

In-Valley

Several participants stated that Reclamation should describe how the In-valley drainage alternative would affect San Joaquin River and South Delta water quality and potential impacts to New Melones releases. One stakeholder recommended using the Tulare Basin Water Quality Control Plan as a reference for water quality standards.

Surface water resources have been identified as a potential impact area and are being assessed in the draft EIS. Reclamation is evaluating the potential surface water quality impacts of the Delta and Ocean alternatives, including potential impacts on drinking water supplies. All of the Action Alternatives would reduce discharges directly to the Lower San Joaquin River. The EIS will describe the potential benefits of removing discharges to the Lower San Joaquin River.

3.1.2 Ground Water Resources

Reclamation should identify the potential for groundwater contamination from evaporation ponds and provide a description of the mitigation measures to avoid seepage. Reclamation should describe how reuse areas will be maintained on a long-term basis, and should evaluate the potential for deep aquifer contamination from continuous irrigation of drainage-impaired lands. One commenter asked for an evaluation of the chemical concentration of selenium and other contaminants in soils and groundwater.

Ground water resources have been identified as a potential impact area and are being assessed in the draft EIS. The EIS will describe the In-Valley alternative, including the siting and design features of the evaporation ponds and reuse areas to minimize groundwater contamination.

3.1.3 Biological Resources

Monitoring and Mitigation

Reclamation should provide a complete description of mitigation and monitoring efforts, including implementation costs, designed to reduce or eliminate potential impacts to terrestrial and aquatic species. Reclamation should pay special attention to impacts to species listed in the Endangered Species Act, on waterfowl described in the Migratory Bird Treaty Act, and marine life within the Morro Bay Sanctuary.

Impacts from Drainage Reduction Efforts

Reclamation should assess the impacts on terrestrial environments resulting from the application of reused/recycled drainage water on salt tolerant crops.

Biological resources have been identified as a potential impact area and are being assessed in the draft EIS. Reclamation will evaluate the potential biological impacts of the drainage disposal alternatives, including the reuse areas. Reclamation will also describe mitigation measures, including a conceptual mitigation plan for reducing or compensating for biological impacts of the evaporation ponds.

3.1.4 Selenium Bioaccumulation

Treatment and Storage

Reclamation should evaluate the impacts of the biological selenium treatment (inorganic to organic forms) on the environment including a description of methods for sealing treatment ponds taken out of service.

Impacts to wildlife

Reclamation should completely evaluate the potential for selenium to affect wildlife, bioaccumulate in the food chain, and affect reproductive cycles of a variety of animal species. Commenters reminded Reclamation of the environmental problems encountered at Kesterson Reservoir from selenium contamination.

Drainwater Treatment

Reclamation should thoroughly treat selenium-tainted drainwater before disposing of it.

Selenium bioaccumulation has been identified as a potential impact issue and is being assessed in the draft EIS. Reclamation will describe the selenium treatment systems, including expected performance. Reclamation will also describe the potential impacts to the natural environment from selenium bioaccumulation.

3.1.5 Geology (Including Hazards)

Reclamation should examine the potential for natural disasters or accidents that may occur along the transport system or at the discharge point. The Ocean disposal alternative would have the highest risk of failure because the pipeline would cross the San Andreas Fault.

Geology, including potential hazards from geological disruption, has been identified as a potential impact area and is being assessed in the draft EIS. Reclamation will assess and describe the potential risks of pipeline failure, the measures to reduce risks, and the potential consequences of a pipeline failure.

3.1.6 Energy

Reclamation should provide a description of the energy requirements and costs required for the In-Valley alternative.

Energy has been identified as a potential impact area and is being assessed in the draft EIS. Reclamation will describe the energy needs for each alternative. The energy costs are included in the cost estimates of alternatives.

3.1.7 Regional Economics

Project Costs

The cost-planning horizon should be long enough to anticipate facility degradation and repair. Many stakeholders commented that Reclamation should

expand their economic analysis for each of the alternatives, focusing on the construction, maintenance, and decommissioning of evaporation ponds.

Other

Reclamation should address the economic impacts to Trinity River interests as a result of CVP operations.

Regional economics has been identified as a potential impact area and is being assessed in the draft EIS. Reclamation included the operation, maintenance, and repair costs for each alternative in the project cost estimates. The costs and economic impacts of CVP operations for the Trinity River interests (or others) are beyond the scope of the Feature Re-evaluation and EIS. Reclamation is evaluating alternatives to comply with the San Luis Act and rulings from the federal district and appellate courts to provide drainage service for the SLU.

3.1.8 Agricultural Production and Economics

Some participants commented that the public should not incur the costs of continued irrigation of drainage-impaired lands.

Impacts of No Action

Reclamation should quantify the declining agricultural output from the continued irrigation of drainage-impaired lands.

Impacts of Land Retirement

Reclamation should address all the economic impacts of retiring lands in the Westlands area (job loss, purchase price, etc.). Reclamation should explain how impacts, such as the loss of farm jobs, would be mitigated.

Commenters focusing on large-scale land retirement stressed the need for a complete economic evaluation of the impacts of land retirement on employment, agricultural output balanced against the cost of providing drainage service, or the actual acquisition costs of the retired land.

Agricultural production and economics have been identified as a potential impact area and are being assessed in the draft EIS. As part of the evaluation of the No Action alternative, Reclamation will describe the economic impacts of providing no drainage service to the SLU. The economic impacts of the No Action and action alternatives will be included in the analysis.

In evaluating land retirement alternatives, Reclamation will also determine the financial and socio-economic impacts (the cost of land retirement in comparison to the long-term agricultural output of the land).

3.1.9 Land and Soil Resources

Reclamation should examine the cumulative impacts of existing Valley land use.

Land and soil resources have been identified as a potential impact area and are being assessed in the draft EIS. Reclamation will describe the potential cumulative impacts of the action alternatives combined with other past, present, and future actions that could affect the same resources. These resources include topics such as biological resources, surface water, ground water, soils, and geology.

3.1.10 Social Issues and Environmental Justice

Reclamation should consider the impacts of water transfers from the Trinity River to the SLU via the CVP on the Yurok Tribe and others that use the Trinity River and San Joaquin River. Reclamation should address environmental justice issues resulting from land retirement.

Social issues and environmental justice have been identified as a potential impact area and are being assessed in the draft EIS. Reclamation will describe any potential disproportionate high and adverse impacts to minority and low-income populations from the action and No Action alternatives. Reclamation will describe the environmental justice issues that arise from the land retirement included in the action and No Action alternatives. Because CVP water operations are not the subject of the Feature Re-evaluation or within the scope of the EIS, Reclamation will not evaluate the social impacts of providing CVP water to the SLU.

3.1.11 Other Environmental Impacts

Reclamation should examine the potential direct and cumulative environmental impacts of on-farm, in-district actions.

Reclamation identified and evaluated on-farm and in-district actions to determine the appropriate size and design of federal facilities to provide drainage service. Individual farmers or water districts would implement on-farm and in-district actions before Reclamation collects, conveys, treats, and disposes of drainwater.

3.2 ALTERNATIVES

3.2.1 Alternatives Development Process

There were many comments on general project development, identifying suitable elements for consideration as part of drainage service, methodologies for environmental assessment, and post project administration of the action alternative.

3.2.1.1 Objectives

Reclamation should describe the project in such a way as to allow a reasonable number of project solutions to be developed. Additionally, Reclamation should better describe the timeframe associated with their goal of providing sustainable agriculture. The consequences of failing to provide adequate drainage service to the SLU should be described in the project purpose.

Reclamation identified multiple disposal scenarios in the PAR and PFR, including the methods and criteria for selecting the disposal alternatives for analysis in the PFR. Reasonable time frames for implementing each disposal alternatives were described in the PFR.

3.2.1.2 Alternatives Development

Reclamation should describe a process for advancing short-term interim measures that provide drainage relief, while developing long-term drainage alternatives. Many commenters suggested utilizing proposals and methodologies outlined in the publication Drainage Without a Drain, and by the San Joaquin River Water Quality Improvement Program. Several commenters stressed that alternatives development should be based on good science and the best available technologies. Reclamation should optimize a combination of non-discharge alternatives, and assess integrated on-farm drainage systems and water treatment.

The methods used for project development, identifying suitable elements for consideration as part of drainage service, methodologies for environmental assessment, and post project administration of the preferred alternative are described in the PFR.

3.2.1.3 Alternatives Descriptions

Reclamation should more accurately describe the No Action alternative, and detail the impacts that not providing drainage service will have on the SLU. Additionally, Reclamation should provide a description of its long-term monitoring commitment for each disposal alternative. Finally, several stakeholders recommended that Reclamation should focus on an alternative that reduces or eliminates the number of evaporation ponds, achieves a water/salt balance in the valley, and meets water quality objectives for the San Joaquin River and San Francisco Bay-Delta.

The no action alternative, including the impacts of not providing drainage service to the SLU, is described in the PFR. Additional descriptions and analysis of the No-Action alternative will be included in the EIS. Efforts to mitigate the size and number of evaporation ponds in the In-valley Disposal Alternative, and efforts to comply with water quality objectives for the San Joaquin River and San Francisco Bay-Delta, are described in the PFR.

3.2.1.4 Water Use

Reclamation should develop an economic/allocation efficiency evaluation of the amount of water used for irrigating saline and seleniferous soils. Commenters reminded Reclamation of its obligation to the Public Trust, where water is to be used for reasonable and beneficial uses, and asked Reclamation to describe how the continued irrigation of tainted soils is consistent with the protection of water quality, reasonable water use, and contemporary water conservation policies. Several participants commented that the delivery of water to the SLU impacts the Trinity River and the Yurok Tribe, and they stressed the need to protect Tribal Trust assets in the Trinity River area. One observer recommended severely curtailing SLU water shipments, while another requested that Reclamation examine better use of CVP water.

The direct and indirect economic impact of developing and implementing the drainage service will be assessed in the draft EIS. Reclamation included the operation, maintenance, and repair costs for each alternative in the project cost estimates in the PFR. The costs and economic impacts of CVP operations for the Trinity River interests (or others) are beyond the scope of the Feature Re-evaluation and EIS. Identifying alternative uses of CVP water was determined to be outside the scope of this project and the EIS.

3.2.2 Land Retirement

Reclamation received several comments regarding land retirement and its impact on the Re-evaluation process.

3.2.2.1 Land Retirement as an Alternative

Some commenters said Reclamation should evaluate land retirement as a distinct drainage disposal alternative. Reclamation should consider the full range of land retirement proposals currently under consideration (including Westlands' proposal to retire 200,000 acres in the SLU) in this alternative. The land retirement disposal alternative should include on-farm/in-district drainage reduction measures (sequential on-farm reuse, salt reclamation, reduced applied water, careful ground water pumping, agroforestry, dry land farming operations, etc.) described in the other disposal alternatives.

Water Retained by District

Reclamation should evaluate a land retirement disposal alternative that retains water not applied to the retired lands for beneficial use in the SLU.

Water Retained for Other Purposes

Reclamation should evaluate a land retirement disposal alternative that utilizes water not applied to the retired lands for beneficial use outside the SLU. The uses evaluated should include environmental mitigation and enhancement or returning CVP water to the Trinity River system. One stakeholder suggested that

Reclamation determine the value of water not applied to the SLU and use the revenue to help defer the cost of drainage service implementation.

Regional Socio-economics

Reclamation should consider the benefit of agricultural production of lands identified for retirement, and compare that with the overall cost of acquiring drainage impaired lands, or the cost of providing drainage service and keeping the lands in irrigated production.

The socio-economic impacts on employment and regional economics should be considered.

Post Retirement Land Use and Ownership

Reclamation should evaluate the impacts of various land ownership and land use scenarios as they relate to post retirement actions. These will include public vs. private ownership, and a variety of potential post retirement uses (wildlife refuges, dry-land farming, fallowing, etc.).

Reclamation has reviewed the comments associated with land retirement and has evaluated them against the objective of providing drainage service to the SLU. Reclamation has agreed to evaluate large-scale land retirement alternatives, and potential land use and ownership issues associated with them. The cost of any large-scale land retirement alternative will be considered as well. Existing land retirement actions are integrated into the alternatives as described in the PFR. Identifying alternative uses of CVP water was determined to be outside the scope of this project and the EIS.

Water Supply Impacts

Reclamation should consider the impacts to local municipal water users resulting from the retirement of the O'Neill Ranch properties.

Retirement of the O'Neill Ranch properties is proceeding as a result of litigation settlement and is therefore not within the scope of this EIS. The terms of the litigation settlement do not preclude delivery of water for municipal uses, and it is Reclamation's understanding that Westlands intends to continue to serve the historic uses.

3.2.2.2 Land Retirement as an Element of other Disposal Alternatives

Reclamation should consider a more complete range of land retirement scenarios (including Westlands' proposal) as part of each disposal alternative. One commenter suggested that Reclamation evaluate alternate land use options that eliminate drainage water production at its source.

Existing land retirement actions are integrated into the alternatives as described in the PFR. Additional land retirement alternatives are being developed for consideration in the Feature Re-evaluation. Identifying alternative land uses or alternative uses of CVP water was determined to be outside the scope of this project and the EIS.

3.2.3**In-Valley Disposal**

Reclamation should confirm all assumptions with pilot units. One participant recommended Reclamation pursue an In-Valley alternative that uses the Double Pass Preferential Precipitation Reverse Osmosis process (DP3RO). It was stated that the Grasslands Drainage Area needs Reclamation to immediately implement projects that continue drainage reduction measures. Other commenters said Reclamation should focus on options that satisfy the original District Court's directive to provide an "out-of-valley" drain.

Reclamation will use the best available and proven technology, and is continuing to consider the DP3RO process, in developing and implementing drainage service.

Evaporation Ponds

Many people voiced opposition to evaporation ponds for a variety of reasons, including potential leakage into groundwater resources, potential hazards to wildlife, long-term maintenance costs, and the eventual disposal of salts and other pond byproducts.

Reclamation has reviewed stakeholder input regarding evaporation ponds and will incorporate design elements where possible that minimize the impacts of these features. The methods and analysis assumptions used to develop the In-Valley Disposal Alternative, including the placement, number, and size of evaporation ponds are described in the PFR, updated information is being assessed by Reclamation in their analysis, and a refined description will be provided in the draft EIS.

Technology

Reclamation needs to verify and state the success of evaporation pond technology. Reclamation should detail the assumptions used for pond design and provide an explanation of how it would mitigate the selenium and eventually cap the ponds. Reclamation should explain how the 50-year life span of the ponds was determined. Reclamation should explain the source of power for the evaporation facilities. The Red Rock system was recommended as an example. Some commenters felt Reclamation should not lose water to evaporation when it could be cleaned up and used by others.

Reclamation will use the best available and proven technology in developing and implementing drainage service. The PFR describes the methods for integrating the best available technology and information from other successful drainage efforts.

Impacts on wildlife

Reclamation needs to fully explain all the impacts the ponds would have on wildlife, and if and how the costs associated with wildlife monitoring have been included.

Reclamation will describe the potential impacts of evaporation and selenium treatment ponds, and potential mitigation associated with these facilities in the draft EIS.

Costs

Reclamation should completely assess the impacts and costs of reverse osmosis, focusing on the cost of building, maintaining and decommissioning the ponds.

The costs of developing and implementing the various disposal options are described in the PFR.

Selenium Treatment

Reclamation should examine algae production to reduce nitrate concentration. Reclamation was cautioned that lagoon systems may result in uncontrolled plant growth downstream, and that multiple selenium reduction lagoons would be superfluous. Reclamation should include Broadview Water District's cost data on selenium bio-treatment.

Reclamation's evaluation of available selenium treatment methodologies, including information regarding data resources, is described in the PFR. Reclamation will continue to update data resources when developing the draft EIS descriptions.

3.2.4 Ocean Disposal

Reclamation should consider combining drainage with reclaimed water before discharging into the Ocean. Reclamation should clarify if the Ocean Disposal alternative includes the use of existing pipelines, and if the cost analysis includes public opposition to the plan.

Reclamation evaluated ocean disposal scenarios designed to minimize both the impact to the ocean environment and the amount of drainage water for disposal. This included utilizing existing conveyance routes, infrastructure and outfall locations. The elements of the Ocean Disposal Alternative are described in the PFR.

3.2.5 Delta Disposal

Reclamation should review the Luoma-Presser Report, which challenges the feasibility of Delta Discharge. Reclamation needs to update real estate prices in the Delta area.

Reclamation reviewed and considered the information from the Luoma-Presser report when assessing the feasibility of the Delta Discharge alternative. Reclamation will identify data resources in the draft EIS. The elements of the Delta Disposal Alternative are described in the PFR.

3.2.6 Deep Well Injection

Reclamation should consider deep well injection as the most favorable alternative and pursue technological assistance.

The PAR and PFR state that demonstrated technologies will be utilized when developing disposal options for the Feature Re-evaluation. Deep well technology has not been demonstrated to be an effective disposal method in the SLU area. Deep well injection and its role in drainage service are described in the PFR.

3.2.7 Other Alternatives

Reclamation should consider options other than completing the SLD or building evaporation ponds, such as on-farm actions like using solar power and crops that require less water. Reclamation should adopt and incorporate the Exchange Contractors Integrated Drainage Strategy into the study. One participant commented that drainage management by farmers and refuges is not sustainable.

The methods used for project development, identifying suitable elements for consideration as part of drainage service, methodologies for environmental assessment, and post project administration of the preferred alternative are described in the PFR.

3.3 STUDY AREA AND DRAINAGE QUANTITY AND QUALITY

3.3.1 Study Area

Reclamation should provide a clearer description of the quantity and quality of land proposed for drainage. The service area should include the entire Grassland Drainage area. The analysis should address the entire SLU and all lands receiving CVP water, as well as farms and water districts that contribute drainage with high levels of selenium to the Delta Mendota Canal. Reclamation should provide a map showing concentrations of selenium chromium, boron, and molybdenum. Reclamation should note that only 15% of the drainage-impacted lands within Westlands are within the Tulare Lake Basin. Reclamation should develop a Valley-wide drainage management plan.

The lands identified for drainage service are described in the PFR. The drainage study area is located in western San Joaquin Valley and consists primarily of the lands lying within the boundary SLU. Reclamation also included the entire Grasslands Drainage Area (some of which lies outside the SLU) in the study area because the drainage systems are closely interrelated with the lands in the SLU. The three disposal alternatives are intended to operate cooperatively with existing drainage efforts. However, assessing drainage service for lands not in or adjacent to the SLU or that are outside the Federal CVP service area has been determined to be outside the scope of the EIS.

3.3.2 Drainwater Quantity and Quality

Reclamation should use current data for assessing drainage quality and quantity. One commenter felt the study's assumptions led to an overestimation of water to be drained, and suggested reducing the amount of water applied. Reclamation should set water quality and quantity limits on drainwater that it will accept from farmers.

On-Farm Practices for Drainage Management

Many people commented that on-farm practices should be reconsidered and suggested that Reclamation list what practices are currently in use. The alternatives should optimize drainage minimization and incorporate targets for drainage reduction. Reclamation was asked to describe the extent to which it would be prepared to reduce irrigation water by implementing effective irrigation technologies, and show this level of reduction in drainwater volume. Reclamation should fully implement the major actions of the SJVDP for on-farm source control drainage management. Reclamation should assess the interest among farmers for recycling groundwater and determine if farmers are willing to accept recycled water.

The methods used for determining drainage quantity and quality, and the methodologies for identifying suitable on-farm/in-district drainage reduction techniques are described in the PFR. The drainwater volume after on-farm/in-district reduction is consistent with the drainwater reduction from full implementation of the San Joaquin Valley Drainage Plan source control recommendations.

3.4 REGULATORY ENVIRONMENT

Reclamation should comply with current and anticipated future State Water Resources Control Board resolutions, policies, and regulations, particularly with discharges to the San Joaquin River and San Francisco Bay-Delta. Water districts and farmers should also meet requirements determined by the government. Reclamation should involve the U. S. Fish and Wildlife Service, U. S. Geological Survey, and the State Water Resources Control Board in this Re-Evaluation and EIS process.

Construction and operation of the disposal alternatives would be subject to a variety of regulatory compliance actions that are in place to safeguard the environment. Further assessment of each disposal alternative will take into account this and reasonably expected changes to the regulatory environment.

3.5 IMPLEMENTATION ISSUES

Reclamation should explain why it has taken on the liability of and responsibility for impaired land reuse. Reclamation needs to provide clarification of who will pay for the implementation and installation of the plan, and what the effective

subsidy would be. Reclamation should detail who would operate the In-Valley facilities.

The purpose and need for the project is identified in the PFR and will be presented in the draft EIS, as will the costs and operations of the alternatives. Details of who would construct, operate, and maintain the various elements of the selected disposal alternative will be established in the implementation plan, which will follow the EIS.

3.5.1 Timing and Flexibility

Numerous participants commented that Reclamation should expedite the implementation of drainage service and provide short-term solutions. Reclamation should incorporate findings from existing studies to save time.

The timing and implementation of the Re-evaluation were described in the Plan of Action (2001), the Amended Plan of Action (2004) and the PFR. Reclamation continues to work with growers, districts, and other agencies to develop and implement drainage management actions.

3.5.2 Costs and Benefits

Reclamation should revisit the logic and costs supporting the In-Valley alternative. It should disclose the cost analysis of land fallowing, including the benefits of not using or selling water, and include these benefits in the irrigation analysis. The cost/benefit analysis should include the disclosure of agricultural subsidies. Reclamation was encouraged to review incentives for innovative farm practices.

Economic impact analysis of each alternative will be presented in the EIS. The cost of developing the disposal alternatives is described in the PFR. Additional analysis regarding agricultural subsidies and the use of water for other purposes has been determined to be outside the scope of the EIS.

3.5.3 Repayment Details

The EIS should display payment details. Reclamation should disclose specifics about repayment terms to reflect true costs and include information on repayment impacts if land is retired.

The project costs include the total costs for each alternative. Repayment plans will be developed following the EIS, consistent with the law and existing Reclamation policy.

3.5.4 Responsibility for the Feature Re-evaluation

Reclamation should explain the structure of the Federal and State environmental review process and if a CEQA evaluation will occur. A few stakeholders felt that Reclamation should have a neutral entity oversee the Re-evaluation process, and

change the Plan of Action so that it is compliant with the court order. One participant asked if the Secretary of the Interior has the discretion to select a different alternative.

The EIS and the detailed analysis of the proposed drainage alternative sets forth information required to select a disposal alternative. State permitting agencies will likely require a CEQA or CEQA equivalent document and the EIS is being prepared to facilitate its' adoption or use as an equivalent CEQA document. The Secretary will recommend a plan for implementation in the Record of Decision. Congress will ultimately determine which, if any, of the alternatives in the EIS is implemented.

3.6 OTHER COMMENTS

3.6.1 Project Resource and Costs

Reclamation should provide a description of resources committed to implementing the plan. The costs to taxpayers for fish and wildlife projects should be described.

Reclamation must define a complete drainage service system, including collection, treatment, disposal, costs based on proven technologies, and the added cost (and project time) of developing and preparing large-scale land retirement alternatives. The costs to address wildlife mitigation outside the SLU were determined to be outside the scope of the EIS.

3.6.2 Comments Supporting or Opposing Drainage Service Alternatives

Several comments supported Reclamation pursuing existing drainage alternatives, focusing on the In-Valley Alternative.

Numerous comments expressed opposition to the Ocean disposal alternative, the Delta disposal alternative, and the evaporation ponds. Many participants commented that the drainage from the Valley should stay in the Valley, and that exporting polluted runoff would cause environmental and economic damage to another location. One person felt all the options were too expensive, while another felt they were each problematic because of selenium impacts.

Reclamation evaluated the potential for acceptance or rejection of a specific disposal alternative in the PFR. Public concern and acceptance was included among other factors in plan formulation and screening.

3.6.3 General Comments

One person stated that taxpayers had not been paid back yet for the CVP investment. Reclamation should mitigate the past and future harm caused to the San Joaquin River area, and describe what assistance is going to farmers who manage land to produce food for a growing population with scarce water resources. A participant voiced the opinion that the Grasslands Bypass Project is

an unreasonable use of water. A few participants commented that Reclamation is in contempt of a court order and that damage claims will continue.

These comments were determined to be issues beyond the scope of analysis for the EIS.

Section 4. List of Commenters

NAME	ORGANIZATION
Dave Ciapponi	Westlands Water District
Terry Young	Environmental Defense
Felix Smith	
W.E. Loudermilk	California Department of Fish & Game
Gary Bobker	Bay Institute
John Kopchik	Contra Costa County Community Development Department
Lisa M. Holm	Contra Costa Water District
R. Berry Stewart	Trinity County Board of Supervisors
Lori Clamurro	Delta Protection Commission
Steve Chedester	San Joaquin River Water Authority
Russ Freeman	Westlands Water District
Matthew Reeve	California Department of Food and Agriculture
Dink & Mary Allen	
Irene Van Tassel	
Nick Di Croce	California Trout
Byron Leydecker	Friends of the Trinity River
Alex Hildebrand	South Delta Water Agency
William Smiland	Law Offices of Smiland & Khachigian
Roy Senior, Jr.	Zim Industries, Inc.
Theresa Presser	USGS
Dave Ciapponi	Westlands Water District
Joshua Baylson	US EPA
Curt Zimmer	Zim Industries
Joseph C. McGahan	Grasslands Drainage Area
Patrick Porgans	Porgans & Associates
Dudley Silveira	
Dennis Falaschi	Panoche Drainage District
Alene L. Taylor	
A.L. Fourchy	San Joaquin Valley Drainage Authority
Susan Masten	Yurok Tribe
Doug Weinrich	US Fish and Wildlife Service
Wayne Verrill	State Water Resources Control Board
Shirley Bianchi	San Luis Obispo County Board of Supervisors

John Alexander	John Alexander Research
Jill Zamek	
Rodger Anderson	City of Morro Bay
Bruce S. Gibson	Cayucos Citizens Advisory Council
William Oswald	Lawrence Berkeley National Laboratory
David Harlow	US Fish and Wildlife Service
Ronald Entweiler	WaterTech Partners
Don & Ellen Dollar	
Lonnie Wass	Regional Water Quality Control Board
Dennis Fox	
Richard A. Denton	Contra Costa Water District
Tom Stokely	Trinity County Planning Department
Thaddeus Bettner	Westlands Water District
Bill VanderPoel	Tule River Ranch, Inc.
Karna Harrigfeld	Herum Crabtree Brown
Lisa B. Hanf	US EPA
Carolina Jimenez-Hogg	Fresno County
Benjamin Garcia	
Carlos Ybarra	
Harold Huss	Five Stars Market
Sylvia Gomez	Westside Elementary School District
Baldo Hernandez	Westside Elementary School District
Albert Miller	Westside Elementary School District
Mel Reyes	Westside Elementary School District
Fred Cook	Westside Farmers Coop Gin, Inc.
20 oral commenters	Morro Bay Scoping Meeting (January 27, 2003)
15 oral commenters	Fresno Scoping Meeting (January 28, 2003)
22 oral commenters	Concord Scoping Meeting (January 30, 2003)
33 oral commenters	Sacramento Scoping Meeting (January 31, 2003)
13 oral commenters	Sacramento Scoping Meeting (March 1, 2004)
6 oral commenters	Concord Scoping Meeting (March 2, 2004)
16 oral commenters	Fresno Scoping Meeting (March 3, 2004)
14 oral commenters	Cayucos Scoping Meeting (March 4, 2004)