

Appendix R. Response to Comments

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1.0 INTRODUCTION

This appendix contains a detailed summary of all comments that were received in response to the Draft Comprehensive Conservation Plan/Environmental Assessment (Draft CCP/EA) for Sacramento River National Wildlife Refuge during the official public comment period. Public comments on the Draft CCP/EA were accepted from July 8, 2004 to August 20, 2004. Any additional comments received up until August 31, 2004 were also accepted and analyzed. Comments received after August 31, 2004 were reviewed for content, but were not used in the analysis.

All comments were reviewed and organized so that an objective analysis and presentation of the comments could be made (Section 2). Each piece of correspondence was assigned an identification number. Note that for simplicity sake, the word “letter” is generally used throughout this appendix to refer to any comment received, whether by letter, fax, postcard, email, comment sheet, or telephone call. A database was created to help analyze the nature and extent of the range of comments received. Service responses are included in Section 3. The names and affiliations of all of the people who commented are listed at the end of this Appendix (Section 4). Section 5 explains and summarizes the changes made between the Draft and Final versions of the Comprehensive Conservation Plan and Environmental Assessment. In cases where a letter pointed out a minor typographical or editorial error in the Draft CCP/EA/ the change was made in the Final CCP/EA, but no response is included in this summary.

2.0 QUANTITATIVE ANALYSIS OF COMMENTS RECEIVED

2.1 Summary of Comments Received on the Draft CCP/EA and the Response Process

The Service received a total of 1,187 comment letters (via letter, fax, postcard, e-mail, comment card, phone conversation) on the Sacramento River Refuge CCP/EA during the comment period.

2.1.1 Public Meetings

To facilitate public review and comment on the Draft CCP/EA, the Service hosted four public meetings (Table 1). Service staff made formal presentations and provided time for questions and comments at the meetings. Service staff and visual aids were also available at each topical station (refuge management, visitor services, wildlife and habitat, and fire and maintenance) to facilitate dialog. Hardcopies and CD copies of the Draft CCP/EA were available for the public to review and take with them.

At the meetings, the public was invited to provide comments on the contents of the Draft CCP/EA. Comment sheets were provided. The public meetings were attended by a wide

range of people, including federal, state, and local agency staff; representatives of organizations; neighbors of the Refuge; and other members of the general public. All four meetings were held in the evening from 6 p.m. to 8 p.m.

Table 1. Date, Location and Attendance During Public Meetings on the Draft CCP/EA

Date	Location	Attendance
July 20, 2004	Willows, CA	6
July 21, 2004	Chico, CA	42
July 27, 2004	Red Bluff, CA	22
July 29, 2004	Colusa, CA	19

2.1.2 Affiliations

Table 2 provides a summary of the affiliation of commentors. Names and entities of the commentors are listed at the end of this Appendix (Section 4). Many of the comments received had letterhead and signatures from various agencies, organizations, and businesses; however, unless the entity was specifically represented in the comment, the comment was left in the general public affiliation type.

Table 2. Commentor Affiliation

Affiliation Type	Number Of Letters Received
Federal Agencies	2
State Agencies	3
Local Agencies	4
Organizations	16
Businesses	9
General Public	1,153
TOTAL	1,187

2.1.3 Comment Media

Comments were received in a variety of formats during this process, including letters (and postcards), e-mails, faxes, phone conversations, and comment sheets distributed by the Service (primarily at public meetings and local businesses) to facilitate the comment process. A hardcopy of the Draft CCP/EA was placed at local businesses as well as local libraries for review (locations are listed in Appendix J). The distribution of media type is summarized below in Table 3. Note: no petitions were received as part of the comment process, although a few of the form letters contained up to 8 signatures. It should be recognized that the increased use of e-mail and other internet-based communication tools contributed to the large number of comments received on the Draft CCP/EA. The Service considered all comments received as part of the decision-making process.

Table 3. Type of Media Used

Type of Media	Number of Comments Received
Letter	126
E-mail	863
Fax	24
Phone Record	7
Comment Sheet	145
Letter & Email	11
Email & Fax	11
TOTAL	1,187

2.1.4 Place of Origin of Commentors

Although the Sacramento River Refuge is a relatively new refuge, it is well known and the anticipation of its opening to the public has been recognized throughout the CCP process. The greatest number of respondents (54 percent) was from California, with 38 other states or outside of the United States making up 1 percent or less. 407 commentors did not provide a place of origin (Table 4).

Table 4. Commentor State of Origin

STATE	# of respondents	STATE	# of respondents
Outside of the US	6	NC	6
AL	1	NE	1
AR	3	NH	1
AZ	3	NJ	2
CA	639	NM	1
CO	1	NV	2
DC	1	NY	15
FL	7	OH	4
GA	1	OK	2
HI	1	OR	9
ID	5	PA	2
IL	7	SC	2
IN	5	TN	1
KS	3	TX	12
LA	2	UT	2
MA	6	VA	4
MD	5	WA	8
MI	1	WI	1
MN	2	WV	1
MO	3	No state given	407

2.2 Quantitative Summary of Comments Received – Alternatives and Issues

Section 3 of this Appendix presents a summary of specific comments received, followed by the Service's responses. However, it is first useful to present a general summary of the nature of comments received, based on issue type. The information presented in this section includes a relatively quantitative analysis of the information received and analyzed. A more precise analysis was difficult due to the overlap of key issues and the open ended nature of the comment process. Data was recorded only for issues specifically identified by commentors. For example, if a letter specifically addressed only one key issue, it was tallied under that issue topic only, even though a position was implied on other key issues. Thus, evaluation and assessment of comments is strongly tied to the nature and content of the specific comments received. Service staff have read and reviewed every letter received during the comment process, and the information contained in those comments was used to help develop the Final CCP/EA, and refine the Preferred Alternative.

2.2.1 Alternative Support

The Draft CCP/EA presented an analysis of 3 alternatives: Alternatives A, B, and C. Commentors often expressed their explicit support for (or opposition to) a particular alternative by name. In many instances, commentors qualified their support for a given alternative, that is, they noted that they preferred a particular alternative overall, but also recommended certain additions or deletions of specific action components. For this analysis, the Service refers to this conditional support as support "with changes." Out of the 1,187 comment letters, 787 (66 percent) of the comments supported an Alternative. Out of those that expressed support for an Alternative, there was strong support expressed for Alternative C (86 percent, with and without changes). Alternative B, the Preferred Alternative was supported by 9 percent, with and without changes. In addition, almost all agencies and governments expressed support for the Preferred Alternative. Five percent supported either Alternative B or C. Very little support was given for Alternative A, the No Action Alternative. Table 5 summarizes the commentors' stated support for the given alternatives. Out of 1,187 comment letters, 400 (34 percent) did not express support for an Alternative. These commentors expressed either opposition or support for a specific issue.

Table 5. Support for Defined CCP/EA Alternative

Alternative	Number (percent)
Alternative A	3 (<1%)
Alternative B	54 (7%)
Alternative B with changes	15 (2%)
Alternative C	664 (84%)
Alternative C with changes	12 (2%)
Alternative B or C	39 (5%)
Total Comments on Alternative Preference	787

2.2.2 Issues

Table 6 contains a list of issues that were specifically mentioned in the comments received. It is important to note that comment letters may have contained more than one issue. Within a single comment letter, there may have been multiple comments on a specific issue; however, the issue was only recorded once per comment letter in this analysis. Either support or opposition was expressed for each of the issues, except for the no hunting issues which consisted entirely of those opposed to hunting on the Refuge.

After reviewing the 1,187 comment letters, 1,681 comments within 19 issues were identified. Many of these issues were also identified during the CCP scoping process. Out of the 1,681 comments, the majority dealt with hunting (57 percent) with 13 percent opposing hunting and 44 percent either supporting or specifically mentioning hunting in their comment.

Table 6. Comments Concerning Specific Issue

Issue	Number (percent)
Hunting	747 (44%)
Fishing	346 (21%)
Opposed to Hunting	219 (13%)
Refuge/River Access	178 (11%)
Agriculture	48 (3%)
Other	36 (2%)
Other Recreation	23 (1%)
Refuge Management	22 (1%)
Adjacent Landowner	12 (<1%)
Law Enforcement/Fire	11 (<1%)
Wildlife Observation	10 (<1%)
Flood Control	10 (<1%)
Boat Ramps	5 (<1%)
Questions	5 (<1%)
Environmental Education	2 (<1%)
Interpretation	2 (<1%)
Photography	2 (<1%)
Disabled Access	2 (<1%)
Camping	1 (<1%)
	1,681

3.0 SUMMARY OF COMMENTS AND SERVICE RESPONSES

This section provides a summary of the individual comments received on the Draft CCP/EA, followed by the Service's responses to those comments. The comments were organized into 14 topic areas many of which are issues identified in Table 2. The topic areas include:

- Floodplain Management/Hydrology
- Adjacent Landowner Concerns
- Biological Comments
- Refuge Management
- Biological Issues
- Biological Integrity
- Hunting
- Cultural Resources
- Sanctuary
- Public Access
- Policy
- Other CCP Comments
- EA Comments
- Praise

Within each topic area, similar or related comments were grouped by subtopic and presented as bulleted items. In many cases, the text in the bulleted comment is a quote from a particular letter; in some cases, very similar comments were merged into a single bullet or comments were paraphrased to make them more concise. Every effort was made to present all substantive comments in this summary; the specific comments presented here are a representative sample of all the comments received. A comment that addressed several issues was sometimes placed in a single bullet, in the section to which it was most closely related. Therefore, there is some overlap between topics. The Service response follows each group of comments. A copy of all of the original comments received on the Draft CCP/EA is maintained on file at Sacramento Refuge Complex headquarters.

3.1 Floodplain Management/Hydrology

Comment: While it is commendable that the Service recognizes the need to protect the integrity of the system of levees, weirs, and overflow areas the wording in Strategy 1.2.3 could and should be more strongly worded to state a Refuge goal is to retain and enhance existing flood flows. The words “coordination” and “studies” are a subterfuge for inaction within governments.

Service Response: Authorizing legislation of the Refuge is described in Chapter 1 of the CCP in the section titled Sacramento River National Wildlife Refuge. The purposes of the refuge are linked to the enabling legislation which is also described in Chapter 1 in the Refuge Purposes section. The process used to determine refuge goals, which are tied to

the purpose of the Refuge is explained in Chapter 2 in the Determining the Refuge Goals, Objectives, and Strategies section. Although the Service does recognize the importance of the Sacramento River Flood Control Project (SRFCP) and requirements to maintain flood control infrastructure, flood control was not defined as a specific purpose for which the Sacramento River National Wildlife Refuge was established.

Coordination and consultation with regulating agencies, environmental compliance including NEPA, and engineering/hydraulic analysis are required for federal actions beyond regular and reoccurring maintenance activities. This document, which involved coordination with other agencies and technical studies and analysis, is part of the process.

Comment: Restoring floodplain hydrology through refuge properties near Deer Creek, Tehama County.

Service Response: Chapter 5, Objective 1.2 describes the refuge management options for floodplain restoration and river processes. The benefits to allowing floodwaters to enter refuge lands should not only improve fish and wildlife habitat, but also provide additional acreage for floodwater storage. Prior to any restoration efforts including both re-vegetation and/or topographic modifications, the refuge conducts in depth ecological and engineering studies to determine the benefits to fish and wildlife as well as potential impacts to neighboring lands. A detailed feasibility study was conducted on the Rio Vista Unit (PWA, 2004) to determine the benefits and impacts to restoring floodplain topography on the property southeast of Woodson Bridge. The study indicated, by restoring historic topographic features on the Rio Vista Unit, there would be ecological benefits and minor local flood hazard reduction in the vicinity of the Rio Vista Unit. The Refuge is in the process of conducting preliminary endangered species consultation and engineering designs to improve drainage on South Avenue through Refuge lands.

Comment: The soils section and geology/hydrology section state that surface erosion and sedimentation rates would change minimally as a result of the proposed alternatives. These statements need clarification and qualification. If floodplain hydrology is restored erosion potential, deposition, and sedimentation should be expected to shift as the floodplain develops.

Service Response: Restoration of agricultural lands to riparian habitat involves normal agricultural practices including orchard removal, discing and land plain work for seedbed preparation and weed control.

Prior to any action involving floodplain changes the Refuge would consult with engineers to conduct hydraulic modeling of the restoration site and identify potential impacts. The Refuge and its restoration partners would design revegetation and other restoration activities accordingly. All restoration plans must be sent to the State Reclamation Board for review and comment. Projects with specific goals for increased flood water storage on

Refuge lands to reduce flood pressure on surrounding communities include La Barranca, Rio Vista, and Pine Creek.

Comment: If the intent of the Refuge is to return the floodplain between the levees to an open area as represented by these pictures in the Draft CCP, it would greatly benefit flood protection to properties in the Butte Basin.

Service Response: It is the intent of the Refuge to restore, enhance and manage the natural, indigenous habitats and vegetation that once occurred and potentially would occur at the Refuge. These habitats include open grasslands, savannas, woodlands, and forests. The Refuge and associated restoration partners use hydraulic models to determine the impacts of restoration design (i.e., vegetation structure and density) on flood flow conveyance and levees. The Refuge has planted open habitats such as grasslands and savannas where needed to maintain flood flow conveyance and protect levees.

Comment: The second sentence in the second paragraph on page 23 of the Draft CCP is misleading and that riparian forests have not been weakened by dams and an altered hydrograph. The opposite is true with summer water flows augmented from Klamath River flows and reservoir releases.

Service Response: Modern flood control and water storage and conveyance systems on the Sacramento River have altered the hydrograph so the flow regime (i.e., timing, distribution, and volume of flow, over bank flooding) and associated physical processes of main channel migration (i.e., river meander), erosion, and deposition/sedimentation have been greatly altered. The Sacramento River is a meandering river and the vegetation, plants, fish, and wildlife are adapted to the seasonal, convulsive nature of these physical processes. Riparian trees and shrubs survive prolonged flooding during dormancy and subsequent drought by tapping into the water table. As trees fall into the river due to erosion on one side of the river, corresponding deposition creates a substrate for seedbed, while seedling roots follow a trailing water table. Over time, the meandering Sacramento River built natural levees that valley oak forests eventually became established and thrived upon. The extent of these forests can be surmised by the extent of Columbia-class soils in the Sacramento Valley. The Sacramento River riparian corridor was a large, diverse mosaic of vegetation, sand and gravel bars. Modern flood control and water storage and conveyance structures ultimately made it possible to clear oak woodlands and riparian forest for agriculture. This change to agricultural land use is largely responsible for the loss of 98 percent of California's riparian habitats. It should also be noted that flows of the Sacramento River are augmented by water from the Trinity River, not the Klamath River.

3.1.1. Restoration

Comment: Consider the impacts of vegetation, sediment transport, and geomorphology on the hydraulic capacity of the River. Evaluation should include hydraulic modeling to determine effects on bank stabilization and channel capacity.

Service Response: Restoration planning activities (Restoration EA, USFWS 2002) fall under the NEPA process for environmental and public involvement compliance. These documents include planning, restoration design, hydraulic analysis, impact analysis, and public involvement. The use of computer models that describe water flow is a standard engineering practice employed to evaluate changes in water flow resulting from a project. There are many different models employed for this purpose, however they are all based on the physics that describe moving water. The basic approach is to calibrate the various model parameters such as water depth and velocity to a known set of conditions on the landscape. Project conditions such as a levee, a bridge, or a change in land cover use are then input into the computer model. The model is then used to compare the resulting project conditions to without project conditions to aid in project design. The detailed, site specific design and collaboration takes place once funding is secured. During the restoration planning process, the Service and its partners are relying more on the expertise and experience of local landowners or tenant farmers, restoration ecologists, and engineering and hydraulic engineers to assist in the design of restoration projects. All site plans are reviewed by the State Reclamation Board, adjacent landowners, and the SRCAF. Although it is the intent of the refuge to restore or enhance all refuge properties in order to fulfill the purposes and accomplish the goals of the Refuge by providing high quality riparian habitat, properties not covered in the Restoration EA (USFWS 2002) will require further analysis and public involvement. It is the responsibility of the refuge manager to ensure that any Refuge actions (e.g. restoration projects) are in compliance with NEPA and other applicable laws and regulations.

Comment: Restore drainage swales/topography through refuge lands prior to restoration

Service Response: The Refuge will focus on the restoration and enhancement of historic topographic features during the planning stages of restoration design on future projects to enhance ecosystem restoration and reduce localized flood hazards prior to implementation. Under Objective 1.2 Floodplain and River Process of the CCP, the Service has identified strategy 1.2.1 as the method for improving the restoration planning process.

Changed CCP, Chapter 5, Floodplain and River Process strategy 1.2.1 to include topographic features: Modify privately constructed levees, *restore or enhance topographic features*, and other bank stabilization features on Refuge lands....

Comment: Statement on page 48 of the Draft CCP and text about bank erosion rates on the Sacramento River is misleading and does not attempt to address how Tehama County is much different than that of counties downstream.

Service Response: The Service added text to this section of the CCP to clarify differences in erosion rates among Red Bluff to Ord Bend, Ord Bend/Llano Seco to Princeton, and Princeton to Colusa.

Comment: Potential impacts of construction projects associated with the CALFED feasibility study currently being conducted for the protection of the M&T Pumping Plant is not included in the Draft EA.

Service Response: Additional text describing the feasibility/NEPA process was added to River Management section in Chapter 4 of the CCP. Chapter 5, Objective 1.2: Floodplain and River Process section identifies the units of the Refuge that require technical investigation pertaining to future management decisions. Strategy 1.2.3 identifies the need to work with Federal, State, county, levee and irrigations districts to investigate best management practices for habitat and flood management purposes through technical studies and agency coordination. There has been no action proposed as a result of the M&T Pumping Plant Feasibility Study. Therefore, the results are not covered under this NEPA process and documentation. The results of the feasibility study will determine the need for additional environmental and/or NEPA compliance.

Changes to the CCP document to include in Chapter 5, under strategy 1.1.4 bullet 2 added the M&T Pumping Plant Feasibility study. Under strategy 1.2.3, changed text to say: Work with Federal and State agencies, counties, and levee and irrigations districts to investigate best management practices for habitat, *water diversion* and flood management purposes through technical studies, coordination and cooperative projects.

3.1.2. Feasibility Studies and Other Investigations

Comment: CCP lacks an adequate description of future conditions since current feasibility studies (Llano Seco and La Barranca) are not cited as projects or alternatives. If the feasibility studies being conducted at Llano Seco Riparian and Pumping Plant were referenced in CCP, the subsequent conclusions would justify need for EIS.

Service Response: Additional text explaining the Feasibility Study/NEPA process was added to River Management section in Chapter 4 of the CCP. Chapter 5 identifies these studies and describes the strategies (Riparian Vegetation and Habitat Strategy 1.1.4 and Floodplain and River Processes strategies 1.2.1-1.2.3) used to address floodplain management issues. The future conditions on the Llano Seco and La Barranca properties have yet to be determined. These site specific projects are currently being analyzed and will be covered under separate environmental compliance when necessary. The results of

the feasibility studies and subsequent NEPA process for each project will dictate whether an EIS is needed.

Comment: Are the feasibility studies at Llano Seco and La Barranca part of No Action alternative?

Service Response: Yes, these feasibility studies are part of the No Action Alternative. Please see the Technical Analysis section of Chapter 4 of the CCP for more details.

Comment: The CCP must disclose linkages to Anadromous Fish Restoration Program (AFRP) goals and objectives for this project.

Service Response: Please refer to Appendix M of the CCP which has been revised to include a description of many federal, state and local programs. The program goals of AFRP that relate to the CCP have also been listed.

3.2 Adjacent Landowner Concern Theme

Comment: Concern from adjacent land owners regarding the following issues: trespass, hunting and weapons restrictions, wildfire, buffer zones, access roads, long-term maintenance funding, and cooperation.

Service Response: Trespass on private lands is a problem throughout the country. The Refuge works with its neighbors to develop strategies to discourage trespass and protect both the resources on the Refuge as well as those of the neighbors. Currently, the Refuge has 2 law enforcement officers (funding for a third officer in fiscal year 2005) that patrol along the Sacramento River Refuge. The Refuge has posted boundaries on an annual basis and more recently began constructing gates and fences at access points to reduce the potential of trespass. Each gate is signed with access restrictions and a contact number for more information. As the Refuge extends over 77 river miles on 26 separate properties, we rely heavily on information provided by our neighbors to identify specific issues or concerns they may be having with regard to Refuge properties. The Refuge also works within the parameters of an MOU with State Parks and Department of Fish & Game to conduct law enforcement activities along the Sacramento River.

Hunting was identified by Congress as a priority public use activity on National Wildlife Refuges in the 1997 amendments to the National Wildlife Refuge Administration Act of 1966. Although the Proposed Action of the CCP opens approximately 50 percent of the Refuge to hunting over the next 15 years, the other half of the Refuge will be open to Big 5 uses or will be closed to all public uses (sanctuary). For example, the majority (571 acres) of the Dead Man's Reach Unit has been identified as more suitable for the fishing, wildlife observation, photography, environmental education, and interpretation (Big 5 uses). In Chapter 1, under Refuge River Jurisdiction, the Service acknowledges the State's "public trust easement" in the area between the low water mark and the ordinary

high water mark. This acknowledgement is illustrated in the proposed public uses (Big 6: hunting, fishing, wildlife observation, photography, interpretation, and environmental education) allowed on refuge lands below the high water mark as interpreted to be those lands below cut banks including gravel and sandbars including 66 acres on the Dead Man's Reach Unit. Safety and maintaining consistency with Department of Fish & Game regulations on state lands adjacent to the Sacramento River Refuge is critical; hence, **hunters are restricted to the use of shotguns and archery equipment while hunting the Refuge.** All other types of firearms are prohibited while on the Refuge.

Fire prevention and hazard reduction programs are also described in Chapter 4 of the CCP. In 2002, the Refuge began to implement the Wildland Urban Interface program on Refuge units to reduce the threat of wildfires on urban areas and landowners adjacent to the Refuge. Projects under this program include prescribed burning to reduce fuels, permanent and seasonal fire break construction, and educational signage. Development and design of site specific projects includes involvement from local landowners, rural, county and state fire fighting departments, the refuge manager and the Complex fire management officer. Site specific restoration designs, developed in cooperation with our neighbors, take into account law enforcement access, boundary signing, fire breaks, and maintaining low growing vegetation to reduce potential impacts around the perimeter boundaries of each unit.

Vehicle access is limited to state and county roads. All but eight of the Refuge units that are proposed to be opened to the public require access via boat only. Those units that are located adjacent to public roads will be accessible by vehicle in that parking lots will be developed at the road, but access to the interior of the units will be pedestrian only. The gravel road located off of River Road in Butte County is not considered a public road and it is not proposed to be open to the public for access to Dead Man's Reach. Access is by boat only.

Funding for annual maintenance staffing and equipment is dependant on the federal budget that is developed by Congress and the President annually. The current and proposed annual staffing and equipment needs are maintained in the national data base and can be found in Chapter 6 under Funding & Staffing.

In Chapter 5 of the CCP, under Goal 3 Partnerships, cooperation and coordination with neighbors is discussed in strategy 3.2.1 through 3.2.6 Private Landowner Cooperation Strategies.

Comment: Concerned about the impacts of unmonitored, un-buffered hunting and the lack of mitigation aimed at protecting neighbors from potential safety, trespass, and annoyance issues.

Service Response: Appendix B contains the Service's required compatibility determinations (CD) for public uses on the Sacramento River Refuge. Included in this

section is the CD for hunting. The compatibility determination includes a description of use, anticipated impacts and how they are addressed, and stipulations necessary to ensure compatibility. The description of use includes weekly law enforcement patrols and field checks to monitor use and address potential conflicts. The Refuge Complex currently has 2 refuge officers (funding for a third officer in 2005) available to cover the 10,000 acres analyzed in this plan. Potential conflicts will be minimized by closing all boundaries with adjacent private land to discourage trespass, maintaining boundary signs and posting public information signs were appropriate. Hunting is not allowed on Refuge units that are either small in size or are located near private residences, businesses, or occupied buildings. The Service has modified Rio Vista and Ohm Units in order to address comments on the Draft CCP expressed by Refuge neighbors over hunting activities potentially occurring near permanent residences. The Service has also added a refuge specific regulation which does not allow hunting within 50 feet of any landward boundary adjacent to privately owned property. In addition, as per Fish and Game regulations, it is unlawful to hunt or discharge while hunting, any firearm or deadly weapon within 150 yards of any occupied dwelling house, residence, or other building or any barn or other outbuilding used in connection therewith. The 150-yard area is a “safety zone”.

Of the almost 1,200 comment letters we received, 784 respondents supported either Alternative B or C compared to the three comment letters supporting Alternative A. In addition, 219 letters were against hunting, but did not indicate a preferred alternative. From these comments, we conclude that growing public sentiment is to open some of the Refuge to public use.

Comment: Squirrels and other rodents are an ongoing problem with adjacent agricultural operations; the Refuge should control at Service expense.

Service Response: In Chapter 5 of the CCP, under Goal 3 Partnerships, cooperation and coordination with neighbors is discussed in strategy 3.2.1 through 3.2.6 Private Landowner Cooperation Strategies. The Refuge is now incorporating perimeter firebreaks and law enforcement patrol access roads into restoration planting designs. These maintained perimeters along private properties engaged in orchard operations have served to reduce the impacts of ground squirrels and other rodents on adjacent properties (Charles R. Crain, Jr. personal communication). The Refuge and its partners have also attempted to biologically control rodents associated with orchard operations by installing owl boxes in strategic locations near these “open” boundaries in an attempt to minimize the impacts of wildlife on adjacent lands. These strategies are designed on a case-by-case basis working with the adjacent landowner so that both parties are satisfied with the outcome.

3.2.1 Relationships

Comment: The Refuge should sustain and improve the relationship with adjoining landowners.

Service Response: In Chapter 5 of the CCP, under Goal 3 Partnerships, cooperation and coordination with neighbors is discussed in Private Landowner Cooperation Strategies 3.2.1 through 3.2.6.

Comment: How will you maintain contact with adjacent neighbors to discuss mutual concerns as stated in Strategy 3.2.1?

Service Response: The process for maintaining contact with adjacent landowners is outlined in the CCP, Chapter 4 Cooperation with Adjacent Landowners. The refuge manager is the primary contact for cooperation with adjacent landowners and public agencies. He will keep the line of communication open to help identify any issues at an early stage and attempt to resolve any conflicts that may exist.

3.2.2 Elderberry Beetle

Comment: Concern regarding conservation guidelines for valley elderberry longhorn beetle, buffers around elderberry plants, and weed control.

Service Response: Conservation guidelines for the valley elderberry longhorn beetle (VELB) are out of the scope of this document. The conservation guidelines were issued by the Sacramento Fish and Wildlife Office to assist those needing incidental take authorizations in developing measures to avoid and minimize adverse effects on the VELB. The Refuge does not enforce Endangered Species Act regulations on private lands. However, the Refuge self-imposed, 100-foot valley elderberry shrub-free buffer (Appendix A, Environmental Assessment, Mitigation Measures) is intended for the boundaries between private orchards, levees, roadways and that of Refuge restoration sites so that agricultural pesticide drift from these neighboring private orchards and facility maintenance operations will not affect VELB habitat in restoration sites or adjacent landowner operations.

Comment: Concern about the 100-foot valley elderberry shrub-free buffer adjacent to neighboring private property and importance of valley elderberry shrub restoration adjacent to existing habitat to valley elderberry longhorn beetle dispersal.

Service Response: The Refuge acknowledges the importance of existing “old growth” riparian forest as a source for dispersing VELB. The 100-foot valley elderberry shrub-free buffer is intended for the boundaries between private orchards and Refuge restoration sites so that agricultural pesticide drift from these neighboring private orchards and fields will not affect VELB habitat in restoration sites.

3.2.3 Other Adjacent Landowner Issues

Comment: The gravel bar area to the northeast and on the opposite side of the river from Ohm is an area of disputed ownership.

Service Response: The ownership of this property is in question due to the meander of the River. The issue has been referred to our Solicitor's Office for resolution. In the interim, the area has been designated as an "Area of Disputed Ownership" and the use (e.g. Sanctuary) will not be designated until the issue is resolved.

Comment: Two individuals have easements to walk and/or picnic on the Mooney Unit. Another individual has a lifetime easement to hunt on this property, accompanied by one guest, during the State season for game birds and mammals. The hunting easement holder believes that his easement is *exclusive* and will be violated if the Refuge opens this unit up to the public.

Service Response: The Service and the individual holding the lifetime easement have worked out an agreement regarding the Mooney Unit. This unit and the northern 62 acres of the Ohm Unit will be closed to waterfowl hunting. However, these areas will be open to other hunting, fishing, wildlife observation, photography, environmental education, and interpretation. Contact the refuge manager for details.

3.3 Refuge Management

Comment: Impacts of restoration on farmland, cooperative land management agreements and coordination with agencies.

Service Response: To date, the Refuge and its partners have restored approximately 3,700 acres of frequently flooded farm ground to high quality riparian habitat. Under Alternative B, the Refuge proposes to restore or enhance 5,855 acres of high quality floodplain riparian habitat over a 15 year period by converting the remaining frequently flooded 1,200 acres of orchard lands, 724 acres of row crops, and 870 acres of fallow ground to habitat. Impacts to local economy and agricultural industry were analyzed in the Environmental Assessment Proposed Sacramento River National Wildlife Refuge (USFWS 1989) and the Environmental Assessment for Proposed Restoration Activities on the Sacramento River National Wildlife Refuge (USFWS 2002). From a regional standpoint, the proportion of lands removed from agricultural production is relatively small. These lands are also susceptible to regular flooding and erosion. Short term losses to the local economy may be partially offset by increased opportunity for public use activities and tourism and the impacts to the farming community will not be significant.

The Cooperative Land Management Agreements, whereby tenant farmers continue to work active refuge orchards until restoration funds become available or the orchard is no longer productive, allow the local farmer to phase out those portions of an orchard that were sold on a willing seller basis. Although, this does not directly mitigate for the land use change, it does allow for those that may be affected to modify long-term plans over a 3-10 year period of time.

The Service is a signatory of the Sacramento River Conservation Area Forum (SRCAF). The SRCAF (SB 1086) acts as the forum for private landowners, stakeholders, conservation groups, federal, state and local government agencies to communicate, coordinate and inform the public on activities occurring along the Sacramento River. The Refuge is an active participant in this process. Refuge staff provided regular briefings on refuge operations, new projects, and CCP status over the past 3 years. Refuge staff conducted two briefings for the SRCAF Technical Advisory Committee and Board members prior to release of the Draft CCP. The Refuge also coordinates with the State Reclamation Board Engineer to review site specific restoration plans prior to the Refuge finalizing the plans.

Comment: Some of the land (2,685 acres as indicated in the Farming Compatibility Determination) that may be acquired or converted is under the Williamson Act contract.

Service Response: Currently, there are no Refuge lands under Williamson Act contract. Since a Williamson Act contract runs with the land and is binding on all successors, the Refuge will coordinate with the California Department of Conservation if any of the properties that the Refuge wishes to purchase in the future has a Williamson Act contract.

Comment: Suggestion to plant food plots for wildlife in the interim between agriculture and habitat restoration.

Service Response: The Refuge acknowledges the utility of food plots to certain game species. However, it is the goal of the National Wildlife Refuge System to maintain biological integrity, diversity and environmental health. The Refuge plans to accomplish this through restoration, enhancement and management of natural, indigenous habitats and vegetation that will benefit the broadest range of plants and wildlife indigenous to the middle Sacramento River. It is the policy of the Refuge to maintain commercially productive agricultural lands until funding becomes available for riparian habitat restoration. The only interim crops planted prior to restoration are those cover crops which suppress non-native weeds and invasive exotic plants, and do not interfere with restoration. Therefore, these cover crops must be either seedless or produce infertile seeds.

3.3.1 Refuge Easement Lands

Comment: Why didn't the Draft CCP/EA include the easement lands?

Service Response: In Chapter 1 of the Draft CCP under the section "The Sacramento River National Wildlife Refuge", the Service described what areas of the Refuge were covered under the CCP. The Llano Seco Unit and Llano Seco Unit Sanctuary were acquired under a separate authority, the North American Wetlands Conservation Act of 1989, and are considered part of the North Central Valley Management Area (NCVMA), a separate unit of the National Wildlife Refuge System. Therefore, these units and the

easements east of Angel Slough on Llano Seco are not included in this CCP. They will be included within the CCP for the NCVMA.

The Service has added a description of Llano Seco Riparian Easement (east of Angel Slough) at the end of Chapter 3 and in Chapter 4, at the end of the section on Habitat Management.

3.4 Biological Issues

3.4.1 Invasive/Exotic Species

Comment: Identify invasive exotic species monitored and controlled and how the Refuge prioritizes weed control.

Service Response: In Chapter 4, the Service added Table 7 (Invasive Exotic Plant Species at Sacramento National Wildlife Refuge Complex) and text explaining prioritization of exotic species for mapping and control at the Refuge. The text in Chapter 5, Exotic, Invasive Species Control Strategies was also modified to acknowledge utility of Table 7 in managing invasive plant species.

Comment: Concerned about use of introduced species as biological control agents for agricultural pest and unknown potential negative affects on non-target native species. Also concerned that use of introduced species as biological control is in conflict with the mission of the Refuge.

Service Response: No introduced species will be used as biological control agents for controlling agricultural pests on the Refuge. Species addressed under biological control in Appendix Q (Integrated Pest Management Plan for Walnut Production) currently exist on the Refuge or are too expensive/labor intensive to be used to control agricultural pests. Currently the least toxic pesticides and herbicides which effectively control target species are used on refuge agricultural lands (Appendix Q. Draft Integrated Pest Management Plan for Walnut Production on the Sacramento River National Wildlife Refuge). Often, these pesticides are less toxic to non-target organisms than those used prior to acquisition as a unit of the Refuge or on nearby private agricultural lands. These agricultural lands are monitored for pest applications so the fewest pesticide applications possible are used. Several research and monitoring projects at the Refuge have included orchards and agricultural lands, so that the affects of agriculture on habitat and the affects of habitat on agriculture are beginning to be investigated. The goal of the Refuge is to restore riparian habitats when funds become available and crop production proceeds are used for restoration activities.

Comment: The Draft CCP identifies birds as important biological control agents as stated in Appendix Q. Suggested that the Refuge plant hedgerow restoration in agricultural complexes.

Service Response: Planting hedgerows of trees and shrubs in a walnut orchard would make orchard floor management more difficult. Even if carefully designed and managed, the hedgerow could serve as isolated, fragmented habitat with potential negative effects to ground and open cup nesting birds (i.e., increased predation and nest parasitism).

Comment: Urge that controlling invasive species be given top priority and that all scientifically approved methods be used.

Service Response: Controlling invasive or exotic species was identified as an objective of the Refuge (Objective 1.9) and will be managed accordingly. Comment noted.

3.4.2 Fish Comments

Comment: Draft CCP has not adequately address fish issues.

Service Response: Commentor has not specified what is inadequate about fish issues addressed in the CCP. It would be remote and speculative for FWS to guess at the impacts to which the commentor is referring. We disagree with assertion that the CCP does not adequately address fish issues.

Comment: Suggestion that the CCP provide a description of how the USFWS intends to monitor anadromous fish resources and provide measures for success for these activities.

Service Response: The Service does not intend to monitor fish populations on the Refuge. What the Service proposes is to coordinate fish monitoring on the Refuge with the fisheries experts, who will determine measures of success. Objective 1.7.6, states: Coordinate research investigations and monitoring at the Refuge which focuses on population demographics, habitat use and requirements, and health of anadromous and other native fishes. Coordinate with CDFG fishery investigations (Lower Stony Creek Fish Monitoring; Redd Surveys), USFWS–Red Bluff Fish and Wildlife Office population surveys (escape/passage at Red Bluff Diversion Dam), USFWS–California/Nevada Fish Health Center disease investigations and monitoring, NOAA– Fisheries investigations and universities conducting salmonid research (University of California, Davis; California State University, Chico) and research regarding other anadromous and native fish species.

Comment: The fisheries resources section of the CCP should be reviewed by an experienced fisheries biologist with knowledge of the Sacramento River. Concerned about the lack of linkage to Central Valley Project Improvement Act (CVPIA) and Anadromous Fish Restoration Program (AFRP) and requested mutual goals and objectives of these programs be made and that the measures of success be disclosed.

Service Response: The Service contacted the following fisheries managers during the CCP process: P. Ward (CDFG); J. Smith, T. Kisanuki, P. Parker, J. Williamson (USFWS–

Red Bluff Fish and Wildlife Office); K. True (USFWS CA-NV Fish Health Center); and, M. Tucker, M. Aceitano, R. del Rosario, and L. Mahan (NOAA– Fisheries). These fisheries experts were asked to review and provide comment on the CCP. Appendix M has been revised to contain a description of CVPIA and AFRP and the goals that relate to the CCP.

Comment: Typo in Table 7 of the Draft CCP where it states “row” but perhaps should state “roe.”

Service Response: The Service appreciates the commentor pointing out the typing error in the document. It has been corrected and it now states “growth” not “row” or “roe”.

Comment: Do not believe pink, chum, and coho salmon occur in the project area.

Service Response: All three of these species are listed in the Sacramento River Conservation Area Forum Handbook (2003) as occurring in the Sacramento River. While never abundant in the Sacramento drainage, a small population of Coho salmon once spawned in the McCloud River, Upper Sacramento River, and tributaries of San Francisco Bay (Frantz, T.C. 1979-1981. Job progress reports; Lake Tahoe. Nevada Department of Wildlife F-20–R-16–17. 82 pp. in Moyle 2002)

The Service has removed pink and chum salmon from the Refuge species list (Appendix G). However, Coho salmon will remain on the Refuge species list since it would not be inconceivable to find non breeding individuals in the middle Sacramento River.

Comment: Objective 1.2 is too subjective and commentor suggests that the Service elaborate on the terms “enhance, restore, and maintain” and refer them to specific goals and objectives.

Service Response: The statement referred to in the comment is found under the rational section of Objective 1.2 and states: “Modifying or removing existing privately-constructed levees that are present and restoring floodplain topography within Refuge boundaries will provide conditions for erosion, sediment deposition, and over-bank flooding. These natural processes will enhance, restore, and maintain floodplain habitats for salmonids, other native fish, and migratory landbirds and waterbirds, including species that breed, migrate and winter along the middle Sacramento River.” Although, it is unclear what the commentor is asking the Service to elaborate upon. We have revised and expanded Objective 1.2: Floodplain and River Processes and its rationale.

3.4.3 Farming

Comment: Concerned about impacts of pesticides on the valley elderberry longhorn beetle, a federally listed threatened species. Commentor also states that farming does not meet the objective to aid in or benefit wildlife management of the area as required in 50 CFR 29.2.

Service Response: The Refuge farming program is managed under Cooperative Land Management Agreements (CLMA) with two local non-profit conservation groups under authority of 50 CFR 29.2. The intent of the Refuge is to restore riparian habitats when funds become available. Cooperatively managed crop production proceeds are used by our non-profit conservation group partners directly on refuge restoration activities. Alternatives to the farming program were analyzed in the Environmental Assessment for Cooperative Farming on the Sacramento River Refuge Tehama, Butte, and Glenn Counties, California (1994) and again in the EA for the Draft CCP. Currently the least toxic pesticides and herbicides which effectively control target species are used on refuge agricultural lands (Appendix Q. Draft Integrated Pest Management Plan for Walnut Production on the Sacramento River National Wildlife Refuge). Often, these pesticides are less toxic to non-target organisms than those used prior to Refuge acquisition or on nearby private agricultural lands. These agricultural lands are monitored for pest applications so the fewest pesticide applications possible are used. Several research and monitoring projects at the Refuge have included orchards and agricultural lands, so that the affects of agriculture on habitat and the affects of habitat on agriculture are beginning to be investigated. The Refuge consulted with and received concurrence from both the Sacramento Fish & Wildlife Office and from NOAA-Fisheries for threatened, endangered, and candidate species consultation. Concurrence letters for ESA consultation will be included as a stipulation in the Farming CD.

3.5 Biological Integrity

Comment: A thorough discussion and investigation of the biological integrity, diversity, and environmental health of a refuge must occur before planning can ensue.

Service Response: The Service has provided a thorough discussion and investigation of the biological integrity, diversity and environmental health of the Refuge. The Threats and Opportunities section of Chapter 1 of the CCP discusses threats to riparian habitats, migratory birds and anadromous fish. Appendix G lists the vertebrate animals and vascular which occur, or potentially occur, on the Refuge. Chapter 3 discusses the Refuge environment including hydrology, geology, soils, vegetation, vertebrate and invertebrate wildlife, and threatened and endangered species, which are also listed in Table 5. The annual habitat management plan for the Refuge, discussed in Chapter 4, has an inventory of the various vegetation types by acreage for individual tracts of each Refuge unit. These also include restored habitats. Special resource issues are tracked in this database including special status species and invasive species and the status of surveys and vegetation management treatments.

Comment: FWS regulations require that before hunting, trapping, or fishing can occur, a determination must be made that wildlife are surplus to a balanced conservation program on any wildlife refuge area and to determine this, the population requirement of wildlife species shall be determined by population census, habitat evaluation, and other ecological investigation and that these investigations has to consider both the population size and

requirements of the target species. An attempt to determine compatible wildlife-dependent recreation for the Refuge until this process has been completed may violate these FWS mandates and this is especially true for hunting since it directly impacts wildlife species.

Service Response: The Service has determined hunting of dove, waterfowl, coot, common moorhen, pheasant, quail, snipe, turkey and deer to be a compatible wildlife-dependent recreation (Appendix B). California Fish and Game Department (2004) also has determined that fish and wildlife resources found along the Sacramento River are healthy and robust enough to support regulated hunting and fishing, complimenting the other activities available to the public in their enjoyment of their public resources.

The Office of Migratory Bird Management sets the general frameworks through their annual regulations permitting the sport hunting of migratory birds. The individual States set seasons within those frameworks. If necessary, the Service develops regulations that may be more restrictive than State hunting regulations in order to protect resources on a refuge-by-refuge basis (i.e., species hunted). Otherwise, the Service observes State regulations on all refuges open to hunting.

U.S. Fish and Wildlife Service Regional and Refuge biologists along with scientists from the U.S. Geologic Survey–Biological Resources Division (Office of Migratory Bird Management) and university researchers meet twice annually with State flyway representatives to discuss inventory data and survey reports for migratory game bird populations which are hunted, proposed for hunting and closed to hunting. The Service bases its migratory waterfowl season length and bag limits for the various species on these surveys. The annual breeding ground survey is one of the most important surveys and has been conducted since 1955. This cooperative effort between the Service and the Canadian Wildlife Service covers Canada, Alaska, and the northern United States prairies where 90 percent of the continental waterfowl populations breed. Results are summarized in various publications, including the annual fall flight forecast. Other important data include harvest and survival rate estimates from band returns. Whether to open a season for a species or not and the establishment of the season length and bag limits are determined by the population objectives for each species. A species must have a harvestable surplus to be considered for hunting. Population objectives for each species are calculated using data from population surveys and banding data. The National Environmental Policy Act process has been followed to insure that migratory bird hunting does not reduce these populations to unsustainable levels.

Current management for mourning doves consists of annual population trend surveys, harvest surveys, and the establishment of annual hunting regulations. Since 1960, management decisions have been made within the boundaries of 3 zones that contain mourning dove populations that are largely independent of each other: the Eastern, Central and Western Management Units. Since 1966, Mourning Dove Call-count Surveys have been conducted annually in the 48 conterminous states by state and federal

biologists to monitor mourning dove populations. In 1992, the U.S. Fish and Wildlife Service and state wildlife agencies initiated the national cooperative Harvest Information Program, which enables the Service to conduct nationwide surveys to provide reliable annual estimates of the harvest of mourning doves and other migratory game bird species. The resulting information on status and trends is used by wildlife administrators in setting annual hunting regulations. In 2001, a National Mourning Dove Planning Committee was formed to further develop guidelines that could be used for regional harvest management. The committee produced The Mourning Dove National Strategic Harvest Management Plan. The implementation of the plan began in July 2003 with the initiation of a national pilot reward-band study. Currently population models are being finalized which will aid in the preparation of regional harvest management plans for 2005. Demographic models and data collection programs to support needs of regional harvest management plans will be established in 2005.

Resident game species are protected by both Federal and State laws and regulations to ensure that harvest rates do not negatively impact populations. The potential impacts of hunting on resident upland game birds and deer are discussed and evaluated in the California Environmental Quality Act process. This process results in periodically updated and publicly reviewed documents. Based on the findings of these documents, the State insures that game animal hunting in California does not have adversely impact its wildlife populations (CDFG 2004).

Wildlife populations along the Sacramento River are currently hunted on both private and public lands, such as Sacramento River Wildlife Area (State), Todd Island and Foster Island (Bureau of Land Management). No impacts to those local populations have been documented (CDFG 2004). Hunting is a highly regulated activity, and generally takes place at specific times and seasons (dawn, fall and winter) when the game animal is less vulnerable (e.g., breeding season) and other wildlife-dependent activities (e.g., bird watching, environmental education and interpretation) are less common, reducing the magnitude of disturbance to Refuge wildlife. Managed and regulated hunting will not reduce species populations to levels where other wildlife-dependent uses will be affected.

Two species, the ring-necked pheasant and turkey, were introduced into the area years ago. These non-native species have more potential to compete for habitat with native species, however no such competition has been noted along the river (CFDG 2004). In addition, selected game species are not known to prey upon other species at unacceptable levels. The potential for competition and predation exists whether the populations are hunted or not; however, removing individuals of non-native species by hunting could conceivably reduce this potential (CDFG 2004).

Comment: supporting recommendations in the Defenders of Wildlife Report, Science-Based Stewardship: Recommendations for Implementing the National Wildlife Refuge System Improvement Act, for a standardized sequence for refuge planning; biological inventory; identification of plan goals; identification of threats; choice of focal species;

comprehensive conservation plan; monitoring and implementation; plan amendment. Also support for the recommended steps for implementing biological inventory.

Service Response: Chapter 4 of the plan discusses current Refuge management and programs. Appendix O shows the inventory and monitoring surveys and research investigations conducted at the Refuge. Currently, the Refuge and its partners collaborate with these investigations when seeking funds and implementing them in the field. Some of these inventory surveys (e.g., western yellow-billed cuckoo collaborative survey with U.S. Geological Survey) and monitoring surveys (e.g., bank swallow collaborative survey with CDFG) represent key focal species of the Riparian Conservation Plan. A recent survey of the valley longhorn elderberry beetle (River Partners 2004) has documented the colonization of this federal-threatened species on planted elderberries at Refuge lands. PRBO has conducted monitoring investigations of the status of breeding landbirds at the Refuge since 1993. Demographic and habitat data are being used track the success of riparian restoration and model landscape level responses. Ecosystem components which decrease the health of landbird populations are being identified, as well as management actions necessary to reverse declining populations. Other research conducted at the Refuge focused on the utility of monitoring indicator species as a means to track ecosystem health (Stillwater Sciences), such as recommended by the Defenders report. Many of the reports and publications from these investigations are posted on the Sacramento River portal web site.

The Refuge will continue to support inventories, surveys, monitoring, and research investigations of Refuge natural resources. The Compatibility Determination for Research (Appendix B) discusses the guidelines for appropriate investigations at the Refuge. Inventory and monitoring surveys and research investigations must be designed to aid in the implementation of sound management practices to increase biological diversity and integrity at the Refuge and ecosystem health.

Chapter 5 presents the planned refuge habitat restoration and management strategies and wildlife surveys. Implementation of the plan will result in increased habitat for threatened and endangered species, migratory birds and anadromous fish. The increased inventory and monitoring surveys by Refuge staff and partners will track the status of these management strategies.

Comment: How will endangered species be protected if 55 percent of the refuge is opened to hunting?

Service Response: The proposed action allows for almost 80 percent of the Refuge to be opened to public use including over half of the Refuge open to hunting. Hunting, as well as all other Refuge uses, have been designed to minimize impacts to listed species and thereby determined compatible with the purposes for which the Refuge was established (Appendix B). An Intra-Service Section 7 consultation was completed with the Sacramento Fish and Wildlife Office and NOAA-Fisheries. Concurrence with the

Proposed Actions (implementing the CCP on the Refuge) may effect, but is not likely to adversely affect endangered, threatened, or candidate species.

3.6 Hunting

3.6.1 Opposition to Hunting on the Refuge

- I wish to express my opposition to the proposal to open the Sacramento River National Wildlife Refuge to “sport” hunting.
- Please maintain the true meaning of “refuge” to the Sacramento River National Wildlife Refuge by not opening it to hunting.
- Hunting on Sacramento River Wildlife Refuge lands will only exacerbate impacts to already stressed populations of wildlife and increase the likelihood of poaching.
- The National Wildlife Refuge System was established more than 100 years ago as a safe haven for endangered species and other plants and animals. At a time when state and national trends demonstrate that hunting is on the decline, the limited financial resources available to the refuge would be better spent on protecting habitat and endangered species than on a hunting program.
- Most visitors to refuges do not hunt, but come to experience nature in a peaceful surrounding.
- Our nation’s wildlife refuges should be managed for the benefit of wildlife, not managed for the benefit hunters. It is time to make our wildlife refuges true sanctuaries as they were originally intended.
- Plants and wildlife belong to all of us, and a minority segment of the population must not be allowed to destroy them for fun and entertainment.
- The refuge was created to protect our nation’s animals. (Dictionary definition of “refuge” given).
- The overwhelming majority of visitors to the national wildlife refuge system come to see and take photographs of wildlife and surrounding natural habitat.
- Support the continuation of the ban on hunting along the Sacramento River Refuge.
- Allowing hunting would appease a small group of Americans, as the vast majority of us are not hunters, and it’s time our values were listened too.
- Do not want to have to be concerned about being shot-or denied access to this special place during the hunting season.
- Hunting will increase the likelihood of poaching.
- The overwhelming public opposition to the allowance of consumptive use activities on National Wildlife Refuges and the tiny percentage of Californian’s who engage in hunting, proposal to expend limited resources on the establishment of a new hunting program is fiscally irresponsible.

In addition to opposition to hunting on Refuge lands, several commentators expressed their opposition to trapping on the Refuge and other federally managed lands.

Service Response: The Service appreciates the effort so many commentors took in providing input on the subject of opening Sacramento River Refuge to hunting. Out of the 1,681 comments, the majority dealt with hunting (57 percent) with 13 percent opposing hunting and 44 percent either supporting or specifically mentioning hunting in their comment (Table 6). Although there was public opposition to allowing hunting on Sacramento River Refuge, the majority of the comments that the Refuge received on the Draft CCP/EA supported hunting on the Refuge. Of the almost 1,200 comment letters received only 219 people/organizations opposed hunting (Table 6). 784 people/organizations supported hunting by supporting Alternative B or C (Table 5) and 747 people/organizations specifically mentioned hunting in their comments (not opposing). It is important to note that the public comment process is not a voting contest.

National wildlife refuges exist primarily to safeguard wildlife populations through habitat preservation and management. The word "refuge" includes the idea of providing a haven of safety for wildlife, and as such, hunting might seem an inconsistent use of the National Wildlife Refuge System (Refuge System). However, habitat that normally supports healthy wildlife populations produces harvestable surpluses that are a renewable resource.

One of the five goals of the Refuge System is "To foster understanding and instill appreciation of native fish, wildlife, and plants and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent recreational uses. Such uses are hunting, fishing, wildlife observation and photography, and environmental education and interpretation." The Service recognizes hunting as an acceptable, traditional, and legitimate form of wildlife-oriented recreation and, in some instances, as a management tool to effectively control wildlife population levels.

In the 1997 amendments to the National Wildlife Refuge Administration Act of 1966, Congress identified hunting as one of six priority public uses of the Refuge System. These priority uses are to receive enhanced consideration, in planning and management, over all other public uses. All uses must also be determined to be compatible with Refuge purposes before they can be allowed. Appendix B contains the compatibility determinations for all of the uses on the Refuge including: hunting; fishing; wildlife observation, wildlife photography and interpretation; environmental education; research; camping and recreational boating; farming; grazing; and mosquito and other vector control. Each of these uses was found compatible on the Sacramento River Refuge. The Proposed Action was designed to provide quality hunting opportunities, improve wildlife sanctuary, ensure compatibility, provide clear, accurate hunting information, and reduce conflicts with other users as much as possible.

The Service must coordinate hunting on refuges with other compatible wildlife-dependent public uses to minimize conflicts. We may use time and space scheduling to ensure quality experiences for both hunters and non-hunters. We ensure that adverse impacts to other wildlife, particularly threatened and endangered species, do not occur.

Although hunting directly impacts individual animal, the amount of harvest is not expected to have a measurable effect on Refuge population levels, especially since hunting activity is not expected to be high along the river. In addition, hunting is monitored, regulated, and designed to ensure that harvest does not reduce populations to unsustainable levels. Fish and wildlife resources found along the Sacramento River are healthy and robust enough to support regulated hunting and fishing, complimenting the other activities available to the public in their enjoyment of their public resources (CDFG 2004).

The Service recognizes the majority of the people that visit refuges visit for wildlife observation and to experience nature, however, just as the comment process is not a voting contest, neither is the number of people within each interest group. The Proposed Action represents a balanced approach for wildlife-dependent recreation providing areas for wildlife sanctuary, for wildlife observation, and for hunting.

The Service disagrees with the statement that the establishment of a new hunting program is fiscally irresponsible. The Service also disagrees with the statement that hunting will increase the likelihood of poaching.

3.6.2 Support for Hunting on the Refuge

- Hunting is a part of our natural heritage and does not need to interfere with other wildlife related activities at the refuge.
- Hunters in general appreciate the wild places and a potential partner in habitat improvement projects.
- Hunters have been at the forefront of the conservation effort and continue to support effective management of our shared natural resources through the donation of their time and financial resources to conservation groups.
- Opening the refuge to hunting and fishing is consistent with Federal and State laws and the purpose of the Sacramento River Refuge.
- I feel that a portion of most refuges should be open to hunting, fishing and trapping.
- I urge you to adopt Alternative C so that hunters and other recreational users can enjoy new much-needed outdoor opportunities.
- I support Alternative B or C because management under either option would provide valuable wildlife-dependent recreational opportunities for the public particularly hunting. Hunting has been identified as a priority use of the National Wildlife Refuges and will not prevent the Service from ensuring that the Sacramento River Refuge furthers the mission of the National Wildlife Refuge System.
- Hunting has proven a valuable wildlife management tool that helps maintain healthy game populations.
- Revenues generated from the sale of hunting license and stamp fees, as well as federal taxes on firearms and ammunition, also generate significant funding to protect habitat.
- Over the last several decades in California, hunter access and opportunity has steadily decreased. Unfortunately, most hunters have only limited access to private property,

while the costs for joining private clubs continue to rise. Other factors, such as the continued loss of wildlife habitat and farmland, have recently combined to further limit hunting here.

- While I do not hunt or fish on public land, I strongly encourage and support public access and use of public lands.
- Support maximizing the amount of hunting and fishing available on the refuge.
- Historical use under private property has allowed hunting and fishing.

Service Response: The Refuge acknowledges the important contributions by hunters in wildlife conservation. By respecting seasons and limits, purchasing all required licenses, and paying federal excise taxes on hunting equipment and ammunition, individual hunters make a big contribution towards ensuring the future of many species of wildlife and habitat for the future. By paying the Federal excise tax on hunting equipment, hunters are contributing hundreds of millions of dollars for conservation programs that benefit many wildlife species, hunted and non-hunted. Each year, nearly \$200 million in hunters' federal excise taxes are distributed to State agencies to support wildlife management programs, the purchase of lands open to hunters, and hunter education and safety classes. Proceeds from the Federal Duck Stamp, a required purchase for migratory waterfowl hunters, have purchased more than five million acres of habitat for the Refuge System lands, including many acres of the Sacramento National Wildlife Refuge Complex. These lands support waterfowl and many other wildlife species, and are often open to hunting. However, none of the land on Sacramento River Refuge has been purchased with these funds.

The Refuge agrees with the comments that hunting is a priority use on refuges, hunting is a valuable wildlife management tool, and that hunter access and opportunity have decreased in California. The Proposed Action is designed to provide quality hunting opportunities on Sacramento River Refuge and to reduce confusion for hunters on Refuge and CDFG lands.

Although the Service received comments opposing trapping, trapping is not a proposed use on Sacramento River National Wildlife Refuge.

Private property was only accessible to a small number of hunters prior to it becoming part of the refuge.

3.6.3 Additional Areas Requested to be Opened or Remain Opened to Hunting

Comment: Boat access only units should be opened to hunting.

Service Response: Many of the boat access units will be opened to hunting. Out of the 26 units on the Refuge, 18 units (or portions of them) are boat access only. Hunting will be allowed on all or a portion of 17 of the 18 units. See Table 9 and Figure 28 for additional information.

Comment: Boat access only excludes disabled hunters.

Service Response: Boat access only units may exclude some disabled hunters from some parts of the Refuge. The Service intends to have parking lots on areas with public road access to the Refuge unit entrance. This will provide access for disabled hunters from the parking lot to a trail. The Service does not have the authority to allow access to the Refuge across private property. Therefore, 13 of the 21 units that will be opened to the public and do not have public roads are accessible by boat only. In the future, if new properties are acquired and access becomes available, the Refuge may wish to make changes to the CCP.

Comment: Open more of Llano Seco area to the public for hunting, fishing, hiking and exploring.

Service Response: Acquired in 1991, the Llano Seco Ranch Riparian Easement consists of 1,281 acres located between river miles 183 and 178. It is bordered to the north by the Ord Ferry Bridge and to the south by the Llano Seco Unit, Riparian Sanctuary. This is an easement on private property and the Service does not have the authority to open this easement to public use. The Llano Seco Riparian Sanctuary and Llano Seco Islands 1 and 2, also acquired in 1991, consist of 906 acres and are located between river miles 183.5 and 175.5. The Riparian Sanctuary was originally acquired for a sanctuary. The Proposed Action also designates this property to be a sanctuary since there is no vehicle access to the property, there are sensitive resources on the property, and public access could potentially negatively impact the private land easement. Llano Seco Island 1 and 2 are proposed to be open to Big 6 activities via boat access.

3.6.4 Regulate/Monitor Hunting

Comment: In the absence of any way to regulate hunter access to the Refuge, keep track of how many hunters are using the Refuge, enforce harvest limits, or restrict hunters to the portions of the Refuge where hunting is allowed, refuge managers would have no way of carrying out their duties to protect wildlife populations or to protect other members of the public who use the Refuge.

Service Response: There are numerous methods and techniques that have been developed for estimating the number of visits on refuges. These methods may be applied to a variety of different situations including areas not accessible by roads, areas that have more than one activity occurring at a time, or areas that have multiple access points. The following methods of estimating the number of visitors will be used on Sacramento River Refuge: direct observations, traffic counters, patrols, self-registration, extrapolations from limited data using stratified samples, and best professional judgment. Harvest limits will be estimated using stratified sampling, self-registration, patrol, and direct observations.

A team of specialists are completing the FWS Visitation Estimation Handbook that will be used on all National Wildlife Refuges. It will take into account staffing levels, Refuge acreage, volunteer support, access points, monitoring sites, etc. Given multiple variables, estimation methods will be presented for use on various areas. Currently, there are interim guidelines for visitation monitoring on National Wildlife Refuges for the Refuge Management Information System - Public Education and Recreation section.

The Service added the information on estimating refuge visits to the Hunting Plan C-13, monitoring use levels and trends.

There are many ways that hunters will be regulated. There will be two full-time and one part-time law enforcement officers on the Refuge Complex dedicated to enforce harvest limits and regulate hunters. They are familiar with the areas of the refuge that are accessible for hunting. Some areas are so dense with vegetation that access is limited. They are also familiar with problem areas for illegal activities so they will be able to efficiently patrol and focus on specific problem areas when needed.

Signs and information will help guide hunters to the proposed areas open to hunting. All Refuge lands have boundary signs and signs designating the appropriate uses, which will support enforcement (CCP, Figure 26 & 27). Hunting maps and refuge information will be available at well-known locations including hunter forums, public facilities, websites, sporting goods stores and kiosks where hunters have obtained information in the past.

Comment: For hunting to be acceptable, it would have to be regulated to limit the number of hunters to a sustainable level. The most reasonable way to do this is to require hunters to check in at a central location and to pay a user fee to support refuge activities.

Service Response: There are numerous acceptable methods and techniques that have been developed for estimating number of visits on refuges. Some of these methods including direct observations, traffic counters, patrols, self-registration, extrapolations from limited data using stratified samples, and best professional judgment will be used on Sacramento River Refuge. Harvest will be estimated using stratified sampling, self-registration, patrol and direct observations.

The programs that use a central check-in and user fees are generally areas that have heavy use, need quotas, etc. The hunting program on the California Department of Fish and Game Sacramento River Wildlife Management Area has operated for a number of years without the need for a centralized check-in or user fees. In our professional judgment, the hunting program on the Sacramento River Refuge will also not need to have hunter quotas at this time. However, the Hunt Plan includes the option for implementing quotas if monitoring efforts by the refuge biologist, law enforcement officers, or manager indicates the need for increased regulation of the activity.

Comment: Concerned about the Refuge allowing open-range hunting. The completely new and unfamiliar hunting format being proposed needs to be complemented by significant and corresponding amounts of outreach efforts, safeguards, monitoring and maintenance.

Service Response: See response above. The hunting program proposed by the Service does not constitute open-range hunting nor is it new and unfamiliar. This format is currently used on California Fish and Game (CDFG) lands in the Sacramento River Wildlife Management Area, lands along the river owned by Bureau of Land Management, and on private lands.

Although hunting will be new to the Sacramento River Refuge; it is not new to other areas along the River including the Sacramento River Wildlife Management Area where hunting has been operating successfully for years. CDFG's hunting program is also 7 days a week as the Service proposes for Sacramento River Refuge. Specific information about the hunting program can be found in the Hunting CD (Appendix B) and the Hunting Plan (Appendix C).

The Service does agree that outreach, monitoring and maintenance will need to take place to provide a quality hunting experience and to provide assurance for our neighbors. Hunting on the Refuge will be regulated and monitored.

Comment: The Hunting CD proposes to inform hunters through signs. This is inadequate to reach all hunters unless signs are posted at every accessible access point along the entire perimeter of the refuge.

Service Response: The Service disagrees with the comment that signage is an inadequate means of informing hunters. The Service intends to post the Refuge boundary including vehicle and boat access locations. Most boat accessible properties have limited access points due to the dense vegetation, steep slope of the river bank, or terrain that prohibits the ability to dock a boat. Signs will be posted at the most opportune boat accessible locations. In addition, signs designating appropriate Refuge uses will be posted. Refuge information and hunting maps will be provided at well known locations including hunter forums, public facilities, websites, sporting goods stores and kiosks where hunters have obtained information in the past.

Comment: The CCP states that the use of federally approved non-toxic shot will be required for all hunting except deer. Lead shot is traditionally and legally used in California to hunt doves. It is unclear how the Refuge will overcome the inevitable confusion over the legality of lead shot use and how effectively the regulations will be enforced.

Service Response: The Service will require the use of non-toxic shot for dove hunting on the Sacramento River Refuge. Initially, educating the public on lead shot requirements for dove hunting on refuge lands may be challenging. However, the Service’s adaptive management philosophy allows staff to respond to site specific issues by modifying strategies of implementation for signing, education, and enforcement. Refuge regulations will be posted and will available in our brochures and on our website. Refuge regulations will be enforced by refuge officers and coordinated patrol with Service special agents, state game wardens, state park rangers and deputy sheriffs.

Comment: Hunting must be limited to a smaller area, and high-quality habitat must be given priority for designation as a no-hunting zone.

Service Response: Hunting activities actually need to take place on fairly large areas of land in order to offer a situation for “fair chase” of game species. We have proposed wildlife observation activities in smaller areas where visitor needs can be met by constructing facilities i.e. trails, restrooms, etc. and yet be able to financially maintain them. High-quality habitat has been designated as sanctuary (Chapter 5, Objective 1.10).

Comment: Without a significant budget increase, refuge personnel will not have the time or resources to conduct the “random, weekly field checks” that the Hunting CD proposes.

Service Response: The field checks will be planned and coordinated with staff and other agencies. The word “random” was changed to planned and coordinated field checks in the Hunting CD (Appendix B) and the Hunting Plan (Appendix C). This will make more efficient use of the law enforcement officers’ limited time.

Comment: The activities of hunters pose a hazard to other visitors on the Refuge. Limiting the area open to hunting would make the Refuge more accessible to the public as a whole and better achieve the goal of increasing visitor knowledge and appreciation of wildlife.

Service Response: We recognize the concern that some visitors will be uncomfortable visiting areas where hunting occurs. Therefore, we have proposed to set aside areas that do not allow hunting and will be developed for wildlife observation, photography, education, and interpretation. These areas will have trails, kiosks, parking areas, and port-a-potties (Table 9 in the CCP). Refuge units that allow hunting are also proposed. Hunting will be limited to designated seasons and will not occur year-round. By providing areas for both consumptive and non-consumptive uses, the Service can increase the knowledge and appreciation of fish and wildlife resources for both consumptive and non-consumptive users.

Comment: Efforts to manage and regulate hunting can detract from other refuge programs. The CCP allocates a mere \$5,000 for outreach, education, and monitoring. This

amount falls short of the funds that would be required to adequately study and monitor the effect of hunting on target and non-target populations.

Service Response: The estimated annual increase in budget of \$5,000 for outreach, education, and monitoring is in addition to current funding that provides for 3 refuge officers to patrol the Refuge Complex. The \$5,000 additional budget would be used for signs, press releases, and brochures. Three officers to patrol monitor and educate the public on approximately 10,000 acres in addition to coordinated efforts with state and local law enforcement agencies would be considered more than appropriate in national wildlife refuge settings.

Comment: Disagree with the statement made in the Hunting CD that hunting has given many people a deeper appreciation of wildlife and a better understanding of the importance of conserving their habitat.

Service Response: The statement in the Hunting CD regardinga deeper appreciation of wildlife and a better understanding of the importance of conserving their habitat...does not imply that “consumptive” users have a greater appreciation for wildlife than “non-consumptive” users. It does however; suggest that hunting and or fishing is one mode of access to and appreciation for wildlife and the outdoors similar to a beginning bird watcher seeing a connection between bird diversity and different habitats. There are many conservation groups that stress the importance of conservation and habitat restoration that also support recreational hunting. This is where the connection is made between hunting and conservation.

Comment: Hunting program should include opportunities for training, testing and trialing hunting dogs.

Service Response: Comment noted. The Service will not be allowing training, testing, or trialing of hunting dogs on the Refuge. Opportunities for these activities exist on other areas (e.g. State Wildlife Areas). Dog testing, training and trialing may also interfere with priority Big 6 uses.

Comment: Make regulations uniform with other agencies controlling the land along the river (as stated in the Comprehensive Management Plan for the Sacramento River Wildlife Area by CDFG)

Service Response: The Service agrees with this comment. The Refuge has tried to make regulations uniform with the different agencies along the river whenever possible. For example, whenever possible Refuge units adjacent to CDFG lands were designated open to Big 6 uses which are consistent with CDFG regulations. There will still be some exceptions to this and Refuge visitors will be responsible for knowing them. For example, CDFG allows coyote, squirrel and rabbit hunting on their lands in the Sacramento River Wildlife Management Area. The Refuge; however, does not allow hunting for these

species. Refuge boundaries and access points will be posted and clear and accurate Refuge hunting information will be provided.

Comment: Using 0 or 00 buckshot as referred to in the Draft CCP is illegal along the river according to state law (Title 14, section 353 (b)). The only legal method is by firing single slugs.

Service Response: Commentor is correct. The Service has revised the appropriate sections in the CCP, Hunting Plan and the Hunting CD.

3.6.5 Navigable Waterways and Hunting

Comment: Request for liberal interpretation of navigable waterways.

Service Response: In Chapter 1, under Refuge River Jurisdiction, the Service acknowledges the State's "public trust easement" in the area between the low water mark and the ordinary high water mark. This acknowledgement is illustrated in the proposed public uses (Big 6: hunting, fishing, wildlife observation, photography, interpretation, and environmental education) allowed on Refuge lands below the high water mark as interpreted to be those lands below cut banks including gravel and sandbars. The Proposed Action allows hunting on over 50 percent of the Refuge, including lands above the high water mark on identified units (Figure 28). During high water events, those lands that have been identified for Big 6 public uses would be accessible by boat and hunting would be permitted. However, those lands that have been identified as sanctuary or allow for the Big 5 public uses would not be open to hunting during high water events. One of the purposes of the Refuge is to provide high quality habitat, including sanctuary from hunting and disturbance, to migratory birds and endangered species.

3.6.6 Huntability Species

Comment: Allow hunting of non-native wild pigs, coyotes, squirrels etc.

Service Response: Species legal to hunt on the Refuge include dove, waterfowl, coot, common moorhen, pheasant, quail, snipe, turkey and deer. All other species that are considered legal game species by California Fish and Game are still not legal to be hunted on the Refuge.

Comment: Work with CDFG to add a special late season deer hunt (late September through late December) for the Refuge and CDFG lands along the river.

Service Response: Comment noted. In the future, the Service and CDFG may be able to offer this type of hunt.

3.6.7 Other Hunting Comments

Comment: All proposed hunt units of 100-200 acres or more be provided with land access in addition to river access.

Service Response: Vehicle access to the Refuge is limited to public roads. Eight of the 26 Refuge units are located adjacent to public roads will be accessible by vehicle. At these 8 units, parking lots will be developed, but access to the interior of the units will be by pedestrians only. Units that are not accessible by public roads, regardless of size, will be boat access only.

Comment: Until the time cultivated agricultural land is developed into the refuge, if the agricultural leasee's are requesting depredation permits for controlling wildlife we propose public hunting become the first priority.

Service Response: Agricultural leases on the Refuge are managed under a Cooperative Land Management Agreement (CLMA). Cooperative farmers and nonprofit conservation organizations that manage the agricultural operations on these units abide to the conditions of the CLMA. A compatibility determination with stipulations (Appendix B) and Integrated Pest Management Plan (Appendix Q) have also been completed. Depredation permits will not issued on these Refuge-owned properties. Tenant farmers knowingly accept the risk of crop depredation from wildlife when farming on a National Wildlife Refuge.

Comment: Areas open to hunting should be off-limits to users other than those holding a valid hunting license and in possession of a legal firearm or weapon during the appropriate seasons.

Service Response: Areas on the Refuge open to hunting will be open to all uses determined compatible. These uses include hunting, fishing, wildlife observation, photography interpretation, environmental education. Signs will be posted to inform hunters as well as non-hunters when the unit is open to hunting. The Refuge boundary will also be posted with signs to ensure that Refuge visitors know when they are entering or exiting a Refuge unit. Using the Refuge specific information and regulations provided, visitors may choose when, where and how they would like to visit the Refuge.

Comment: Existing private facilities (campgrounds, marinas) should be thought of as partners and be a part of whatever long range plan is adopted. Bank protection is important.

Service Response: Existing private facilities including campgrounds and marinas are considered Refuge partners. Bank protection is an important issue identified in Objective 1.2 of the CCP.

3.7 Cultural Resources

Comment: Under the Cultural Resources Section of the CCP add more information about the recent history of the Sacramento Valley including River boat trade, ferries, agriculture, etc.

Service Response: Comment noted. The Service has revised this section of the CCP to include more information about the recent history of the Sacramento Valley.

3.8 Sanctuary

Comment: Both Alternative B and C are deficient in the amount of sanctuary (16 percent) and with current staffing the Refuge does not have the resources to monitor public use impacts at the Refuge. Recommends increasing the amount of sanctuary at the Flynn, Rio Vista, Phelan Island, Capay and Sul Norte units.

Service Response: The rationale for determining public use and sanctuary areas at the Refuge are explained in Appendix L of the CCP. We have added 341 acres of sanctuary along the central-eastern portion of Rio Vista, which increases overall sanctuary to 20 percent. We believe much of the Refuge will serve as “sanctuary” because of the dense structure of riparian vegetation and access to most units is by boat only. The Refuge is in the process of adding an additional full-time law enforcement officer, which will greatly increase natural resources monitoring. The CCP also calls for periodic surveys of public use to determine impacts to Refuge natural resources. Identified public use impacts will be addressed through education and when necessary, additions to Refuge sanctuary. In addition, Objective 1.10 Wildlife and Cultural Sanctuary, also makes provisions for the establishment of short-term sanctuaries to protect transient sensitive fish, wildlife and other natural resources; examples include breeding colonies, nest/roost trees, sensitive vegetation and areas with sensitive plants.

Comment: Clarify the planning process that has led to the designation of sanctuary.

Service Response: The process for determining the public use on a particular refuge unit is explained under Objective 1.10 Wildlife and Cultural Sanctuary. Appendix L also contains a list of specific issues that were considered when designating the amount of public use at each refuge unit.

Comment: Keeping only a small portion of the refuge off-limits to public use is insufficient to support the diversity of species that use the Sacramento River Refuge.” Commentor also expressed concern with lack of sanctuary for migratory birds because of the limited size of the Refuge.

Service Response: The Service has increased the amount of sanctuary on the Refuge from 16 percent to 20 percent. The sanctuaries are located within separate reaches of the

River which distributes wildlife for resting, feeding, nesting, and fawning. In addition, the density of the riparian forests provides additional sanctuary for wildlife species. Many of the areas used by wintering waterfowl are already open to public use because they are accessed by hunters during high water flooding events. Likewise, the mallards, wood ducks, common mergansers, and Canada geese, which breed at the Refuge, occupy the main channel or sloughs and oxbows connected to the main channel, which currently receive public via boat access. The riparian habitat restoration (revegetation, private levee removal, topographic restoration) undertaken by the Refuge has increased habitat for endangered species (e.g., bald eagle, valley elderberry longhorn beetle, Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, bank swallow, western yellow-billed cuckoo), anadromous fish (e.g., fall-late fall run Chinook salmon), migratory birds (e.g., red-shouldered hawk, mourning dove, rufous hummingbird, Pacific-slope flycatcher, black-headed grosbeak, spotted-towhee), and resident species (e.g., wild turkey, deer). Habitat restoration has increased the natural diversity of Refuge lands and monitoring results from PRBO have demonstrated that as these revegetated sites mature, avian diversity increases. Public use will result in local disturbance of species, but the habitat structure will provide sanctuary, and the restoration projects will continue to increase natural diversity.

Comment: There is no information regarding where these lands (sanctuary units) are located, how they were chosen, whether they include a representative sample of wildlife habitats, how the designation would be enforced, etc.

Service Response: The location and description of sanctuary units was described in the Draft CCP. Sanctuaries were described in Chapter 5 in Table 8, in Objective 1.10, and in Figure 27 Visitor Services Alternative B maps. Appendix L described the rationale behind the public use determinations for each unit. The Hunting Plan (Appendix C) described the method of enforcement for the sanctuaries as well as the rest of the Refuge.

3.9 Public Access

Comment: Recommend that a separate Public Access Plan be developed.

Service Response: Public access is addressed in Goal 2 Visitor Services, in Chapter 5 of the CCP. Many of the items that would be included in a public access plan can be found within each of the objectives and strategies of the Visitor Services goal and in the step down plans listed; therefore, a public access plan is not necessary. Several studies were used in determining public use trends along the Sacramento River including Sacramento River Public Recreation Access Study (EDAW 2003), Sacramento River Recreation Survey (DWR 1980) Public Opinions and Attitudes on Recreation in California (California DPR 1998), and Outdoor Recreation in American Life: A National Assessment of Demand and Supply (Cordell et al. 1999). Please refer to the Public Use section of Chapter 3, Goal 2 of Chapter 5, and Appendix N for additional information.

Comment: Alternative B states vehicle access would be allowed on designated roads and parking areas only. A detailed planned road system in the refuge is not clear in the CCP.

Service Response: The Service acknowledges the importance of minimizing the number of roads to decrease habitat fragmentation, which influences emigration, immigration, and wildlife population dynamics.

There is no planned public access road system for the Refuge. The roads referred to are entrance roads to the 8 Refuge units that are accessible by vehicle. There are also parking areas proposed for these units. There are also interior roads that will be utilized for refuge maintenance and monitoring, but these roads will not be opened to the public. Currently, there are no facilities at these areas for parking. If visitors and school groups want to access these areas for wildlife observation, education, interpretation, or photography they will need a place to park. Foot trails will be maintained on each of these areas.

3.9.1 Boat Ramps

Comment: Environmental justice requires public access from roads and trails since not all people can afford to own or rent a boat and additional boat ramps are needed on the river.

Service Response: Executive Order 12898 (Environmental Justice) states: each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such, programs, policies, and activities, because of their race, Color, or national origin. The Service has made reasonable accommodations for access, given the constraints at each site (lack of legal land access, high cost of boat ramp construction and maintenance) and our mission.

Within the large alluvial Sacramento River system, the very nature of changing sedimentation and accretion patterns and a dynamic meander pattern pose a challenge to determining the best location for boat ramps and similar facilities. A number of the existing facilities have costly maintenance needs, and some are now closed because of siltation and channel meander. Providing additional boat ramps on the river is not a high priority for the Refuge. Even if there was funding for constructing boat ramps, there is very little money available for maintenance costs. It has been estimated that annual boat ramp maintenance (i.e. dredging and ramp repair due to erosion) can cost tens of thousands of dollars annually, which makes it unfeasible for the refuge. Instead, the Refuge has assisted its partners including Tehama County with routine maintenance of their boat ramp by providing equipment and an operator.

3.9.2 Visitor Parking Lots

Comment: The CCP proposes to build and maintain eight new parking lots on the Refuge in the Wildlife Observation, Wildlife Photography and Interpretation CD. However there is no description of the proposed location, and no information about the expected impact of these parking lots.

Service Response: The parking areas proposed are for the Refuge units that are accessible to vehicles. Currently, there are marginal facilities located at the entrance roads for parking on these areas. These facilities would be the footprint for improved parking and access for refuge visitors.

The proposed areas that will need parking lot improvements were listed in the Table 8 of the Draft CCP. The average size of the parking lots is 25 'x 85' to accommodate a combination of up to 10 vehicles or a bus. The parking lots are proposed to be graveled, have drainage to address runoff, and would be constructed in areas that do not have support wildlife habitat. Impacts from these improved parking areas would be negligible.

If visitors and school groups want to access these areas for wildlife observation, education, interpretation, or photography they will need a place to park. Without the improvements to parking lots, the visitors to these proposed areas will not have access.

Comment: The Wildlife Observation, Wildlife Photography and Interpretation Compatibility Determination does not contain information on the impacts of increased visitor load on wildlife. A legitimate CD must include why the use is being proposed, where the use would be conducted, anticipated impacts of the use, and an explanation describing how the proposed use would or would not materially interfere with or detract from the fulfillment of the purposes of the Refuge.

Service Response: There is an understanding that increased visitor use, consumptive and non-consumptive, will increase impacts on wildlife. This disturbance is recognized and addressed in the Hunting Plan and the Anticipated Impacts of Use section in the Wildlife Observation, Wildlife Photography and Interpretation CD. The Service agrees with the content required for a "legitimate" CD (50 CFR 26.41(12)). Although all of the information was stated within the Draft CCP, the CD has been revised to include this information as well.

3.10 Policy

Comment: Service policy of requiring pre-approval by the Service before a pesticide can be used on refuge land has resulted in lengthy delays and sometimes denial of the use of certain needed pesticides even though these products are thoroughly tested and approved for use on these sites by both the USEPA and California EPA.

Service Response: The Refuge must follow the U.S. Fish and Wildlife Service pesticide use policy. Under this policy, the refuge manager may allow the use of certain mosquito control pesticides (which include several larvicide products) without higher level review. More toxic chemicals such as adulticides and organophosphate larvicides require annual review/approval at the Regional Office (Sacramento, California or Portland, Oregon) or Washington D.C. Office level. By their nature, NWRs are places of wildlife concentration, and the Service pesticide review process considers this in evaluating the use of any pesticide, regardless of U.S. or California EPA registration. Service approval/disapproval of a particular pesticide use of Refuges is based on a review including their toxicity to non-target organisms, presence of sensitive species, persistence of the chemical/carrier in the environment, application rate, method, and frequency, and the availability of alternative products.

Refuge staff will continue to work with local Mosquito Abatement Districts by meeting before the potential mosquito season on Refuge lands to discuss ways of reducing mosquito production and minimizing public health risk by allowing mosquito control, when necessary, based on mosquito population data and public health risk thresholds. In fact, the Districts are currently allowed to use a “package” of mosquito control products, including a variety of larvicides, a pupicide, and adulticides when treatment thresholds have been reached. The compatibility determination for mosquito and other vector control (Appendix B) and the Draft Integrated Pest Management Plan (Appendix Q) provide additional information about this process.

Comment: FWS does not provide any funding to the counties for control of Refuge produced mosquitoes.

Service Response: All of the Refuge units are owned in fee title by the Service; therefore, they do not provide property tax revenues to county governments. However, the Service does provide refuge revenue sharing payments to the counties in which these parcels are located. These annual revenue sharing payments were instituted to help mitigate the effects of property acquisition. The county can use the refuge revenues sharing payments for any government purpose.

Comment: From the County’s perspective, land taken out of agricultural production is off the tax rolls. The County needs tourism opportunities to contribute to the local economy and offset these losses.

Service Response: The Service does provide refuge revenue sharing payments to the counties in which Refuge units are located. These annual revenue sharing payments were instituted to help mitigate the effects of property acquisition. The Sacramento River corridor offers substantial opportunities for both land-based recreation uses (e.g., hunting, wildlife viewing, hiking) and water-based uses (e.g., boating, fishing, swimming). Trends for the Pacific region indicate wildlife viewing and nature study are expected to increase by 65 percent and double the number of days per year per person in the next 40

years. Fishing is expected to increase, while hunting is expected to decrease (Appendix N, EDAW Table 4.2-11). The increase in recreation opportunities provided by the Refuge will help offset the local losses from the agricultural economy.

3.10.1 Refuge River Jurisdiction

Comment: Concern over total closure of River due to impacts on anadromous fisheries utilizing the river year round.

Service Response: The CCP/EA does not suggest the possibility of closing down the Sacramento River to public use. Rather, in Chapter 1 under the Refuge River Jurisdiction section, the Service acknowledges the State’s “public trust easement” in the area between the low water mark and the ordinary high water mark. This acknowledgement is illustrated in the proposed public uses (Big 6: hunting, fishing, wildlife observation, photography, interpretation, and environmental education) allowed below the high water mark on refuge lands. These lands are interpreted to be lands below cut banks including gravel and sandbars.

Comment: CCP cites several statutes and cases apparently to support the USFWS assertions that it has, or will in the future exercise jurisdiction over portions of the Sacramento River. The commentor cites a section from the River Jurisdiction section of the CCP: “For example, in the U.S. v. Hells Canyon Guide Service case, the District Court maintained that the Property Clause of the Constitution gave the government power “to regulate conduct on non-federal land (the Snake River that runs through the National Forest) when reasonably necessary to protect adjacent Federal property or navigable waters.” In addition, this case stated “Congress’ power over Federal lands includes the authority to regulate activities on non-federal waters in order to protect the archaeological, ecological, historical and recreational values on the lands” (United States v. Hells Canyon Guide Service; U.S. District Court of Oregon, Civil No. 79-743; 5-6; 1979).”

Service Response: This comment takes this quote out of context. The intent of the Refuge River Jurisdiction section of the CCP is to clarify State and Federal laws dealing with jurisdiction on and under water bodies. This section explains that Federal Courts have clarified these statutory authority issues in regards to Federal agencies (including National Wildlife Refuges) that own and manage lands that encompass portions of water bodies. The Federal Courts have consistently maintained that Federal agencies have jurisdiction over *recreational uses* on these water bodies when the water body is integral to the primary purposes for which the park, forest, or wildlife refuge was established. It is the policy of the Sacramento River Refuge to recognize the rights of the public to use, consistent with State and Federal laws, the waters below the ordinary low water mark and the “public trust easement” in the area between the ordinary low water mark and ordinary high water mark.

3.11 Other CCP Comments

Comment: Provide an annual seminar on proper river etiquette and how to minimize the impact on the river shores.

Service Response: Comment noted. The Service, at this time, will not offer an annual seminar on proper river etiquette. There are numerous outreach efforts planned to inform visitors about the Refuge. Many of these efforts are outlined under Goal 2 Visitor Services in the CCP. Refuge visitors will be informed of laws and regulations and these laws and regulations will be enforced by refuge law enforcement officers.

Comment: Are there plans to charge for access to use these lands?

Service Response: There is no entrance fee planned for the Sacramento River Refuge at this time.

Comment: Please encourage citizen volunteers for appropriate projects and participation within the refuge.

Service Response: The National Wildlife Refuge System Volunteer and Partnership Enhancement Act of 1998 (P.L. 105-242) strengthens the Refuge System's role in developing relationships with volunteers. Volunteers possess knowledge, skills, and abilities that can enhance the scope of refuge operations. Volunteers enrich Refuge staff with their gift of time, skills, and energy. The Service developed Objective 2.7 to develop a volunteer program that will support and help implement the Refuges special events, restoration, and maintenance programs.

Comment: I fear, like many, that uncontrolled areas (primarily parking areas) will get excess litter. Perhaps come up with some sort of ticket and receipt that is placed on the car and carried with you.

Service Response: Signs and information will help guide Refuge visitors. All Refuge lands will be posted with boundary signs and informational signs designating the appropriate uses, which will support enforcement. Hunting maps and refuge information will be available at well-known locations such as hunter forums, public facilities, websites, sporting goods stores, and kiosks.

Currently, the Refuge has 2 law enforcement officers that patrol along the Sacramento River Refuge boundaries daily. The Refuge will be hiring an additional full time officer to support changes to refuge management proposed in this plan. All laws and regulations, including littering, will be strictly enforced.

Comment: I strongly urge the prohibition of all off-road vehicles on refuge land.

Service Response: The Service has not proposed, and will not allow, off-road vehicles on the Refuge.

Comment: No vehicle access other than some parking areas. No buildings, signs, interpretive centers etc.

Service Response: Due to the nature of the Refuge, many of the units will not have vehicle access. Only 8 of the 26 Refuge units will have parking areas established adjacent to public roads. The Service has no current plans for any buildings; however, in the future when funding permits an interpretive center/office may be developed. Signs will be a part of the Refuge too. Signs are important to inform refuge visitors about what uses are allowed on each unit and what uses are not allowed. Boundary signs are also important to reduce trespass on our neighbors.

Comment: Open 73 percent of the refuge to hunting and fishing, but gradually phase out farming operations. Phase out of certain agricultural operations will overall benefit the Pacific flyway.

Service Response: The Service agrees with comment about phasing farming out gradually; however, only half of the Refuge will be opened to hunting as stated in the Proposed Action. Phasing out farming allows the Refuge to continue to financially support restoration activities and reduces the local economic impact of removing agricultural operations. Agricultural areas provide habitat for many species of wildlife but species diversity will increase further once the areas are restored.

Comment: Hope to get more disabled people into the field with Alternative C.

Service Response: Alternative C would not have provided any additional opportunities for disabled hunters to get into the field than Alternative B, except for the additional acreage open to hunting.

Comment: There will not be any method implemented to regulate fishing.

Service Response: This comment misquotes the statement on B-11 of the CCP which reads, "...there will not be any method implemented to regulate fishing quotas." This statement referenced the anticipated limited numbers of anglers on Refuge lands due to limited boat access and opportunities. The methods of implementing the fishing program can be found in the Fishing Plan (Appendix D).

Comment: Maps on Page 79 of the Draft CCP are helpful but would be more beneficial if adjacent roads could be labeled and adjacent properties labeled public or private ownership.

Service Response: The unit maps, Figures 11-24, are in the Refuge Unit Description section include a brief summary of the size, location, and land use/composition. The purpose of these maps is to supplement this section by depicting the existing habitat. Figure 28, the Visitor Services Alternative B maps, have labeled roads, creeks, public facilities, and adjacent public lands that may be more helpful in identifying the nearest access point or a familiar landmark.

Comment: Refuge website should include links to local businesses.

Service Response: The Service cannot promote local businesses on the Refuge website, but we could list the Chamber of Commerce as local resource.

Comment: Recommend that implementation of the CCP is evaluated by an advisory committee comprised of public and private members.

Service Response: Comment noted. The Service does not intend to form an advisory committee at this time.

Comment: Support building of bat boxes as an inexpensive and effective method of mosquito control that has few side effects for other wildlife species.

Service Response: Comment noted.

Comment: Sacramento River Refuge should become its own entity within the national refuge system once the CCP has been finalized.

Service Response: Comment noted. The Sacramento River Refuge is currently managed as part of the Sacramento National Wildlife Refuge Complex. It is not feasible to de-complex the Sacramento River Refuge from the Sacramento Refuge Complex until full funding and staffing are reached.

Comment: Suggest adding a map that indicates those lands taken by legislative fiat to “protect” some endangered species.

Service Response: All of the lands within the Sacramento River Refuge have been purchased from willing sellers. Therefore, this comment does not pertain to the Refuge and is outside the scope of this CCP.

Comment: Why doesn't the planning hierarchy include any local landowners on the planning team?

Service Response: Planning teams, as defined by the Service's planning policy (602 FW1) are: “interdisciplinary in membership and function. Teams generally consist of a planning team leader, refuge manager and staff biologists, a state natural resource agency

representative, and other appropriate program specialists (e.g., social scientist, ecologist, recreation specialist). We also will ask other Federal and Tribal natural resource agencies to provide team members, as appropriate. The planning team prepares the CCP and appropriate NEPA documentation.”

Therefore, no local landowners were included on the planning team. The Refuge; however, has invited local landowners and any other member of the public to participate in the CCP planning process. Appendix J contains a list of people that received planning updates, copies of the plan or came to public meetings regarding the CCP. Appendix J also contains a list of the outreach that was conducted by the Refuge to ensure that the public including refuge neighbors and local landowners knew about the CCP.

Comment: Planning assistance from local law enforcement staffs to aid one full-time refuge officer is worrisome. As noted under Objective 4.1 there have been thefts and equipment losses in recent months and local law enforcement units are needed in these areas rather than on Refuge lands.

Service Response: This comment is incorrect. Objective 4.1 actually states: Provide visitor safety, protect resources, and ensure compliance with regulations through law enforcement. Increase the number of law enforcement officers (from 1 to 2) and increase the monitoring of significant resource sites from quarterly to monthly by 2010.

The rationale states: “A common belief among neighboring landowners is that public ownership, easements, or access could result in increased vandalism and theft of agricultural equipment, poaching, and disregard of private property rights. A well-planned and coordinated program will be necessary to successfully address these concerns. The elongated and fragmented layout of the Refuge, which crosses through four counties, requires law enforcement coordination on the Federal, State, county, and local levels. Enforcement is further complicated because many units are accessible only by water.”

Comment: There are no references in the CCP that Refuge lands are adjacent to PCGID/PID infrastructure.

Service Response: The Refuge clearly understands that this infrastructure exists and knows its location. We have revised Figures 16, 18, 20 and 23 so that the major pumping plants, including PCGID/PID, are now identified.

Comment: Requests the FWS disclose how program success will be measured.

Service Response: The CCP develops objectives within Chapter 5. These objectives are written to be specific, measurable, achievable, results-oriented and time-fixed. Therefore measures of success for the CCP will be based upon individual objectives which have quantitative elements built in to see if they are met. For example, Objective 1.3 states:

implement 8 surveys by 2005 and 4 additional surveys by 2015. This objective will be met if the surveys are conducted during the set timeframe.

Comment: Request documents elucidate statements on scientific principals of sound fish and wildlife management. How does CCP fit with goals of CVPIA, AFRP, AFSP, EWP, and existing Biological Opinions?

Service Response: Please refer to Appendix M which has been revised to include a description of many federal, state and local programs. The program goals that relate to the CCP have also been listed.

Comment: Request more detail on what is meant by active and passive management practices.

Service Response: Active (or cultural) and passive restoration management practices are described in detail in Chapter 5, Objective 1.1. The glossary (Appendix H) also contains a definition of cultural restoration and passive restoration which are as follows:

Cultural Restoration (also Active Restoration): Restoration that uses horticultural and agricultural techniques for plant establishment. Common practices of cultural restoration includes: propagating seeds, acorns and cuttings in a greenhouse; planting these propagules in rows so that irrigations systems may be installed and maintained and weeds can be sprayed and mowed. Specific human actions taken to reestablish the natural processes, vegetation and resultant habitat of an ecosystem.

Passive Restoration: Restoration is defined as the return of an ecosystem to an approximation of its former unimpaired condition. Passive restoration is defined as restoration that relies on natural processes for plant establishment. These processes include: flooding, sediment deposition, erosion, and seed dispersal from local or upstream plant sources. Allowing an ecosystem to restore its natural processes, vegetation and resultant habitat without human actions.

Comment: Request an update on the status of biological assessments and biological opinions relating to the CCP.

Service Response: The Refuge completed and Intra-Service Section 7 consultation with the Service (Sacramento Fish and Wildlife Office) and NOAA-Fisheries. As stated in the Draft CCP, copies of these consultations and the concurrence letters are provided in the Final CCP in Appendix F.

Comment: Recommend that the FWS provide a comprehensive list of other plans which are likely to impact management of the Refuge. Also suggest providing details of the

plethora of the Federal laws, Executive Orders, regulations and conservation initiatives that pertain to the CCP.

Service Response: The Draft CCP contained information about these conservation initiatives, plans, laws regulations, and Executive Orders in Chapters 1-5, as well as in the Draft EA. Details of these plans, laws, and regulations have been expanded upon in the revised Appendix M in the Final CCP.

Comment: How does the CCP relate to CALFED?

Service Response: Established in May 1995, the California Bay-Delta Program (CALFED) is a cooperative effort of federal and state agencies working with local communities to improve the quality and reliability of California's water supplies and revive the San Francisco Bay-Delta ecosystem. CALFED's mission is to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta System. The CALFED Ecosystem Restoration Program goals (Appendix M) which are consistent with the goals, objectives and strategies of the CCP.

Comment: Suggestion to add columns to Table 2 containing goals of the programs and measures of success for these programs.

Service Response: Table 2 contains a list of partners in habitat acquisition, restoration and management with the Service. It is not a list of programs that would contain measures of success. A list of plans and programs and their respective goals can be found in the revised Appendix M.

Comment: Commentor was unable to find any reference or introduction to Figure 8 in the Draft CCP.

Service Response: The reference to Figure 8 is on the preceding page (page 33) of the Draft CCP. This figure is copied from Exhibit 1 of the Service's Refuge Planning Policy Overview (602 FW 1).

Comment: The Draft CCP states "farmers have shown a willingness to work with the Service to cooperatively assist in the management of the Sacramento River Refuge." The commentor states in order for this section of the CCP to be accurate the Service must disclose the concerns of agriculture as they relate to the development and implementation of the CCP.

Service Response: The referenced quote was taken out of context. The Cooperative Land Management Agreement/Cooperative Agreement section of the CCP states: "Farmers and private nonprofit conservation organizations have shown a willingness to work with the Service and have the expertise and resources necessary to cooperatively assist in

management of Sacramento River Refuge. The completion of defined land management activities by the cooperators will provide direct and substantial overall benefits to Refuge habitat and the associated wildlife.” What is written in the CCP is not related to the stated comment.

In response to the comment about disclosing the concerns of agriculture, the Service has made numerous efforts throughout the CCP process to request comments on the CCP. Appendix J contains a list of outreach that the Service conducted over the three year long CCP process. Many comments about agriculture were received and these have been incorporated into the CCP. If the commentor has additional comments, they were not specified in the comment and the Service will not speculate.

Comment: Suggests that contact with private landowner be maintained and the concerns of landowners addressed.

Service Response: The Refuge has been and will continue to work with numerous adjacent landowners. As explained in Chapter 4 in the Cooperation with Adjacent Landowners section and Chapter 5, Goal 3 Partnerships, the Refuge wants to create and maintain partnerships with federal, state, local agencies organizations, schools, corporations, and private landowners. Although there is no set framework, since each partner will have its own concerns, the Refuge will create a process that is mutually beneficial for all partners. The primary contact for the cooperation with partners is the refuge manager.

Comment: Recommends that the final environmental documents and CCP provide examples of adaptive management.

Service Response: Examples of adaptive management were discussed in the Draft CCP in several places. In Chapter 4, habitat management plans were discussed. This annual plan uses adaptive management to guide management activities for the Refuge for that upcoming year. The habitat management plan is a vital link in adaptive management because it provides a way to track the results of management decisions and associated actions. Also in Chapter 4 under the section on migratory bird management and in Chapter 5 in the overview of the landscape ecology approach section, three examples of adaptive management strategies are given where survey information is applied to improve restoration designs on the Refuge.

3.12 Environmental Analysis Comments

Comment: In the EA, the Service states that riparian restoration under Alternative B and C is not significant. What does this mean?

Service Response: In development of the environmental consequences section of the EA, the Service has provided impacts analysis consistent with NEPA implementing

regulations at 40 CFR 1502.16(a) and 40 CFR 1502.16(b). Here NEPA implementing regulations require discussions of environmental consequences to address “[d]irect effects and their significance” and “[i]ndirect effects and their significance.”

In describing the significance of impacts, the Service defers to NEPA Implementing Regulations at 40 CFR 1508.27.

"Significantly" as used in NEPA requires considerations of both context and intensity:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. “

Thus, while the Service believes the environmental effects of implementing the CCP will result in improved conditions for fish and wildlife resources along the Sacramento River, when considered within the context of the worsening environmental conditions occurring throughout the Sacramento River Valley, we do not believe the magnitude of anticipated improved conditions attributable to CCP implementation represents a significant beneficial effect as defined in NEPA Implementing Regulations at 40 CFR 1508.27.

We described the differences between public use levels under Alternatives B and C when compared to Alternative A as “substantial” in an effort to denote that we anticipate markedly differing levels of public use under different alternatives. However, despite the fact that we anticipate markedly different levels of public use under Alternatives B and C when compared to Alternative A, we do not anticipate public use levels under any of the alternatives to result in significant impacts to the human environment (40 CFR 1508.27).

Comment: The greatest concern we have is the conclusion of FONSI. This determination is arbitrary and capricious.

Service Response: In the Draft CCP, the Service did not make a determination or otherwise rendered a Finding of No Significant Impact. The function of the EA is to assist with making a determination as to whether an EIS must be prepared (40 CFR 1501.4(c)). In the environmental consequences section of the EA, the Service provided impacts analysis consistent with NEPA implementing regulations at 40 CFR 1502.16(a) and 40 CFR 1502.16(b). Here NEPA implementing regulations require discussions of environmental consequences which address “[d]irect effects and their significance” and “[i]ndirect effects and their significance.”

Comment: The EA does not disclose and assess potential impacts to land and facilities owned and operated by PCGID/PID.

Service Response: PCGID/PID did not comment during the scoping period or at any other time during the CCP process until their comment letters on the Draft CCP/EA. Also, in those comment letters, they have not stated what the impacts to the facilities are; therefore, the Service will not speculate what these impacts or concerns are. The Refuge is working with PCGID/PID on a feasibility study to protect their pumping plant and restore the riparian sanctuary described in the Technical Analysis section of Chapter 4 of the CCP. This study was funded by CALFED.

Comment: Considering the CCP management objective and the size of project area, the appropriate framework for environmental review is an EIS.

Service Response: The Service disagrees with the assertion that the CCP management objective and the size of project area argue for preparation of an EIS. The level of detail provided in the CCP is appropriate. Significance of impacts to the human environment determines whether preparation of an EIS is warranted. Thus, an EA provides a discussion of the magnitude of the impacts within the context of the situation for each impact topic.

Comment: Commentor claims to provide new information to the CCP process in their comment letter, previously not addressed or disclosed.

Service Response: The Service received the above-mentioned comment letter; however, the commenter has not provided any new information in their letter. The Service has reviewed and developed a response to the substantive comments brought forth in all of the comment letters received during the comment period (Appendix R).

Comment: CCP activities are likely to have significant direct adverse impacts and cumulative impacts on the operation of PCGID/PID pumping plant and fish screen.

Service Response: It is important to note that the commentor has only generally asserted that CCP implementation is likely to have significant direct adverse impacts and cumulative impacts on the operation of PCGID/PID pumping plant and fish screen, but has not provided any information as to what those impacts might be. It would be remote and speculative for FWS to guess at the impacts to which PCGID/PID is referring. The Refuge is working with PCGID/PID on a feasibility study described in the Technical Analysis section of Chapter 4 of the CCP.

Comment: Language should be added to the introduction of the EA to state that “pursuant to Council on Environmental Quality regulations, the principle purpose for drafting and EA is to determine if there are significant impacts and if and Environmental

Impact Study is required. If significant impacts are identified, the need to prepare an EIS is triggered.”

Service Response: This sentence in the EA has been revised to read “.....in accordance with National Environmental Policy Act (NEPA), amended and its implementing regulations.”

Comment: The CCP and the EA should be stand alone documents

Service Response: The draft CCP and EA were developed consistent with NEPA implementing regulations to reduce excessive and duplicative paperwork by incorporating by reference (40 CFR 1500.4 (j)), integrating NEPA requirements with other environmental review and consultation requirements (40 CFR 1502.25), and combining environmental documents with other documents (40 CFR 1500.4 (o)). The final CCP will be a stand alone document.

Comment: The EA is silent to potential harmful impacts to PCGID/PID pumping plant and fish screen.

Service Response: It is important to note that the commentor has only generally asserted that CCP implementation is likely to direct adverse impacts on the operation of PCGID/PID pumping plant and fish screen, but has not provided any information as to what those impacts might be. It would be remote and speculative for FWS to guess at the impacts to which PCGID/PID is referring.

Comment: Disagree with the determination that “all activities proposed under Alternative B are not expected or intended to produce significant levels of environmental impacts that would require mitigation measures.”

Service Response: Commentor asserts that impact conclusions are not justified, yet commentor does not specify what is inadequate about the analysis. The Service disagrees with the comment and believes that the conclusions are warranted.

Comment: Provide greater detail why mitigation measures are anticipated and suggests that EIS is needed because FWS is planning mitigation measures.

Service Response: FWS is proposing mitigation measures in an effort to avoid having CCP implementation result in significant adverse effects. Regarding the suggestion that mitigation measures trigger preparation of an EIS, it is important to note that an agency may support a conclusion of less than significant effects by showing that mitigation measures will significantly compensate for a proposed action’s adverse environmental impacts (Friends of Endangered Species v. Jantzen, 760 F.2d 976, 987 (9th Cir. 1985)).

Comment: The loss of jobs associated with agriculture is an unacceptable adverse effect that demands much more detailed analysis and further demonstrates the need for an EIS.

Service Response: It is important to note “that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment” (40 CFR 1508.14). In assessing the physical and biological effects of changing land use on certain pieces of land, the EA has appropriately addressed the interrelated potential social and economic impacts.

The agricultural sector of the regional economy would be most affected by riparian habitat restoration. The reestablishment of riparian habitat would result in small reductions to agricultural production, local agricultural jobs, and personal income. These changes were analyzed in the Restoration EA in Section 4.4 Effects on the Social and Economic Environment (USFWS 2002). The Service has taken the effects on Prime and Important Farmland into account as it has considered alternatives to the CCP. Alternative B was developed because it would lessen these impacts. No significant positive or negative economic impacts are expected from implementation of the proposed alternative.

The report entitled “Socioeconomic Assessment of Proposed Habitat Restoration within the Riparian Corridor of the Sacramento River Conservation Area” (Jones & Stokes 2003) looked at an estimated 42,543 acres study area to generally define and broadly communicate the economic consequences that may result from the establishment of a riparian corridor along the Sacramento River between Red Bluff and Colusa. This economic analysis focused on evaluating two kinds of effects associated with establishing a riparian corridor along the Sacramento River: changes in regional economic activity and fiscal conditions, and changes in resource costs and benefits. The agricultural sector of the regional economy would be most affected by riparian habitat restoration. The conversion of 9,390 acres of agricultural land to riparian habitat would result in small reductions to agricultural production, local jobs and personal income. These reductions would be relatively small when taken in the context of the 4-county agricultural economy. County tax revenues would see minor adjustments. The easily quantified benefits of the restoration would be small in comparison to the losses, but the potential for substantial local benefits in the recreation sector and societal benefits from the improvement in habitat conditions in the Sacramento Valley is large. The key to realizing substantial recreation-related benefits would be the expansion of public access and recreation-related facilities along the Sacramento River.

Comment: Commentor stated that they would appreciate receiving the comments made by other reviewers of this EA.

Service Response: The Service incorporated the comments by reviewers prior to the release of the Draft CCP/EA. The CCP and EA reflect the combined contribution of the CCP core team, extended team, and the reviewers.

Comment: Appendix 1 objectives and goals are presented in subjective terms.

Service Response: The goals and objectives that are referred to in Appendix 1 are directly from Chapter 5 of the CCP. As much as possible, the objectives are written to be specific, measurable, achievable, reasonable, and time-fixed. This allows the reader to obtain the quantitative elements to measure success right in the objective. These objectives are restated in Appendix 1 to compare each under each alternative of the EA.

3.13 Praise

- As adjacent landowners we have historically relied upon this good neighbor policy and its incumbent good-faith on the part of the Service and the Refuge management to employ sound preventative and precautionary measures and to respond to incidents and problems as they occur.
- M&T Chico Ranch would like to take this opportunity to acknowledge the importance of the CCP and recognize the efforts of the USFWS in this endeavor to date.
- The environmental education program described on page 157 is good.
- The website described on page 161 is good.
- Wish to compliment the authors on a very complete and easily readable report. Especially noteworthy is the intent to work with “many partners to protect and restore riparian habitat along the Sacramento River and its watershed.”
- The policy of not planting elderberry bushes within 100 feet of the Refuge boundary with private agricultural operations is appropriate.
- Defenders of Wildlife approves of the decision that was made to keep the majority of the refuge lands closed to camping, but to allow limited camping on gravel bars below the high water mark.
- Plan B allows for great public access for non-consumptive purposes.
- Alternative B is a nice compromise between development and wildlife sanctuary. Like the idea of providing land to be kept aside for a wildlife sanctuary while improving other parts of the refuge for public access and appreciation.
- Plan C create maximum opportunity for public use and enjoyment for the citizens of this county.
- We at Kittle’s Outdoor & Sport Co. support conservation efforts along the river and are in favor of option C. Thank you for allowing us to share the Draft with the public. It seems to be very comprehensive.
- Plan B better serves the needs of the community. Hunting and fishing have significant historical and cultural value as does farming and eliminating it under option C is not good.
- I fully support Alternative B to preserve natural habitats for the use and enjoyment of the public as well as the animals that live there.

- We are especially supportive of Alternative B which would optimize habitat restoration and public use of the Refuge.
- Plan is impressive and appears very well thought out. The different uses of these refuges are very diverse and I am pleased with the plan.
- On behalf of The Nature Conservancy I wish to commend your project team for the Draft CCP.
- It is an excellent and inclusive document that will serve as an effective guide for the management of the Refuge.
- The plan has a strong technical basis and the detailed plans for implementation reflect all of the hard work and thought that went into the document.
- The extensive public outreach efforts that were included in the planning process are well chronicled and the plan clearly reflects much of the public input was received.
- The plan will be an important tool to help implement the goals and principles of the Sacramento River Conservation Area Forum Handbook.
- I am very excited to see wildlife habitat restored along the river.
- If this Refuge is managed like the others in the Complex it will no doubt provide high quality habitat and high quality recreational opportunities.
- We join you in your mission of preserving and protecting these public treasures while encouraging compatible public utilization and enjoyment.
- As a hunter and fisherman, I congratulate you for your conservation efforts in restoring wildlife habitats along the Sacramento River.
- I attended your public comment meeting in Red Bluff. Thank you for this meeting and the presentation. I also want to thank all your personnel that were present. Most questions were answered during that meeting. The CD provided me with excellent materials to make my own assessment and evaluation.
- I attended the Colusa meeting. Thanks for the time and effort. Good job.
- The USFWS and CDFG are doing a good job in the re-establishment of wildlife within California.
- I commend you for your thorough job. Keep up the good work.

Service Response: Comments noted.

4.0 LIST OF PEOPLE AND ENTITIES THAT PROVIDED COMMENTED

4.1 Federal Agencies

Agency

USFWS, Red Bluff Fish and Wildlife Office
USFWS, Regional Office

Signature

Parker, T.
Vallentine, N.

4.2 State Agencies

Agency

California Department of Conservation
California Department of Fish and Game
California Department of Fish and Game
California Department of Water Resources

Signature

O'Bryant, D
Curtis, B.
Hoffman, P.
Ng, M.

4.3 Local Agencies

Agency

Butte County Mosquito and Vector Control
Glenn County Board of Supervisors
Glenn County Mosquito and Vector Control
Tehama County Flood Control and Water
Conservation District

Signature

Camy, J.
Freeman, G.
Cavier, J.

Ohlin, E.

4.4 Organizations

Organization

Abbey of New Clairvaux
Animal Protection Institute
Association of Veterinarians for Animal Rights
California Bowmen Hunters
California Waterfowl Association
Central Valley Project Water Association
Chico Area Flyfishers
Chico Chapter of California Deer Association
Defenders of Wildlife
Fresno County Sportsman's Club
Fresno Chapter Quail Unlimited
Princeton Cordora Glenn Irrigation District/
Provident Irrigation District
Sacramento River Preservation Trust

Signature

Brother Regis
Engebretson, M.
Barnato, T.
Becker, J.
Hennelly, M.
Birk, S.
Miller, D.
Wood, A.
Matson, N.
Woods, G.
Woods, G.

Boyd, L.
Merz, J.

Straight Arrow Bowhunters
The Fund for Animals
The Nature Conservancy

Bostain, S.
Handley, V.
Zelege, D.

4.5 Businesses

Business

3B's Ranch
Chico Sportsman's Den
Crain Orchards, Inc.
Crain Ranch
Keyawa Orchards, Inc.
Kittles's Outdoor and Sport Club
M&T Chico Ranch
Western Outdoor News

Signature

Bocks, C.
Ebright, D.
Crain, C.
Crain, H.
Keyawa, R.
Kittle, P.
Heringer, L.
Karr, B.

4.6 General Public

Adolf, N.
Ahre, D.
Alcisto, P.
Alexander, D.
Alexander, A.
Allen, T.
Alonso, M.
Alvarez, C.
Amaral, L.
Amaral, C.
Amaral, D.
Amaral, D.
Amaral, D.
Amaro, B.
Anchors, J.
Anders, C.
Anderson, S.
Anderson, A.
Andoe, D.
Andrews, M.
Anello, D.
Arendt, R.
Arendt, S.
Aries, J. and H.
Artley, R.
Aureala, W.
Austin, G.

Ave, M.
Ave, J.
Baccam, T.
Bachelor, M.
Baer, W.
Baer, K.
Bailey, T.
Baker, G.
Ballard, L.
Ballon, A.
Barber, B.
Barbour, T.
Barcion, D.
Bard, B.
Barden, D.
Bariola, S.
Barnhart, M.
Barranco, M.
Bates, J.
Baum, B.
Baxter, J.
Beaham, P.
Beaham, T.
Beaver, E.
Beavers, N.
Begley, R.
Belkin, D.

Belkin, M.
Beltramo, J.
Beltramo, J.
Benamati, R.
Bender, D.
Bender, E.
Bender, M.
Bender, R.
Benson, C.
Berger, B.
Bergstrom, B.
Berry, J.
Berryhill, T.
Betagna, N.
Bethel, C.
Betts, J.
Bianchi, R.
Biggs, S.
Billeci, F.
Bird, D.
Bitker, M.
Black, D.
Black, M.
Blackwell, D.
Blackwell, D.
Blackwell, D.
Blackwell, P.

Bloxham, T.	Calais, C.	Christensen, E.
Blue, B.	Calbreath, L.	Christensen, M.
Bock, R.	Campbell, M.	Cianelli, T.
Boelens, R.	Candler, R.	Cierley, H.
Bohli, B.	Capriola, R.	Clapp, G.
Bohnemeyer, M.	Caracci, J. and V.	Clapp, K.
Bohnemeyer, S.	Cardella, S.	Clapp, S.
Bonds, J.	Carlson, D.	Clark, B. and C.
Bourdon, J.	Carlson, D.	Clarkson, J.
Boyd, D.	Carlson, D.	Claypool, R.
Boyes, B.	Carman, T.	Clement, R.
Branco, C.	Carney, M.	Cloninger, J.
Bratt, S.	Carney, R.	Cloud, M.
Breglia, A.	Carpenter, T.	Cockrell, A. and D.
Brigantino, T.	Carr, G.	Conn, T.
Britton, R.	Carter, G.	Connell, D.
Bronner, B.	Carter, M.	Connell, D.
Brooks, J.	Cartwright, S.	Connors, P.
Brott, S.	Caruso, G.	Constantini, T.
Brott, S.	Case, M.	Cook, B.
Brown, R.	Case, M.	Cooper, S.
Brown, V.	Case, M.	Copeland, R.
Brown, V.	Cassaretto, T.	Copland, S.
Browne, D.	Cassianna, E. and F.	Corbin, B.
Browne, J.	Cassillas, D.	Cordeau, S. and K.
Bruce, D.	Castellano, E.	Harding
Brugger, R.	Castro, D.	Cornelisun, R.
Bruhn, S.	Cerro, P.	Cornish, K.
Bruno, E.	Cerro, R.	Cory, D.
Bulloch, R.	Chaddock, D.	Cose, E.
Bunch, R.	Chamberlain, S.	Cose, K.
Bundy, M.	Chan, C.	Cotton, T.
Buriani, D.	Chapman, E.	Countryman, G.
Buriani, N.	Chartier, M.	Cowan, B.
Buriani, R.	Chase, C.	Craig, T. and E.
Buriani, R.	Chauvin, R.	Crane, J.
Burke, J.	Chavarria, M.	Cress, G.
Burkett, B.	Chavarria Patino, M.	Crete, C.
Burkett II, R.	Chesney, T.	Crisitia, N.
Burns, P.	Chikato, M.	Croff, W.
Burres, E.	Chikato, M.	Cronin, S.
Burroughs, K.	Childs, S.	Crowe, B.
Butler, J.	Chin, K.	Cullins, W.
Buzzell, M.	Chokrevski, M.	Cullins, W.

Cumming DuCoeur, E.
Cunha, M.
Curnow, C.
Currey, D. and H.
Currey, D.
Dailey, M.
Damaso, M.
Damitz, G.
Damitz, G.
Damitz, G.
Damitz, G.
Daniel, B.
Dardzinski, M.
Davanis, T.
David, M.
Deitz, J.
Deitz, J.
Deitz, R.
Delbridge, G.
Delorey, G.
Dematteis, P.
DeMello, S.
Deming, S.
Dengler, R.
Denison, J.
Deniz, S.
Denson, L.
Depew, G.
Derdivanis, J.
Deschene, J.
DeWitt, R.
Dicherry, D.
Dick, J.
Dickson, M.
Dietrich, D.
DiGioia, E.
DiMarco, J.
DiNicola, B.
Dinwiddie, D.
Dirkson, K.
Dixon, K.
Dodd, B.
Dodd, E.
Glenn Dodge, G.

Domras, R.
Donald, F.
Donley, C.
Donnelli, G.
Donnici, A.
Doob, J.
Dorow, M.
Dorrell, D.
Doucette, C.
Douglas, M.
Douglas, R.
Dross, T.
Drost, C.
Drummond, A.
Duda, T.
Dufek, D.
Duffy, D.
Dunlap, J.
Durrant, T.
Dwinger, D.
Dwinger, T.
Dyrssen, D.
Eaton, H.
Eddy, D.
Edmonds, D.
Edwards, W.
Ehrich, T.
Eichert, K.
Eisenman, M. and C.
Eitel, R.
Embree, D.
Emmons, M., T., D.,
and D.
Engberg, D., C. and C.
Engbretson, J.
Engle, R.
Engurasoff, G.
Engurasoff, S.
Enright, R.
Ereth, K.
Erickson, C.
Erickson, S.
Ernenwein, R.
Erwin, J.

Estensen, D.
Estes, D.
Esteve, G.
Eugene, J.
Eusebio, M.
Everly, F.
Everson, G.
Ewing, D.
Eyre, T.
Falletti, R.
Farley, D.
Farmer, G.
Farnung, B.
Farrar, A.
Farrey, R.
Fast, M.
Fava, G.
Feldheim, C.
Feltman, S.
Fendrich, C.
Ferrill, H.
Fetzer, P.
Figone, J.
Figone, J.
Figone, P.
Figone, A.
Filsinger, L.
Finkle, P.
Fischer, Philip
Fischhoff, R. and S.
Flores, J.
Flowers, B.
Flowers, D.
Flynn, B.
Fole, J.
Foley, T.
Forberg, J.
Forberg, J.
Forrester, C.
Foster, T. and R.
Foster, J.
Foster, M.
Foust, J.
Foy, M.

Frank, G.
Frediani, T.
Freeman, D.
Fritsch, S.
Frulan, B.
Fryer, W.
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Gaines, F.
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Gebke, S.
George, L.
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German, B.
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Ghelfi, P.
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Go, A.
Godsey, B.
Goetter, S.
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Goodenough, B.
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Kline, D.
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Ruckle, J.	Shippen, D.	Stevenson, D.
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Ruddick, L. and A.	Shobe, B.	Stewart, R.
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Sager, J.	Slagle, G.	Strauss, R.
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Santerrer, C.	Smith, J.	Strong, K.
Santino, D.	Smith, J. and J.	Struble, D.
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Saulet, G.	Smith, L.	Stuenkel, M.
Schimke, S.	Smith, E.	Sturges, J.
Schmidt, S.	Smith, K.	Summers, D.
Schmidtke, J.	Smith, E.	Swallow, B.
Schmitt, S.	Smith, J.	Sweer, J.
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Schmitz, B.	Smith, R.	Tassin, K.
Schnalle, R.	Smith, K.	Taylor, T.
Schneider, P.	Smith, D.	Taylor, L.
Schuldies, L.	Sobiloff, B.	Taylor, J.
Schults, J.	Somerday, R.	Taylor, B.
SchultsBob	Sorg, S.	Taylor, T.
Schussel, R.	Sorsky, M.	Taylor, T. and C.
Schussel, R.	Souza, M.	Tebbe, B.
Schussel, M.	Spangler, D.	Telucci, J.
Schwartz, R.	Sparks, L.	Temps, L.
Schwick, K.	Spatta, G.	Theller, J.
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Scott, S.	Spatta, G.	Thomas, S.
Scott, D.	Spolar, J.	Thommen, D.
Scott, J.	Springer, J.	Thompson, G.
Sefert, J.	Springer, S.	Thompson, E.

Thompson, W.	Walker, J.	Williams, T.
Thompson, M.	Walker	Williams, P.
Thompson, A.	Wallace, S.	Williams, R.
Thornton, M.	Wallrich, D.	Williams, J.
Tiller, M.	Wally, R.	Williams, D.
Tintle, B.	Walther, R.	Wilms, J.
Tittle, T.	Wandell II, F.	Wilson, J.
Todd-Mancillas, W.	Wanket, D.	Wilson, E.
Todd-Mancillas, W.	Ward, B.	Wilson, F.
Tolliver, T.	Warmerdam, K.	Wilson, K.
Tolpin, J.	Warmerdam, P.	Wilyard, D.
Towner, M.	Warner, D.	Wines, S.
Towns, T.	Warner, C.	Winter, J.
Tracey, T.	Warren, B.	Winter, M.
Treiber, L.	Warren, M.	Winters, R.
Trivett, R.	Waters, J.	Wolfe, M.
Trost, H.	Watson, E.	Wood, R.
Trout, S.	Watters, C.	Wood, D.
Tucker, T. and B.	Weaver, D.	Wood, D.
Demartini	Webb, B.	Wood, J.
Turley, B.	Weinrich, W.	Wood, J.
Turner, K.	Weinstein, D.	Wood, P.
Tuttle, G.	Well, J.	Wood, F.
Uhland, T.	Wendt, B.	Woodry, L.
Underwood, G.	Wentzel, M.	Wright, C.I
Vaiana, M.	Wheeler, B.	Wrinkle, J.
Valdez, D.	Wheeler, R.	Wrinkle, M.
Valle, D.	Wheeler, G.	Wunsch, M.
Valley, L.	Whilson, C.	Wunsch, K.
Van Alstyne, R.	Whitaker, G.	Wunsch, A.
Van Bree, F.	White, J.	Wunsch, S.
Van Dylce, A.	White, R.	Wunsch, E.
Van Nuys, R.	White, E.	Wunsch, R.
Van Sant, R.	White, L.	Wunsch, S.
Van Sickle, J.	Whitmore, D.	Yakoubovsky, N.
Vann, S.	Whittaker, L.	Yarosevich, J.
Verret, T.	Whitter, Z.	Young, G.
Vix, S., L. and B.	Wiedkemp, K.	Youngberg, N.
Voleck, J.	Wiedkemp, A.	Yunker, N.
Volker, G.	Wigaard, C.	Zamboni, E.
Vorhes, Z.	Wikey D.	Zilch, D.
Voris, T.	Wilcox, C.	Zuck, D.
Wacker, M.	Wilkinson, J.	Zuckerman, E.
Wagenman, L.	Willging, P.	Zumwalt, D.

5.0 Summary of Changes

This section explains and summarizes the major changes made between the draft and final versions of the CCP.

5.1 Refuge Acres

The Refuge acres have changed since the Draft CCP and now more accurately represent the legal boundaries. Table 7 summarizes these changes.

Table 7 Refuge Acres Changes

Refuge Unit	Draft Acres	Final Acres
Blackberry Island	63	52
La Barranca	1,073	1,066
Todd Island	165	185
Mooney	344	342
Ohm	750	757
Flynn	552	630
Heron Island	116	126
Rio Vista	1,202	1,149
Foster Island	150	174
McIntosh Landing North	60	63
McIntosh Landing South	71	67
Pine Creek	603	564
Capay	667	666
Phelan Island	308	308
Jacinto	82	69
Dead Man's Reach	634	637
North Ord	43	29
Ord Bend	118	111
South Ord	122	122
Llano Seco Riparian Sanctuary	751	751
Llano Seco Island I	56	56
Llano Seco Island II	100	99
Hartley Island	397	487
Sul Norte	590	590
Codora	394	399
Packer	375	404
Head Lama	129	177
Drumheller Slough	226	224
Total Refuge Acres	10,141	10,304

5.2 Visitor Services Changes

Changes in the Refuge acreages (Table 7) and changes in the amount of sanctuary have changed the percentages that were used in the Draft CCP. Table 8 shows the draft and final acreages (and percentages) for sanctuary, Big 5 and Big 6 uses.

Table 8 Visitor Services Changes

	Draft Alt B	Draft Alt C	Final
Sanctuary	1,663 (16%)	1,663 (16%)	2,043 (20%)
Big 5	2,907 (29%)	1,124 (11%)	2,938 (28%)
Big 6	5,571 (55%)	7,354 (73%)	5,323 (52%)

5.2.1 Sanctuary Acres

The Service has revised the amount of sanctuary acres proposed between the draft and final CCP from 1,663 acres (16 percent) to 2,043 acres (20 percent). The additional sanctuary acres were added to the Rio Vista and Ohm units (additional 341 and 156 acres respectively). Sanctuaries are areas on the Refuge that are closed to public use. The CCP states that hunting will not be allowed on Refuge units that are small in area and close in proximity to urban areas and private dwellings. In order to be consistent with this statement, the visitor service uses were changed from Big 6 to sanctuary on the areas of Rio Vista and Ohm units that are adjacent to private residences.

5.2.2 Hunting

Many comments were given from adjacent landowners concerning hunting and trespassing. The Service added the following regulation to the Refuge Hunting Plan (Appendix C): “Hunting is not allowed within 50 feet of any landward boundaries adjacent to privately owned property. As per Fish and Game regulations, it is unlawful to hunt or discharge while hunting, any firearm or deadly weapon within 150 yards of any occupied dwelling house, residence, or other building or any barn or other outbuilding used in connection therewith. The 150-yard area is a “safety zone”. In addition, Big 6 acres were reduced when sanctuary was added to Rio Vista and Ohm units.

5.3 Changes to CCP

5.3.1 Technical Analysis

The Service added a section titled Technical Analysis in Chapter 4 and in Objective 1.2 Floodplain and River Processes in Chapter 5 to address comments received regarding ongoing feasibility studies.

5.3.2 Other Changes

In response to a comment received, the Service added a description and a map of Llano Seco Riparian Easement and Table 7 Invasive Exotic Plant Species at Sacramento National Wildlife Refuge Complex.

5.4 Changes to Appendix M

The Service revised Appendix M which now contains a list of other laws and executive orders that may affect the CCP or the Service's implementation of the CCP. It also contains an overview of policies and plans that are relevant to Sacramento River Refuge.

