FINAL
ENVIRONMENTAL ASSESSMENT

STONE LAKES NATIONAL WILDLIFE REFUGE

HEADQUARTERS PROJECT

Stone Lakes National Wildlife Refuge
1624 Hood-Franklin Road
Elk Grove, California 95757

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Section I: PURPOSE AND NEED FOR ACTION

Introduction

This environmental assessment (EA) evaluates the environmental effects of three alternatives for managing the 331-acres located near the headquarters of the Stone Lakes National Wildlife Refuge (Refuge). Pursuant to the National Environmental Policy Act (NEPA) of 1969, this EA will be used by the U.S. Fish and Wildlife Service (Service) to evaluate whether the effects on the quality of the human environment from the Proposed Action would be significant.

Purpose for Taking Action

The U.S. Fish and Wildlife Service (Service) proposes to develop a variety of habitat improvements including seasonal and permanent wetlands, riparian, and uplands on the 331-acre headquarters property of the Refuge. This proposed project would contribute to the following Refuge interim goals that were defined in the May 1992 Final Environmental Impact Statement (FEIS) establishing the approved Refuge boundary (USFWS 1992):

(1) provide for a diverse assemblage of native Central Valley plant communities and their associated fish, wildlife, and plant species;
(2) protect, enhance, and restore habitat to maintain and assist in the recovery of rare, endangered, and threatened plants and animals;
(3) preserve, enhance, and restore Central Valley wetlands to provide foraging and sanctuary habitat needs for migratory waterfowl and other waterbirds;
(4) create linkages between Refuge habitats and habitats on adjacent lands to reverse past impacts of habitat fragmentation on wildlife and plant species;
(5) coordinate management activities with other agencies and organizations to maximize the effectiveness of Refuge contributions to regional habitat needs;
(6) provide for environmental education, interpretation, and fish and wildlife oriented recreation in an urban setting accessible to large populations; and
(7) recognize the importance of flood storage as an important benefit and natural component of the Stone Lakes basin ecosystem.

The purposes of the Refuge were defined by a number of acts of Congress, granting the Service authority to acquire lands for the National Wildlife Refuge System (NWRS):

- "...for the development, advancement, management, conservation, and protection of fish and wildlife resources..." 16 U.S.C., Subpart 742f (a)(4);
- "...for the benefit of the United States Fish and Wildlife Service, in performing its activities and services..." 16 U.S.C., Subpart 742(b)(1) (Fish and Wildlife Act of 1956);
- "...to conserve (A) fish and wildlife which are listed as endangered species or threatened species..or (B) plants..." 16 U.S.C., Subpart 1534 (Endangered Species Act of 1973); and
- "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds..." 16 U.S.C. , Subpart 715-715y (Migratory Bird Conservation Act).

Need for Taking Action
Since the Service completed fee title acquisition of the headquarters property in 2000, the property has remained under agricultural production. The property has great potential to support a wide variety of Refuge habitats and wildlife-oriented visitor uses and occupies a key location in the center of the Refuge adjacent to South Stone Lake. Restoration of wetland, grassland and riparian habitats on the site will contribute to the habitat restoration and management goals of the Refuge as defined in the FEIS (USFWS 1992). Creation of habitats on the headquarters property for fish and wildlife including endangered and threatened species and migratory birds is also consistent with three of the Refuge purposes cited above. Finally, as a result of the funding used by the Service to acquire the headquarters property (Central Valley Project Improvement Act, b1other), the Service is obligated to pursue development of habitats on the property that will contribute directly to the recovery of special status species that were impacted by the Central Valley Project.

Relationship with other Planning Efforts
In 1992, the FEIS for the establishment of Stone Lakes NWR was finalized (USFWS 1992). That planning process identified the approved refuge boundary and authorized the Service to work with willing landowners to create the Refuge through cooperative agreements, memoranda of understanding, or acquisition of easement or fee title interest. The FEIS describes the goals of habitat restoration on the Refuge as to enhance and restore a variety of plant and wildlife communities native to the Stone Lakes Basin and the Sacramento San Joaquin Delta for the benefit of migratory birds, special status species, and to provide wildlife-oriented public recreation.

In 2002, the Service began the planning process for preparation of a Comprehensive Conservation Plan (CCP) for the Refuge. When completed, this plan will outline Refuge goals, objectives, and strategies for habitat restoration and management and visitor use programs on the Refuge. The results of the multi-year CCP planning effort will guide overall Refuge management for the next 15 years and should be completed in 2005. Development of a variety of visitor-related facilities and infrastructure for the headquarters unit is being analyzed as part of the CCP process. These improvements may include: (1) constructing a new entrance road from Hood-Franklin Road to access the headquarters and maintenance buildings and parking lot; (3) parking lot for approximately 55 vehicles; (4) toilet facilities; (5) outdoor educational shelter and interpretive displays; (6) 1,500 feet of universally-accessible trails; (7) wildlife-viewing platform; and (8) photo-blind. Before the headquarters property can be formally opened for the above public uses, the Refuge would prepare a compatibility determination to evaluate the compatibility of these proposed secondary uses with the purposes of the Refuge and the mission of the NWRS (see Section I; Purpose for Taking Action). Preparation of the CCP and the associated compatibility determinations will involve notification of the public.

Because the initiation of planning for the headquarters project predates the CCP process and funding sources and partners are currently available for the project, the Service has opted to prepare this analysis in advance of completion of the CCP.

Decisions to be Made
Based on the analysis documented in this EA, the Manager of the Service's California-Nevada Operations Office must select one of the management alternatives for the headquarters unit and determine whether the selected alternative would have significant effect on the quality of the environment.

Scoping Process and Public Involvement
Refuge staff have met with a number of stakeholders including, adjacent private landowners, ranchers, local agencies, tribal organizations, and other private organizations to solicit their views regarding this proposed project. These parties included local landowners (LaRue Schock, Galen Whitney, California Department of Parks and Recreation); involved agencies (Sacramento County Department Regional Parks, Recreation, and Open Space, Sacrament-Yolo Mosquito and Vector Control District, Sacramento County Agricultural Commission, Sacramento County Departments of Planning and Transportation, Sacramento Area Flood Control Agency, and Pacific Gas and Electric Company); tribal organizations (Ione Band of Miwok Indians); and private organizations (Ducks Unlimited, Wildlands, Inc., Tremaine and Associate). In addition, Refuge staff mailed a Notice of Availability for public review of this EA to over 300 recipients and posted the document on the Refuge website (http://stonelakes.fws.gov).

The Refuge also convened a Wildlife and Habitat Review during November 12-15, 2002 and a Visitor Services Review during December 4-7, 2002. These reviews were done to assist with preparation of the Refuge CCP and were made up of Refuge staff and staff from several other refuges, the Portland Regional Office, and local Service planning staff. During these exercises, a number of habitat alternatives were evaluated and considered for the headquarters unit.

Issues and concerns of agencies, organizations, and nearby landowners were also voiced during the public scoping process for the Refuge CCP, held by the Service during September-October 2002. At four public meetings in Walnut Grove, Elk Grove, Sacramento, and Davis, attended by a total of 137 participants, the Service received a wide range of input from private citizens, organizations, and agencies regarding future restoration and management scenarios for the Refuge, including the headquarters unit. Two additional planning updates were issued to inform the public of the scoping workshops and to update them on the results of the scoping meetings. During the CCP scoping meetings and as part of the planning updates, information was provided and feedback was solicited regarding the habitat and visitor use improvements under consideration for the headquarters unit.

Issues and Concerns
As a result of the scoping process for this proposed project and the Refuge CCP, a number of issues were identified for analysis in this EA:

Topography
1. Construction of the project would necessitate some earth work, including construction of berms, dikes, islands and re-contouring.

Hydrology

2. Pumping surface water for wetland management and irrigation could increase demand and local competition for surface water supplies during the irrigation season.
3. Creating and restoring wetlands could affect flood storage capacity of the Beach-Stone Lake Basin and could contribute to flooding during large flood events.

Vegetation and Wildlife

4. Restoring, enhancing and creating habitats could contribute to the recovery of special status biological communities of the Central Valley and of special status plants and animals.
5. Restoring, enhancing and creating habitats could benefit migratory waterfowl.
6. Restoring, enhancing and creating habitats could benefit migratory neotropical migrants.
7. Restoring, enhancing and creating habitats could improve wildlife movement corridors in the Beach-Stone Lakes Basin.

Cultural Resources

8. Creating and restoring wetlands could impact unknown cultural resource sites and adjacent known sites.

Economic Considerations

9. Habitat improvements could expand future opportunities for wildlife-dependent recreation (e.g., wildlife observation, photography, environmental education and interpretation) in close proximity to an urban area (pending compatibility determination outcome in the CCP).
10. Increased future visitor use (pending compatibility determination outcome in the CCP) associated with habitat improvements could generate additional revenues for local businesses.
11. Habitat improvements could lead to increases in management capability and staffing for the Refuge.
12. Management costs for the property after implementation of the project may exceed the management budget of the Refuge.

Land Use

13. Conversion of 261 acres of agricultural lands into habitat could cause impacts to the agricultural economy of Sacramento County.
14. Seepage from Refuge wetlands could affect the ability of adjacent landowners to keep their land de-watered for farming purposes.
15. Presence of newly-created habitats on Refuge land could result in new restrictions being placed on pesticide use by adjacent landowners.
16. Presence of newly-created habitats on Refuge land could result in new restrictions being placed on routine agricultural practices by adjacent landowners due to conflicts over endangered species.
17. Increased numbers of noxious weeds on newly-restored Refuge lands could cause economic impacts to adjacent and nearby landowners. Noxious weeds may include a number of non-native invasive species (e.g., yellow star thistle, perennial pepperweed)

that may pose an economic impact to landowners, compete with native plant communities, or otherwise negatively impact the quality of habitats for plants, fish, and wildlife.

Social Considerations

18. Creation of new wetland habitats may result in increased production of mosquitoes and increased human health risks.
19. Development of the habitat improvements as part of the project may affect the quality of life for nearby residents.

Section II: ALTERNATIVES INCLUDING THE PROPOSED ACTION

This section presents three reasonable alternatives under consideration by the Service for management and restoration of the headquarters property at Stone Lakes NWR (Figure 2). The three alternatives are all considered to contribute to the interim habitat management goals for the Refuge (USFWS 1992). The three alternatives considered include: (1) Alternative A - Farming Option (No Action); (2) Alternative B - Habitat Restoration Option (Proposed Action); and (3) Alternative C - Grassland Habitat and Grazing Option.

Features Common to All Alternatives

Under all alternatives, the headquarters property would remain under Service ownership as a management unit of the Stone Lakes NWR. Under all alternatives, the property would be managed consistently with and contribute to the habitat management goals of the Refuge as defined in the FEIS (USFWS 1992). The property would also continue as the site for the Refuge administrative headquarters and maintenance storage building.

Alternative A - Farming Option (No Action)

Under this alternative, the Service would continue ongoing agricultural activities under a special use permit. Farming may include production of winter wheat, alfalfa, corn, or pasture crops. To maintain and enhance the values of the property for nesting and wintering migratory waterbirds, some portions of the crop could be left unharvested and other wildlife-friendly farming practices could be utilized (e.g., harvesting delays, crop residue management). By implementing this alternative, the Service would still be contributing to interim Refuge goals for habitat and wildlife management for the Refuge (USFWS 1992). This alternative would not require physical alteration of the property and be most consistent with the traditional land use on the property.

Alternative B -Habitat Restoration Option (Proposed Action)

Under this alternative, the Service proposes to restore and enhance 251 of 331 acres (76 percent) of the agricultural lands adjacent to the Stone Lakes NWR headquarters office into a combination of seasonal and permanent wetlands (200 acres), native grasslands (100 acres), and riparian habitat (25 acres). Riparian trees that would be planted and promoted under this alternative would include: valley oak, Fremont cottonwood, elderberry, and a variety of native willows, shrubs, native grasses, and herbaceous plants. Eighty acres would remain in agricultural production (e.g., winter wheat, alfalfa, corn, clover).

This alternative would contribute to the interim habitat goals outlined in the FEIS for the Refuge (USFWS 1992). Under this alternative, 76 percent of the property would be converted from farming to habitat and would constitute the greatest departure from traditional land use on the property. This proposed project would require coordination with adjacent landowners to ensure that no conflicts developed between the Refuge and routine nearby agricultural practices and the quality of life of neighboring residents.

Alternative C - Grassland Habitat and Grazing Option

Under this alternative, the property would be restored and managed to promote grassland vegetation, including both native and non-native species. In addition to a variety of native grasses that may be planted under this alternative, plantings could also include non-native clovers *(Trifolium* spp.*)* to provide optimum forage for livestock. Grazing would be a primary management tool, along with mowing, herbicide application and prescribed burning. In some portions of the property, irrigated pasture could be re-established and non-native herbaceous species such as clover planted. During the rainy season, existing low-lying portions of the property, would support seasonal wetlands. However, no active water management (e.g., pumping) for wetlands would occur.

By implementing this alternative, the Service would still be contributing to the interim goals for habitat and wildlife management for the Refuge (USFWS 1992). This alternative would not require physical alteration of the property and be consistent with traditional land uses on the property and adjacent lands.

Section III: AFFECTED ENVIRONMENT

Project Area

The Stone Lakes National Wildlife Refuge was established in 1994, becoming the 505th NWR. The approved Refuge boundary encompasses 18,200 acres, including a core Refuge of approximately 9,000 acres and a 9,000-acre "Cooperative Wildlife Management Area". At present, approximately 6,000 acres are managed by the Service through cooperative agreement, conservation easement, and fee title acquisition. The Refuge is located in the Sacramento Valley in the southwestern part of Sacramento County and the northeastern Sacramento San Joaquin Delta. The approved Refuge boundary lies about 10 miles south of the City of Sacramento, straddling Interstate-5 from the town of Freeport south to Lost Slough (Figure 1). The natural habitats present within the current Refuge consist of: grasslands (3,834 acres), seasonal and permanent wetlands without water control (645 acres), seasonal and permanent wetlands with water control (435 acres), open water/aquatic beds (400 acres), riparian forest (360 acres), and agricultural croplands (306 acres).

The 331-acre headquarters property lies one mile west of Interstate-5 and adjacent to and south of Hood-Franklin Road. To the north of the site is the 2,700-acre North Stone Lake unit, owned by Sacramento County Department of Regional Parks, Recreation and Open Space and California Department of Parks and Recreation; to the east is the property of Mr. LaRue Schock, and to the south and west are lands owned by Mr. Galen Whitney (Figure 2).

The project area was acquired in fee title by the Service in three phases from two different landowners during 1995-2000. At the time of purchase by the Service, the entire project area was in cultivation for grapes. The project area has previously been leveled for irrigation and has three pump stations for diverting water from tributaries of South Stone Lake. During 1997-2002, the vineyards were removed and the entire site is now under cultivation for winter wheat, under a Refuge special use permit.

Current wildlife use on the headquarters property is low due to ongoing agricultural practices and the limited natural habitats on the site. Approximately every five years, about 10 percent of the property ponds water from rainfall and local runoff for several weeks and 500-800 dabbling ducks use the area for foraging. The property also supports a small number of raptors and songbirds in existing riparian woodlands along the north arm of South Stone Lake.

More than 6,000 people per year visit the Refuge to participate in a variety of wildlife-dependent recreational and educational activities. These include wildlife observation and photography, interpretation, and environmental education. These activities primarily occur on the Beach Lake Unit of the Refuge, where a 3-mile trail system leads to a wildlife viewing platform that is open to visitors every second and fourth Saturday of each month. Throughout the year the Refuge hosts a number of special events for the general public, volunteers, and supporters. Educational tours are also offered to school, scouting, and other groups by special arrangement.

Numerous prehistoric and historic properties are known to occur within the Stone Lakes NWR approved boundary and tend to be located on high ground near permanent water sources. Due to flooding history, prehistoric sites also commonly lie under historic properties. Prehistoric sites have been recorded along major drainages and historic lake shorelines within the Beach-Stone Lakes Basin. The entire headquarters property has recently been surveyed for the presence of any historic properties by qualified professional archaeologists (Tremaine and Lopez 1997, Simons et al 2000). Two prehistoric properties are known to occur on the headquarters unit but do not lie within the Area of Potential Effect for the proposed project. These two sites were first characterized by Heizer (1934) and were re-located and delineated by Tremaine and Lopez (1997) who updated their primary records. Three historic properties were also documented on the property and architectural inventories were conducted (Napoli 2001). Following inventory, the three historic properties were demolished and removed by the Refuge.

Section IV: ENVIRONMENTAL CONSEQUENCES

Alternative A - Farming Option (No Action)

Topography and Hydrology

Continuation of farming activities on the headquarters unit under the No Action Alternative would not involve any changes in topography or departures from traditional water management practices.

Vegetation and Wildlife

Vegetation on the property would continue to consist primarily of agricultural crops. Noxious weeds would be managed by farmers operating under a Refuge Special Use Permit. Wildlife

would continue to make use of the property, particularly during the winter months when some seasonal innundation may occur due to rainfall.

Cultural Resources
Historic sites on the property would continue to be protected.

Land Use
Traditional land uses (i.e., farming) would continue on the property with an emphasis placed on wildlife-friendly agricultural practices (e.g., cultivation of small grains, delayed tillage, set-aside of unharvested areas for ground-nesting birds, etc.). Some use of pesticides (e.g., herbicides), subject to approval by the Refuge, would occur under this alternative.

Economic and Social Considerations
No changes would occur in the local economy and no impacts would occur to adjacent landowners. Some small increase in the Refuge budget for overseeing the farming program may result.

Alternative B- Habitat Restoration Option (Proposed Action)
Topography and Hydrology
Construction of the project would necessitate substantial earth work, including construction of berms, dikes, islands and re-contouring that could result in short-term, construction-related airborne dust. Contractors would practice accepted dust management methods such as use of water trucks and avoiding disturbing large acreages on windy days (>10 mph), when necessary. No erosion from run off or siltation into waterways is anticipated, because the property has an existing levee along the north arm of South Stone Lake and construction will be done during the dry summer season.

Pumping of surface water from the Sacramento Drainage Canal and the north arm of South Stone Lake for wetland management and irrigation could impact availability of surface water supplies during the irrigation season. Pumping by the Service for habitat management would occur under the appropriative and riparian water rights that are carried by the headquarters property. Most water diversion for wetland management would occur in the fall and winter and not correspond with the peak summer months when nearby landowners are irrigating their crops. The Refuge would consult with the neighboring landowners to ensure that pumping does not overly increase demand and local competition for surface water supplies, when plantings or seasonal wetland units require irrigation, or pumping is needed to maintain permanent wetlands.

Under this alternative, approximately 150 acres of new wetlands would be created and restored on the headquarters unit. Assuming an average depth of ponding of one foot, then about 150 acre-feet of water would be diverted and impounded into managed wetlands from approximately September through March. This would only have a small effect on the flood storage capacity of the Beach-Stone Lake Basin and could result in an increase in the 100-year floodplain elevation by <0.5 inches. This is consistent with the impact analysis conducted as part of the FEIS for Stone Lakes NWR (USFWS 1992) which predicted that the total floodplain elevation impact for the Refuge could be three inches.

Wetlands would be constructed in such a manner as to minimize the potential of seepage occurring from Refuge wetlands onto adjacent agricultural properties. For example, permanent wetlands on the western portion of the property would be built through excavation below grade level. Furthermore, ditches running along the east (Sacramento Drainage Canal) and the west sides of the property should act as barriers to any seepage.

Based on a review conducted in cooperation with the Sacramento County Agricultural Commission of past pesticide use by adjacent farmers, no conflicts are anticipated between the habitat improvements envisioned under this alternative and the pesticide applications done by adjacent landowners. Refuge staff also met directly with local landowners to discuss this issue. As the Service agreed in the FEIS for Stone Lakes NWR (USFWS 1992), a 300-foot non-wetland buffer zone would be maintained between the westernmost wetlands on the project area and the adjacent landowner to the west. This should ensure that the proximity of new Refuge habitats does not result in new restrictions being placed on pesticide usage by adjacent landowners.

Vegetation and Wildlife

Restoring, enhancing and creating habitats on the property would be completed within five years and could result in expanded acreage for a number of special status biological communities of the Central Valley, as defined by the California Department of Fish and Game. These communities may include: freshwater marsh, willow scrub, valley oak riparian forest, mixed riparian forest, cottonwood riparian forest, and valley wildrye grassland. A number of special status (e.g., federally or state-listed, species of special concern, etc.) plants and animals may also benefit from the project, including: greater sandhill crane, Aleutian Canada goose, long-billed curlew, white-faced ibis, tricolored blackbird, western pond turtle, giant garter snake, and valley elderberry longhorn beetle. The greater sandhill crane may utilize the property for both feeding and roosting. New foraging habitat would result for both long-billed curlews and the white-faced ibis who may also nest on the headquarters property. Tricolored blackbirds may utilize the site for establishing a new nesting colony. A wide variety of other migratory waterbirds would utilize habitats created under this alternative, including species representing: diving birds, wading birds, shorebirds, waterfowl, raptors, and songbirds.

Under this alternative, wildlife use on the property would increase both in terms of species diversity and abundance. Waterfowl use of the property may increase from approximately 1,000 dabbling ducks to as many as 6,000 individuals and species which currently do not occur on the property, such as sandhill cranes and a variety of shore and wading birds, may begin to use the headquarters property for the first time. As part of the project, wildlife movement corridors in the Beach-Stone Lakes Basin would also be improved.

Cultural Resources

No impacts to known cultural resource sites are anticipated because construction of wetlands and habitat improvements would be planned so that no surface disturbances will occur within 200 feet of any site. During construction, the Service would have monitors onsite to ensure all construction activities were conducted in a manner to safeguard any previously-documented or

newly-discovered cultural resources. Monitors would have full authority to stop all work and initiate site surveys, if necessary. Any new resources discovered by monitors would also receive appropriate protection.

Land Use

The creation and restoration of wetlands, grasslands and associated riparian zones would not increase weed infestations on adjacent properties because Refuge staff and cooperators would be working to establish desirable and native vegetation and control noxious weeds as part of restoration and management of the property. Currently weed infestations include perennial pepperweed or whitetop, yellow star thistle, Johnson grass, and fennel or anise. Control of these weeds and other undesirable vegetation would be part of an Integrated Pest Management (IPM) program that would include mechanical (e.g., mowing, discing, etc.) and chemical treatments. Much of the existing pepperweed would be eliminated during construction. Weed management is part of the annual maintenance on all Refuge units. Refuge staff would treat infested areas in the early spring, as is done on the Beach Lake Unit, where we have had success in limiting expansion of pepperweed and star thistle infestations.

Implementation of the proposed project will convert 251 acres of field crops (i.e., winter wheat, irrigated grasses) into a variety of natural habitats. When contrasting this acreage with the total amount of agricultural land within Sacramento County (234,302 acres) which produce an estimated $249.4 million in agricultural commodities (Sacramento County Agricultural Commission), the conversion of this acreage would constitute a minimal impact on the agricultural economy of the county. Furthermore, the profitability for local farmers to produce field crops has been depressed for the last decade (R. E. van Loben Sels, Reclamation District 744, personal communication).

If the proposed project is implemented, expanded use of the headquarters property by two federally and two state-listed species may occur: (1) giant garter snake, (2) valley elderberry longhorn beetle, (3) Swainson's hawk, and (4) greater sandhill crane. Suitable habitat for giant garter snake, Swainson's hawk, and greater sandhill crane already exists on properties of adjacent or nearby landowners. Therefore, implementation of the proposed project should not result in nearby landowners being subjected to a greater degree of regulatory pressure under the federal or state endangered species acts.

The Service recognizes the benefits of many traditional farming practices for wildlife resources and has attempted to be supportive of the local agricultural community over the past ten years since establishment of the Refuge. Also, the Refuge must honor commitments that were given in the FEIS (USFWS 1992) regarding conversion of farmland into habitat. Therefore, if habitats created on the headquarters property as part of this project lead to new restrictions being imposed on pesticide applications by adjacent farmers, any buffer zone that may be required to comply with pesticide labels or County Agricultural Commission regulations would be created within the Refuge boundary.

Economic and Social Considerations
The proposed habitat improvements under this alternative could lead to the Refuge receiving increases in budgeting to expand station management capability and staffing. Additional funding and staff proposals related to this project have been entered into the Service's internal budget systems including Refuge Operating Needs System (RONS) and Maintenance Management System (MMS).

Restoring, enhancing, and creating wetland habitats can expand mosquito breeding habitat if not properly designed and adequately managed. Wetland design features for the project would follow best management practices outlined by Kwasny *et al* (2004) for the Central Valley Joint Venture and supported by Sacramento-Yolo Mosquito and Vector Control District (Memorandum of Understanding 1993). These practices include features such as the ability to independently and rapidly flood and dewater wetland units and promote populations of mosquito predators. In keeping with the Memorandum of Understanding (1993) between the Service and Sacramento-Yolo Mosquito and Vector Control District (District), the Service has provided draft wetland design plans to the District for review to ensure that newly-created wetlands do not become a major source of mosquito production.

Depending on the outcome of compatibility determinations (Section I), future visitor uses on the headquarters property may include wildlife observation, environmental education, interpretation, photography, and nature study. These visitor uses will be evaluated as part of the CCP to be completed in 2005.

Alternative C - Grassland Habitat and Grazing Option
Topography and Hydrology
The restoration of the property to a mix of native and nonnative grasses under the Grassland Habitat and Grazing Option would not involve any changes in topography. When considering demand for water supplies, overall water use for the dry and irrigated pastures that would be maintained under this alternative, would be approximately the same as existing conditions.

Vegetation and Wildlife
Restoring the property to managed native and nonnative grasslands could contribute to the recovery of the California special status biological community of valley wildrye grassland. This habitat would support the following special status species: greater sandhill crane, long-billed curlew, white-faced ibis, borrowing owl, horned lark, northern harrier, and Swainson's hawk. Seasonal flooding of low areas would attract a variety of waterfowl, shorebirds and other wading birds. Short grass habitat would be maintained and invasive weeds and undesirable vegetation controlled through techniques such as grazing or prescribed burning. These are traditional vegetation management tools used for generations in the vicinity of the Refuge and would not interfere with the land practices of adjacent and nearby landowners.

Cultural Resources
As part of implementation of the proposed action, there may be potential impacts to cultural resources on the property. The Service would ensure that no construction activities occurred on the property that may lead to adverse impacts to the two known delineated prehistoric properties

on the site. During construction, the Service would also have monitors onsite to ensure that all construction activities were conducted in a manner to safeguard any previously-documented or newly-discovered cultural resources. Monitors would have full authority to stop all work and initiate site surveys, if necessary. Any new resources discovered by monitors would also receive appropriate protection.

Land Use

Restoring the property to managed native and nonnative grasslands would not increase weed infestations on adjacent properties because Refuge staff and cooperators would be working to establish desirable and native vegetation and control noxious weeds as part of restoration and management of the property.

If the proposed project is implemented, expanded use of the headquarters property by two state-listed species may occur: (1) Swainson's hawk and (2) greater sandhill crane. Suitable habitat for these species already exists on properties of adjacent or nearby landowners. Therefore, implementation of the proposed project should not result in nearby landowners being subjected to a greater degree of regulatory pressure under the state endangered species act.

Economic and Social Considerations

The local economy may be slightly affected as the property is shifted from wheat production to cattle grazing to maintain native grasslands. No impacts to adjacent landowners are expected under this alternative. The proposed improvements under this alternative could lead to the Refuge receiving increases in budgeting to expand station management capability and staffing. Additional funding and staff proposals related to this project have been entered into the Service's internal budget systems including RONS and MMS.

SUMMARY OF IMPACTS BY ALTERNATIVE

Impact Topics	**Alternative A. (No Action)**	**Alternative B. (Habitat Restoration Option)**	**Alternative C. (Grassland Habitat and Grazing Option)**
Physical Resources (air, soil, water, etc)	No Effect	Very slight to no effect	Very slight to no effect
Biological Resources (Special status species, wildlife, habitat, vegetation)	No Effect	Beneficial effect with increases in wetland, grassland and riparian habitats and associated species	Beneficial effect with increases in grassland habitat and associated species
Cultural Resources	Very slight to no effect	Very slight to no effect	Very slight to no effect
Recreation	No Effect	No effect*	No effect*
Social or Economic issues	No Effect	No effect*	No effect*
Land Use	No Effect	Very slight to no effect	Very slight to no effect

* Potential visitor uses on the headquarters property may include wildlife observation, environmental education, interpretation, photography, and nature study, depending on the outcome of compatibility determinations with Refuge purposes and the NWRS mission (Section I). These visitor uses are being evaluated as part of the CCP which will be completed in 2005.

Section V: COMPLIANCE, CONSULTATION AND COORDINATION WITH OTHERS

A. List parties contacted during the planning process. Summarize results of consultation or coordination with these parties. If the EA was circulated for public comment, also provide a summary of any significant issues raised and how they were resolved.

As described above in Section I (Scoping Process), Refuge staff have met with a wide variety of stakeholders including, adjacent private landowners, ranchers, local agencies, tribal organizations, and other private organizations to solicit their views regarding this proposed project.

Interested individuals, organizations, and agencies were notified by mail in early March regarding a 30 day comment period to review the draft EA. To facilitate public review, the

document was posted on the Refuge website (http://stonelakes.fws.gov) and at local libraries. Copies were provided on request.

One written comment was received from the California Farm Bureau Federation and refuge staff met with adjacent landowners to solicit their views on the project. Except for the Farm Bureau Federation, all comments were supportive or neutral regarding the project. Parties commenting in writing on the EA will be provided a copy of the Finding of No Significant Impact and the document will be posted on the Refuge website.

B. **List pertinent laws, executive orders and regulations, and state how these have been complied with.**

Clean Water Act - Within the footprint of construction activities related to the proposed project, the project does not encompass any jurisdictional wetland habitat as defined under Section 404 of the Clean Water Act. Completion of this project would include placement of at least six new water control structures and replacement of an existing culvert. None of this work would necessitate excavation or placement of fill material into wetlands or waters of the United States.

Endangered Species Act - No suitable habitat for any federally-listed or proposed species presently exists within the footprint of the proposed project. Pursuant to Refuge Manual part 7, 2.5 C (1), the Stone Lakes NWR project leader determined that the proposed action will not affect listed or proposed species or critical habitats within the action area. Therefore, no consultation was initiated with the Sacramento Fish and Wildlife Office for concurrence with this finding. By creating and enhancing habitats, the project would benefit a number of special status species as described in Section IV of this EA.

National Historic Preservation Act - Two prehistoric properties are known to occur on the headquarters property but do not lie within the Area of Potential Effect for the proposed project. The entire property has been surveyed by qualified archaeologists and both previously-documented prehistoric properties on the property were delineated (Tremaine and Lopez 1997, Simons et al 2000). Updated site records were forwarded to the California North Central Information Center and the California State Historic Preservation Office. Three historic properties were also documented on the property and architectural inventories conducted (Napoli 2001). Following inventory, the historic properties were demolished and removed by the Service. At the recommendation of qualified archeologists and tribal representatives, all earthwork associated with the project will be monitored to ensure protection of cultural resources.

Floodplain Management - The proposed project is consistent with a number of Executive Orders, including: Protection of Wetlands (EO 1190); Floodplain Management (EO 11988); Protection and Enhancement of the Cultural Environment (EO 11593); and Intergovernmental Review of Federal Programs (EO 12372), and local policies, including the County of Sacramento Urgency Ordinance No. 1411 Relating to Floodplain Management.

Section VI: REFERENCES

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FIGURES

Figure 1. Stone Lakes National Wildlife Refuge Project Area

Figure 2. Alternatives Considered in Stone Lakes NWR Headquarters Project