Notice of Determination

TO: ☒ Office of Planning and Research

For U.S. Mail:
P.O. Box 3044
Sacramento, CA 95812-3044

Street Address:
1400 Tenth Street
Sacramento, CA 95814

FROM: Department of Fish and Game
Northern Region
1724 Ball Mt. Rd.
Montague, CA 96064
Contact: Steve Burton
Phone: (530) 459-1129

LEAD AGENCY (if different from above):

SUBJECT: Filing of Notice of Determination pursuant to § 21108 of the Public Resources Code

State Clearinghouse Number: 2010062071

Project Title: Ash Creek Wildlife Area Restoration

Project Location: 1 mile north of State Highway 299 between Bieber and Adin

Project Description: The Project proposes to restore approximately 3,500 acres within the Ash Creek flood plain on Ash Creek Wildlife Area.

This is to advise that the Department of Fish and Game (DFG), acting as ☒ **the lead agency** / ☐ **a responsible agency** approved the above-described project on the date signed below and has made the following determinations regarding the above described project:

1. The project ☐ **will** / ☒ **will not** have a significant effect on the environment. (This determination is limited to effects within DFG's jurisdiction when DFG acts as a responsible agency.)
2. ☐ **An environmental impact report** / ☒ **A negative declaration** / ☐ **A timber harvesting plan** was prepared for this project pursuant to CEQA.
3. Mitigation measures ☒ **were** / ☐ **were not** made a condition of DFG's approval of the project.
4. A Statement of Overriding Considerations ☐ **was** / ☒ **was not** adopted by DFG for this project.
5. Findings ☐ **were** / ☒ **were not** made by DFG pursuant to Public Resources Code § 21081(a). DFG did, however, adopt findings to document its compliance with CEQA.
6. Compliance with the environmental filing fee requirement at Fish and Game Code § 711.4 (check one):
   - ☐ Payment is submitted with this notice.
   - ☐ A copy of a receipt showing prior payment is on file with DFG.
   - ☐ A copy of the CEQA Filing Fee No Effect Determination Form signed by DFG is attached to this notice.
   - ☒ Project is undertaken by DFG; no fee per Fish and Game Code § 711.4(c)(2)(B).

☒ Lead Agency certification: DFG, as Lead Agency, has made the final EIR with comments and responses and record of project approval, or the Negative Declaration, available to the General Public at the DFG office identified above.

☐ Responsible Agency statement: The final EIR, Negative Declaration, or THP that was prepared by the Lead Agency for this project is available to the General Public at the office location listed above for the Lead Agency. DFG's CEQA Findings are available at the DFG office identified above.

Signed: _____ *Date:* 8-17-10

for Curt Babcock
Acting Habitat Conservation Program Manager
Northern Region

Date Received for filing at OPR:

CALIFORNIA DEPARTMENT OF FISH AND GAME
CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS FOR
Ash Creek Wildlife Area Restoration

Introduction

The California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, *et seq.*) and the State CEQA Guidelines (Guidelines) (Section 15000, *et seq.*, Title 14, California Code of Regulations) require that no public agency shall approve or carry out a project for which a mitigated negative declaration (MND) has been completed that identifies one or more significant effects, unless the agency makes the following finding as to each significant effect:

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.

The California Department of Fish and Game (DFG) is proposing to restore approximately 3,500 acres within the flood plain of Ash Creek. The project is located on the Ash Creek Wildlife Area, on mile north of State Highway 299 between Bieber and Adin, in Sections22,27,28,29,30,31,32,33, T39N, R8E Mount Diablo Base and Meridian.

As the lead agency for the project, the DFG has prepared an Initial Study and a proposed Mitigated Negative Declaration which conclude that the Project will not result in significant environmental effects with the mitigation measures required in, or incorporated into the Project. DFG is further required by Guidelines Section 15074 to determine, on the basis of the whole record before it, including the Initial Study and any comments received, whether there is substantial evidence that the Project will have a significant effect on the environment. DFG is also required by guidelines Section 15074 to determine whether the environmental document has been prepared in compliance with CEQA, and whether the document reflects DFG's independent judgment and analysis.

Findings

DFG has considered the MND prepared for the project and has concluded that the Project should be approved under the terms and conditions specified therein. On the basis of the record before DFG, there is no substantial evidence that the project will have a significant effect on the environment. DFG finds that the MND has been prepared in compliance with CEQA and reflects DFG's independent judgment and analysis.

Signature: _____ *Date:* 8-17-16

Curt Babcock
Acting Habitat Conservation Program Manager
Northern Region

ENVIRONMENTAL CHECKLIST FORM

1 Project Title: Ash Creek Wildlife Area Restoration

2 Lead Agency Name and Address:

California Department of Fish and Game, 601 Locust St., Redding, CA 96001

3 Contact Person and Phone Number: Mr. Steve Burton 530-459-1129

4 Project Location: 1mile north of Highway 299 between Bieber and Adin, CA

5 Project Sponsor's Name and Address:

Pit Resource Conservation District
PO Box 301
Bieber, CA 96009

6 General Plan Designation: Agriculture General Agriculture exclusive

7 Zoning: Agricultural Preserve

8 Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheet(s) if necessary.)

See attached

9 Surrounding Land Uses and Setting: (Briefly describe the project's surroundings.)

The surrounding lands are primarily used for agriculture and rangeland. Most of the surrounding landscape is farmland, grassland, or sagebrush scrub.

10 Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

California Regional Water Quality Control Board-401 Certification
Army Corps of Engineers-Notification for NWP 27

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology / Soils
☐ Hazards & Hazardous Materials	☒ Hydrology / Water Quality	☒ Land Use / Planning
☐ Mineral Resources	☐ Noise	☒ Population / Housing
☐ Public Services	☒ Recreation	☒ Transportation / Traffic
☐ Utilities / Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION (To be completed by the Lead Agency):

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Mark Stopher — Signature

6/15/2010 — Date

MARK STOPHER — Printed Name

Acting Regional Manager — For

INITIAL STUDY

ASH CREEK WILDLIFE AREA RESTORATION PROJECT

Prepared for

California Department of Fish and Game

MAY 2010

Prepared by

VESTRA Resources Inc.
5300 Aviation Drive
Redding, California 96002

TABLE OF CONTENTS

Introduction

PROJECT PROPONENT

The Pit Resource Conservation District (RCD) received grant funds from the Sierra Nevada Conservancy to develop a restoration plan and prepare necessary environmental and permit documents for lower Ash Creek and its floodplain within the Department of Fish and Game's Ash Creek Wildlife Area (ACWA). The RCD has been working closely with the California Department of Fish and Game (DFG) for the last 2 years to develop a restoration plan for the project area. This Initial Study analyzes the effects of the proposed restoration plan.

LEAD AND TRUSTEE AGENCIES

Because of the potentially significant impacts that could occur as a result of project construction, and because the project is funded by the State of California, it is subject to the requirements of the California Environmental Quality Act (CEQA). The proposed project crosses jurisdiction and requires approvals and permits from various federal, state, and local agencies. Compliance with federal environmental regulations, such as the Clean Water Act and National Historic Preservation Act, is also required. DFG has been identified as the Lead Agency for this project.

PROJECT LOCATION

The DFG manages the ACWA located near the towns of Bieber and Adin in Lassen and Modoc Counties (Figure 1). The project area consists of the lower portion of Ash Creek before it joins the Pit River. The total area of the creek and associated floodplain identified in this project consists of approximately 3,500 acres.

PROJECT SUMMARY

The ACWA provides important habitat for a variety of biological species and is one of the major nesting areas for the State threatened greater sandhill crane. Several thousand waterfowl use ACWA, especially during spring migration (e.g. March and April). However, existing habitat and natural resources along Ash Creek and its associated floodplain are degraded and continue to degrade. The current degradation is due to a variety of past management practices which occurred prior to the State's purchase of the property. Continued degradation to aquatic habitat within Ash Creek and upland habitat within the project area is expected because the creek has become deeply incised and flood flows rarely access the floodplain (see photographs 1-8 in Appendix A). This lack of floodplain connection can be visually observed within the floodplain as wet meadow vegetation that has become replaced with upland grassland and sagebrush habitat types (see photographs 4,7,8 in Appendix A). A proven restoration method, known as the "pond-and-plug" technique, is proposed to restore approximately 3,500 acres on the ACWA.

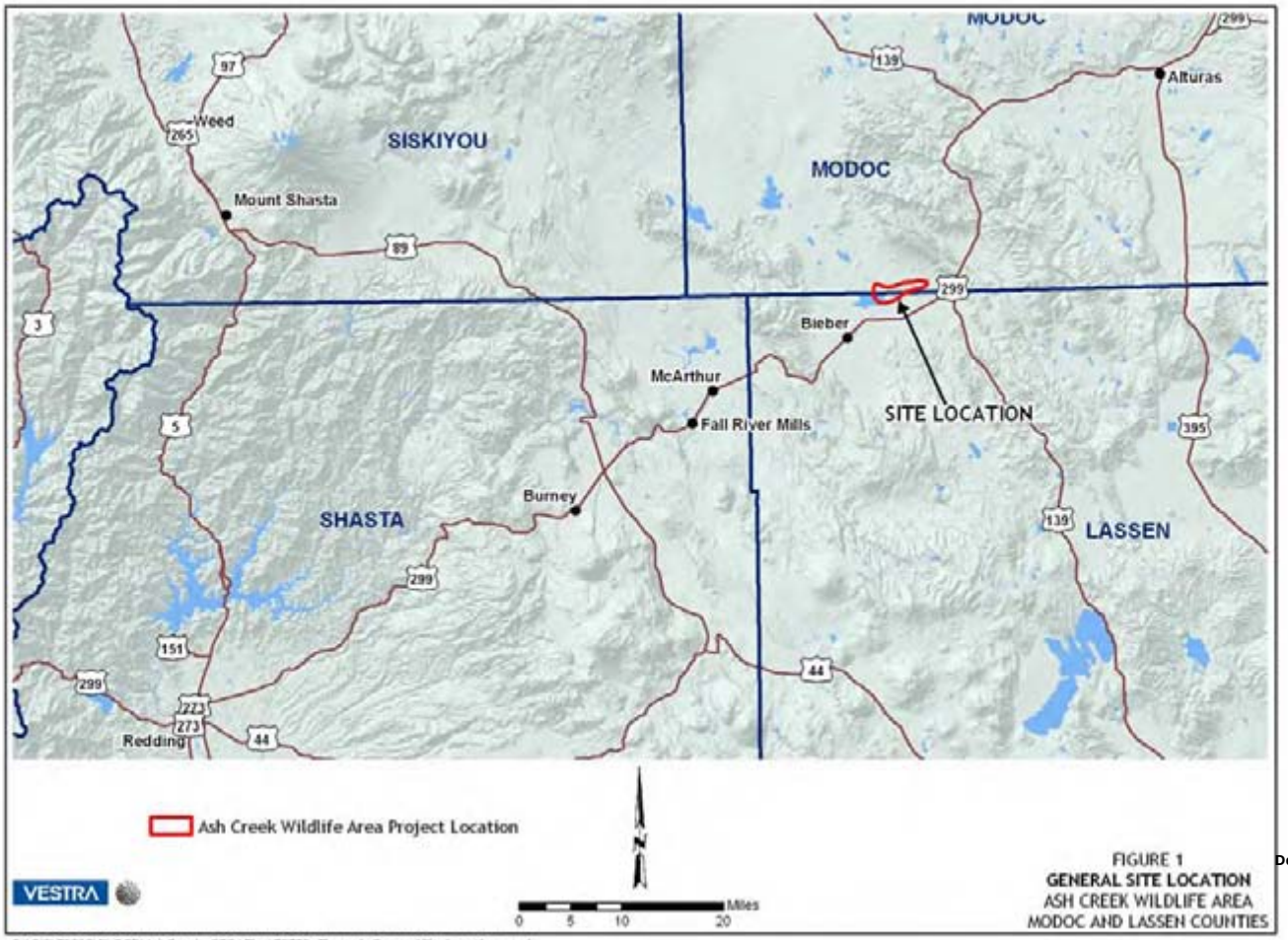

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FIGURE 1
GENERAL SITE LOCATION
ASH CREEK WILDLIFE AREA
MODOC AND LASSEN COUNTIES

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PROJECT NEED AND OBJECTIVE

This project will restore and enhance Ash Creek and its floodplain. Currently, the creek is incised and continues to degrade stream channel and floodplain conditions as most peak flood flows are now contained in the gully.

The landowner and project sponsor objectives for this project include:

1) Restore the channel and floodplain connection in all degraded reaches.
2) Stabilize eroding gully channels.
3) Improve the health and vigor of the wetland landscape.
4) Enhance nesting habitat for waterfowl and migratory birds.
5) Improve fish habitat for native Pit River fishes.
6) Minimize long-term maintenance.

PROJECT BACKGROUND

The Pit RCD and DFG first discussed restoration ideas along Ash Creek in the winter of 2006. From these conversations, a conceptual design was developed for lower Ash Creek and its floodplain. The project area is shown on Figure 2. The conceptual design plan was used to submit a funding application to the Sierra Nevada Conservancy. The application proposed to develop a restoration design plan and prepare the necessary permit and compliance documents. The restoration design plan was completed in August 2008.

SCOPE OF THE INTIAL STUDY

The DFG, as lead agency under CEQA, must comply with the environmental review process described in the state CEQA guidelines. The focus of the detailed discussion in this Initial Study is on the specific issues and concerns identified in the environmental significance checklist and relevant portion which opens each resource section in the "Environmental Setting" section. The following resource topics are analyzed in this Initial Study:

1) Biological Resources
2) Cultural Resources
3) Geology and Soils
4) Hydrology and Water Quality
5) Recreation
6) Land Use Planning
7) Population Housing
8) Transportation/Traffic

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 1 contains a summary of the results of the impact analysis by resource topic, including resources avoided through project design and residual impacts, which are considered less than significant.

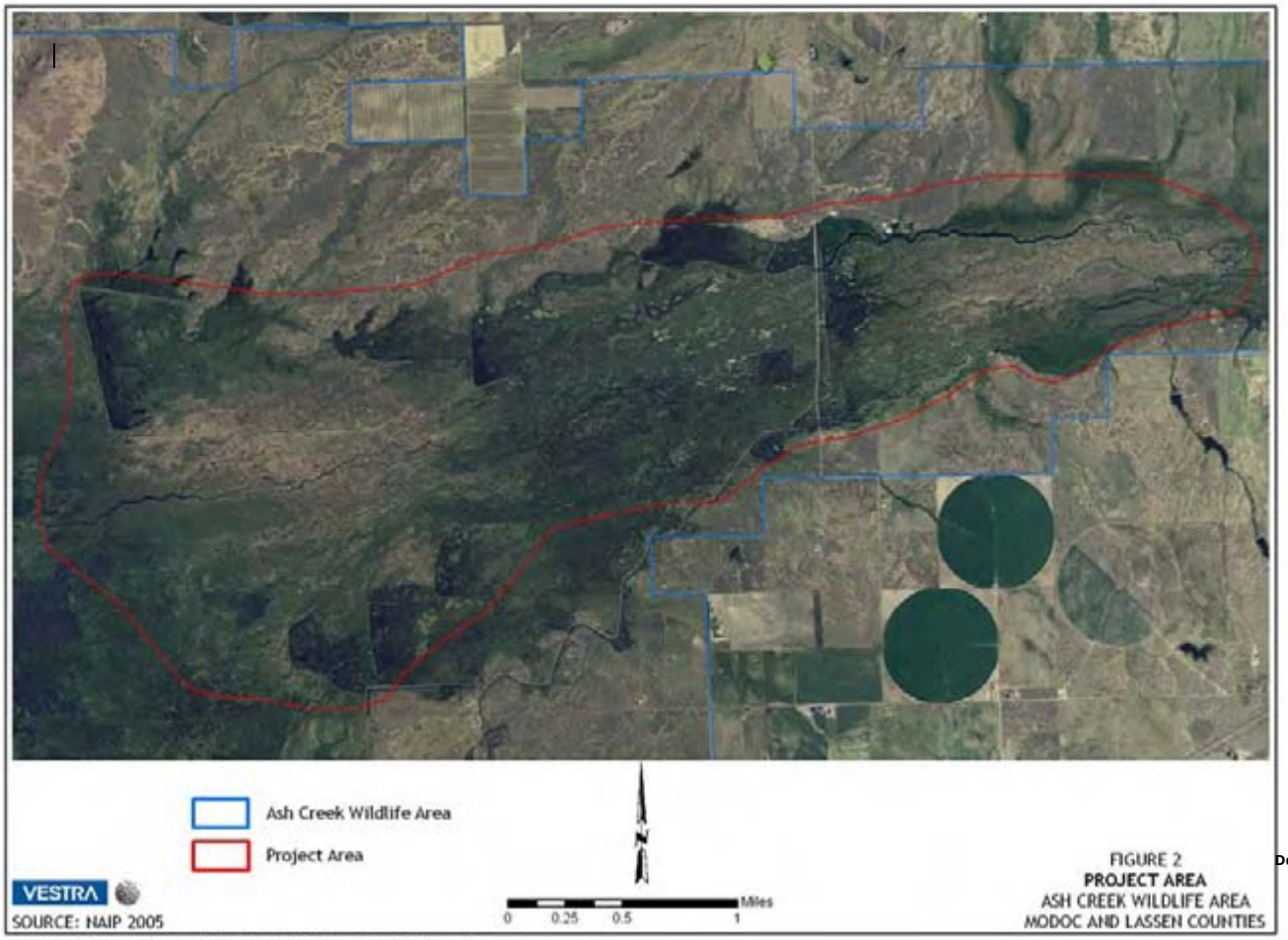
Ash Creek Wildlife Area
Project Area
VESTRA
SOURCE: NAIP 2005
N
0 0.25 0.5 1
Miles
FIGURE 2
PROJECT AREA
ASH CREEK WILDLIFE AREA
MODOC AND LASSEN COUNTIES
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Table 1 SUMMARY OF POTENTIAL IMPACTS AND MITIGATION MEASURES	
Potential Impact	**Mitigation Measure**
Disturbance of nesting greater sandhill cranes and/or Swainson's hawk	Conduct preconstruction surveys and avoid disturbance until nesting has been completed
Disturbance of special-status plant species	Conduct preconstruction surveys and avoid direct impacts if feasible. If not feasible, minimize impacts and stockpile topsoil, collect seeds/fruits, and remove sod-mats for replanting in new areas depending upon the species impacted.
Short-term disturbance of Waters of the United States and Other Wetlands	Restore natural drainage hydrology of the stream channels and floodplain
Temporary disturbance of common wildlife and fish species	Conduct surveys and rescue fish and other aquatic animals (e.g. turtles) if they become stranded during construction activities
Potential adverse change in the significance of historical and/or archeological resources	Review archeological records, conduct preconstruction archeological surveys, and prepare an archeological resource management report which avoids disturbance to sensitive sites
Potential to inadvertently disturb human remains during ground-disturbing activities	Stop construction at the site and notify appropriate state authorities
Potential for damage to buried archaeological sites	Stop construction at the site and notify appropriate state authorities
Potential impacts on terrestrial and aquatic resources from hazardous materials	Refueling and equipment maintenance will be conducted in designated areas outside of the riparian and aquatic areas following identified BMPs

PROJECT DESCRIPTION

To effectively address the full spectrum of project objectives identified in the Project Summary, it is necessary to consider the restoration of the natural form and function of the ACWA stream channels and floodplain. This not only provides the best match of methods to objectives, but offers the best opportunity to restore a self-maintaining ecosystem. The restoration design recommends restoring the historic conditions that dissipate flood flows across the wide floodplain surface rather than engineering hardened structural components designed to resist the forces of peak runoff that have been artificially constricted along narrow corridors.

Geomorphic restoration was recommended as the most cost-effective method available to meet all project objectives, provide acceptable levels of risk, and facilitate current management practices.

This section summarizes the key project elements associated with the restoration design (prepared by StreamWise 2008). These include:

1) Redesign of the water delivery system
2) Redesign of County Road 87A (CR87A) and adjacent levee removal
3) Removing existing levees that occur within the floodplain that are causing floodplain constriction west of CR 87A.
4) Constructing "pond and plug" within the incised channel systems throughout the project area

Figure 3 shows the layout of these project elements.

1) Redesign of Water Delivery System

The County of Modoc Watermaster Department administers water rights associated with this project (subject to Judgment and Decree Number 3670). Water is diverted from Ash Creek to ACWA and adjacent landowners via a rock structure located at the east end of the project area and a levee parallel to CR87A. This project will require the removal of these structures. To maintain water rights, two pipelines will be installed improving water delivery, water conservation, and fish passage. The project does not divert or store additional water.

The existing rock diversion structure will be removed and the channel redesigned to maintain low-flow water elevation and allow flood flows to overtop. The installation of a pond in the channel will allow water to be diverted into two pipelines. One 24-inch pipeline will lead from the pond and extend west to CR87A. It will continue west in an 18-inch pipeline and end at the Pilot Butte 3 wetlands unit. The second 24-inch pipeline will follow along the southern edge of the meadow continuing west and end at the Big Valley Canal. Water control valves installed in the pipeline will allow the distribution of water to individual wetland units and water right holders. A total of 6.9 miles of pipeline are proposed. Disturbance of cultural resources, known to occur in upland areas, are avoided by burying the pipeline along the perimeter of the lowland areas.

The pipelines allow for the restoration of the natural form and function of the channel and floodplain, water right allocations to continue without interruption, and flows to be accurately measured. Seepage and evaporation losses that currently occur from the ditch transport system will be eliminated by the redesigned water delivery system. Management of individual wetland areas will be improved by eliminating the need to flow water through several wetland areas to reach lower sites.

2) Redesign of CR87A and Adjacent Levee Removal

Several gullies have formed immediately downstream of CR87A. Design of a restoration project that restores natural form and function of stream channels across a broad floodplain is made difficult by the collection of flood flow by the levee and road, as well as the release of this energy at constricted points (i.e. culverts and bridges). The alluvial deposits that form the meadow in this reach are unable to withstand such concentrated flows as they have evolved through the centuries with flood flow spreading across a floodplain over 3,000 feet in width.

Two bridges located on CR87A are scheduled for replacement in 2010. The north bridge is wood construction and allows flood flows to pass downstream. The south bridge is a steel girder bridge and allows irrigation water to flow into the Big Valley Canal. One potential benefit of lowering CR87A is the elimination of the need to replace the north bridge. Water passing under this bridge would be restored to the floodplain surface and eliminate the need for any structure at this point. Restoration of the floodplain function would lower maintenance of the south bridge by requiring only channel-capacity flows to pass. Floodwater would spread across the 3,000-foot floodplain, making scour points at bridge piers improbable. Culverts located in CR87A would be eliminated, further reducing maintenance requirements.

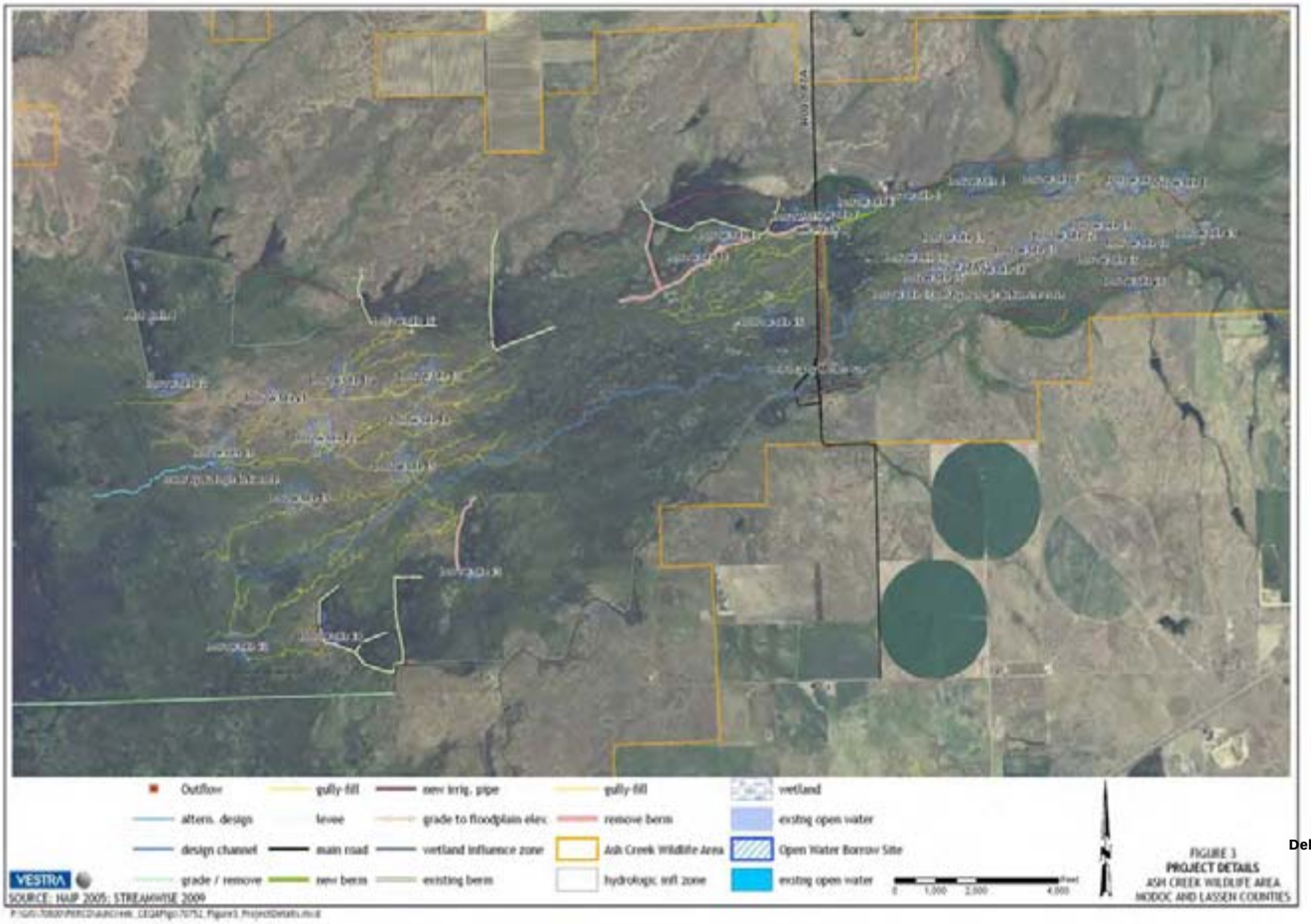

FIGURE 3
PROJECT DETAILS
ASH CREEK WILDLIFE AREA
MODOC AND LASSEN COUNTIES

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Discussions with local residents, Modoc County planners, and DFG determined that the removal of the levee system and lowering of CR87A to match floodplain elevation would meet project objectives if the road were operational during most of the season. By lowering the road base to floodplain elevation, it would be passable at all times except during flood events. The development of a Memorandum of Understanding (MOU) between Modoc County and DFG will ensure CR87A remains open to the public except during flood events. The MOU will also detail the need to maintain CR87A at floodplain elevation.

3) Berm or Levee Removal

Various areas in the project have levee or berm remnants that have been used for water management. Some are also the remnants of previous excavations or channelization projects. Such levees tend to prevent flood flows from dispersing evenly across an otherwise flat floodplain. By concentrating floodwater energy, the levees increase the risk of erosion, either at the levee itself or elsewhere where flood flows are concentrated as a result of the obstruction. The primary means of ensuring project success is by dispersing flood flows evenly across a well-vegetated floodplain, as in the stable historic condition.

Some of the levees (or berms) in the project area pose a potential threat to the project success and would be removed and leveled to match the elevation and slope of the surrounding floodplain. Sites that are recommended for berm removal are outlined on the plan view map (Figure 3). Following levee removal, these areas would require vegetative seeding to ensure stability in flood flows.

4) Pond-and-Plug Construction

The pond-and-plug restoration technique first involves the relocation of the primary low-flow stream to a stable remnant channel that exists along the central portion of the meadow. The enlarged gullies then require fill in order to prevent recapturing flow during peak-flow events. The fill would be derived from the excavation of ponds at multiple locations along the gully (Figure 3). The borrow pond locations offer wide separation between the filled gullies and the design channel to reduce risk of pond capture during peak runoff events. This technique is often referred to as "pond-and-plug" methodology and has been used on numerous projects in California and elsewhere. Some of these projects have been tested over 15 seasons with supportive results from monitoring programs.

This design approach was considered the best to achieve the objectives of the project proponents. It would reconnect the channel and the floodplain and, thereby, restore the water table to the predisturbance elevation, helping to revitalize the riparian community and wet meadow. It would also alleviate the problem of erosion from the gully walls, and the new channel would be much less susceptible to erosion. Fish habitat within the project area would be improved as a result of reduction in width-to-depth ratio of the channel. Long-term maintenance should also be substantially reduced over present levels.

Most importantly, the groundwater hydrology in the vicinity of the gully channels would be restored to prechannelization conditions, allowing recovery of the wetland resources in these areas. The two Wetland Influence Zones are defined as the areas of landscape that would be immediately influenced by the elimination of the incised gullies in the adjacent area. The upper Wetland Influence Zone

surrounding the CR 87A crossing is measured at 1,235 acres, beginning near the terminus of the gully systems below CR 87A and extending upstream to the pond at the top of the project. Some areas remain in wet condition above CR 87A due to the impoundment of water by the large north/south levee to the east of the road. This influence extends upstream several hundred feet but gives way to vegetation that has been negatively influenced by the relocation of the low-flow channel to the north.

The lower Wetland Influence Zone begins approximately 7,950 ft below (west) of County Road 87A crossing and extends 9,250 ft downstream to the terminus of the lower gully systems at the upper edge of the intact wetlands. The lower Wetland Influence Zone is measured at approximately 1,180 acres. This entire area has been severely impacted by a network of incised gullies that have drained the wetland surface and created a desiccated landscape conducive only to annual weeds and sagebrush.

In total, the two zones that would be immediately enhanced by restoration of the groundwater hydrology cover approximately 2,415 acres, or 3.77 square miles. There is some legitimate argument that geomorphic restoration has influences outside this limited area, but the current conservative estimate is sufficient to justify actions to restore the historic form and function of Ash Creek. It is expected that the 150 acres of disturbance to impacted wetlands caused by the necessity to borrow fill material from the pond sites located along the gully features would be adequately offset by the restoration of the 2,415 wetland acres under direct influence of the gully formations.

Other support for immediate action to restore the channel form and function comes from the data analysis and conclusion that the two gully systems would likely join in 10 to 20 years, causing a rapid decline in wetland resource values as the remaining intact meadow is desiccated by the deepened drainage of the gullies.

Flood flow levels after project completion are expected to closely mimic historic conditions prior to channel incision. Due to the expansive floodplain width, alterations to channel capacity recommended in restoration design would not have a significant effect on flood water surface elevations.

Pond Dimension, Depth, and Pattern

Approximate pond dimensions and depths are outlined in Appendix B, locations of each can be found in Figure 3. These dimensions were calculated to yield the volume of soil necessary to fill the existing gullies to grade. Filling these gullies is necessary to prevent flood flows from recapturing the gully and causing further accelerated bed and bank erosion. The total acreage of new ponds would be approximately 150.3 acres. The volume of fill derived from this excavation is expected to be approximately 518,000 cubic yards. The mean depth of the ponds would vary according to location, proximity to the low-flow channel, required material, and ground conditions. In general, the objective to enhance brood habitat for migratory waterfowl is best served by creation of open-water habitat. This requires sufficient depth to prevent a complete emergence of cattails and tules. Excavating material at sufficient depth to ensure open-water habitat is consistent with the project goal of minimizing disturbance to existing wetland resources when creating the footprint of the borrow ponds.

During pond excavation, sod mats from the top surface would be saved for revegetation of the filled gully reaches. The sod mats that are not of high enough quality for transplant would be stockpiled for use in the final layer of the gully fill. The seed bank contained in this sod and topsoil would

greatly enhance the vegetative recovery of the gully fill and reduce risk of soil loss during flood events.

Determination of the final equipment requirements to accomplish these tasks should be made by the construction contractor in accordance with the project specifications.

Pond and Fill Area Revegetation

Pond Revegetation: Pond perimeter revegetation will occur naturally, but planting some of the perimeter is recommended in order to reduce risks of erosion from a high-flow event. Willow cuttings will be obtained onsite and planted by hand. Cattails and tules are widespread and can be easily spread along the pond banks.

Other species can be introduced for specific benefits, such as wildlife browse and cover. Hawthorn, chokecherry, wild lilac, and wild rose are a few examples of beneficial native vegetation that can be acquired locally and introduced into the project area for increased wildlife usage.

Another method for revegetation of the pond perimeter is to mulch the bare areas with grass cuttings from areas in the vicinity that exhibit good native bunch grass stands. The cuttings would be made in late spring when the seed heads are at maturity. Native seed is also available from a variety of sources if supplementation is needed.

The minimum recommended treatment for the pond areas would include mulching with native mulch and planting seed, plugs, or sod mats in key areas of highest potential stress.

Fill Area Revegetation: The fill area of the current incised gullies would be exposed to the floodwaters of any moderate to large flow event. While the shear stress on the floodplain from flood flows is not great, bare soils do pose a potential risk of some erosion. In a flood event of 100-year magnitude (3,000+ cfs), bare fill material could create a risk of stream recapture along the filled gully. For this reason, it is recommended that the gully fill areas be seeded with perennial grasses, preferably native wetland grasses, as they tend to have high resistance to erosive forces. Additionally, native species generally require the least maintenance and have higher survival rates than non-natives. Native grass species considered for the dryer areas include *Hordeum brachyantherum, Leymus triticoides*, and *Poa secunda*. Wetter areas would be likely to support good stands of sedge and rush such as *Scirpa microcarpus, Carex pragecilis, Carex barberii, Juncus mexicana*, and *Juncus covillei*.

Topsoil, which would be stockpiled from the initial phase of pond excavation, should be used as the top layer of fill in the gully treatment wherever feasible. This has the advantage of introducing the seed bank from that topsoil to the gully fill areas. Following the final grading of the fill areas, the most efficient method to disseminate native seeds would be to spread native grass straw taken from areas onsite with appropriate vegetative mix. Native grass straw would be harvested during a period with seed intact in an area that demonstrates a strong native wetland vegetation component. This straw would be used as mulch for the filled gully and pond perimeter sections.

Revegetation of Critical Stress Areas

Particular attention must be paid to the vegetative efforts in areas that may be prone to excessive stress during peak flow events. One such area would be the filled gully interface where the design channel leaves its current course. This area would be subjected to the force of flood flows that are

somewhat confined by the channel upstream of the project area. To ensure stability, log revetments, with root wads attached, would be interlocked at this fill area. Large rock must be used to anchor these logs into the fill. Most importantly, willows must be used to stabilize critical points in this structure to prevent undermining around or under the logs. Willow root balls will be excavated from areas that will be disturbed during project construction, such as the bottom of the gully, and seated into holes dug out with the excavator to accept them. Willow cuttings may also be used to bolster this work.

Sedge/rush sod mats would also be used to protect key areas where erosion potential is high. Sod mats are usually cut from the surface are of the borrow ponds with a bucket loader or a Posi-Track loader and reset along areas where velocities are expected to be high. The freshly set sod mats would be watered thoroughly to help ensure root bonding with substrate and to fill air pockets with soil.

PROJECT TIMING

Project construction would begin in late summer 2009 and continue to completion in early fall of the following year. Various stages of the project will be accomplished throughout this time period. Most activities will occur during the dry season (late summer/early fall). This would ensure that soil moisture conditions in the meadow would permit equipment passage with a minimum of damage or compaction. This schedule ensures that instream flow conditions are low in order to minimize any adverse effects of construction on water quality, such as siltation or turbidity slugs. Low instream flow conditions also simplify in-channel construction (such as gully filling) and channel re-routing (moving the stream into the new design channel).

The timing would also be selected so that only a short time exists after construction before soil moisture begins to increase with the onset of the wet season. This will help ensure that new and transplanted vegetation would have the best possible chance of survival.

It is estimated that project construction should take approximately 90 working days, but this is dependent upon contractor crew size and machinery capacity.

ENVIRONMENTAL SETTING

This section provides a summary of the existing conditions for environmental factors that are potentially affected by the proposed project.

Hydrology/Water Quality

Sources of Information and Methodology
Topographic data collected in the mid-1990s were used to create a digital 2-foot contour layer added to the digitized aerial map of the site. After assembling these data, several field trips to the project area were taken to collect a variety of field data relative to hydrology and geology.

Field Data Collection – Surveying
For several sites, a laser level was used in the surveys, which followed standard field survey methods (*Moffitt and Bouchard 1982*). Data from the surveys were entered into a computer spreadsheet for data

analysis and plotting. Charts were plotted and used to document present valley, channel, and bank conditions and dimensions, as well as to determine the amounts of cut and fill that would be required during restoration construction. Data collected during the surveys followed procedures described by Leopold (1978).

Due to the vast expanse of degraded channels, GPS methods of survey were used to document conditions of most gully reaches. The location and extent of each gully was delineated using a handheld Trimble Geo XT GPS data collector. During data collection, a separate data file was compiled that estimated channel width and depth at numerous points along each channel. These data were later combined to estimate cross-sectional area and channel length for each surveyed segment. These data were compiled to produce the gully volume figures.

Existing topographic data compiled in the mid-1990s by DFG were converted to digital format by VESTRA Resources as an overlay on the 2005 ortho-aerial photograph. In most areas, these data were accurate in depicting the landscape and gully formation. In other areas, the digital topographic lines seemed to ignore deep gully incisions. When analyzing the areas of poor match, it was noted that these areas are consistently found upstream of larger gully formations. It was concluded that the topographic data collection (done in the mid-1990s) predated the upstream portion of the gully formation. This discrepancy allows for an estimation of headcut distance from the date of the topographic survey to the present.

Stream Channel Assessment and Typing

Channel assessment and typing followed the protocols developed by Rosgen (*1994, 1995, 1996*). The protocols involve channel classification, which provides a convenient method of assessing and comparing a number of different parameters associated with channels of different types, as well as a hierarchical assessment method. Methods incorporated into this assessment process include the use of topographic maps and aerial photography, as well as field-collected data documenting channel and valley morphology and geometry.

Use of this classification system allows for efficient communication of current conditions among those familiar with this common method of stream classification. It is not intended to provide any form of template on which to base specifications for design. Restoration design criteria, especially estimation of dimension, pattern, and profile of design channels that will carry the bankfull flow, are based entirely on investigation of the natural form and function as defined by conditions observed in the field. This is accomplished by direct measurement of stable reference conditions, often those left behind as remnant channels abandoned by past rechanneling of the primary flow. Many remnants of stable channel exist through the ACWA project, as the main flow has been redirected into irrigation ditches in many areas. These reaches were surveyed and dimensions noted for design reference. In most areas, the ACWA restoration design will propose a return of the primary flow channel to these small, well-vegetated channels.

Bankfull Determination

One of the parameters that is most important to the character and morphology of a stream channel is its bankfull discharge. Bankfull discharge is defined as the stage at which water first begins to access (or spill out onto) the floodplain. Channel morphologic features (dimension, pattern, and slope) are built and maintained by this flow. Indicators of bankfull stage were sought and located at various locations along Ash Creek in remnant channels in the project area meadow. Bankfull features in the gully channels are unreliable due to the high level of instability in the gully. Methods

for identification of bankfull stage as defined by Leopold and others were followed (*Dunne and Leopold 1978, Harrelson et. al. 1994*). Flow records from the gauging station were analyzed, and data from the short period of record were plotted on a log-normal graph to determine recurrence intervals (*Dunne and Leopold 1978*). These calculations of bankfull were compared to bankfull stages computed from regional flood-frequency data charts (*Waananen and Crippen 1997*). As a last check, discharges were calculated for the remnant channels using dimensional data and Manning's Equation to estimate flow capacity of these channels.

Existing Conditions

Ash Creek drains out of the eastern portion of Lassen County, California, and briefly enters Modoc County at Adin before reentering the northwestern corner of Lassen County. West of Adin, Ash Creek enters the ACWA. Ash Creek drains approximately 258 square miles of Lassen National Forest land mixed with agricultural properties, primarily in the valleys. The elevation at the eastern edge of the project site is approximately 4180 ft and 4130 ft at the western end. Ash Creek runs roughly east to west through the ACWA project site, eventually joining the Pit River near Bieber, California. The Ash Creek watershed is located on the Big Swamp, California, USGS 7.5-minute quadrangle.

Assessment of current stream-channel conditions verifies that the existing active channels are Rosgen type "F-5," which are entrenched channels with silt and sand bed and banks (*Rosgen 1996*) (Figure 3). These channels are entrenched, or incised, to such an extent that they are only able to access their floodplains in extremely high flood events. Consequently, the banks are subjected to extremely high erosional stresses and tend to expand laterally until the excessive stress is alleviated. Given the flood volumes recorded at nearly 3,000 cfs, the current gully would need to erode laterally to many times its current width before dissipation of flood flows could be achieved.

With the channel effectively disconnected from the meadow floodplain, water seldom spreads over the top of the meadow, which would help recharge the groundwater table. Instead, water is almost entirely contained within the gully, and even high flows are routed straight through the meadow in a shorter period of time, so there is little recharge to the groundwater reservoir. In addition, although no peizometers have been placed on this project to measure depth of groundwater, data collected in similar meadows with incised channels show that the channels serve to lower the groundwater table for significant distances on either side (*Poore 2001*).

For well over a century, the project area has been manipulated in an attempt to facilitate agricultural and grazing management. The tendency for the vast open meadow to remain under water for long periods of the year was seen as a limiting factor in grazing management. Numerous straightened gullies, washed-out culverts, incised ditches, and abandoned remnant channels lie in evidence of past efforts to drain the meadow more efficiently. These efforts have succeeded in providing drainage in most areas, but have resulted in deep channel incisement and subsequent desiccation of the surrounding landscape. Aerial photographs clearly depict large acreage of dry landscape in the vicinity of these gullied channels, while adjacent areas with stable channels remain covered with dark green wetland vegetation (Figure 3). This process is very active, and the gullied channels continue to headcut through the landscape. Data collected in the mid-1990s show the extent of the gully migration, while current survey data collected as part of this investigation indicate progression of the headcuts nearly 5,000 ft upstream. Two lineal miles of pristine wetlands separate the lower series of gullies from another series developing just below CR 87A. At the current rate of gully extension, this intact wetland resource will be breached and the two gully systems will connect within 10 to 20

years. The effect on the wetland resource values of the entire ACWA will be negative as the gully system will drain the meadow and reduce habitat values dramatically. It is a certainty that nesting habitat for all wetland-dependent species will be virtually eliminated in the vicinity of the gullies if action is not taken to address the issue in a short timeframe.

Comparison areas of stable channel conditions with gullied areas on the 2005 aerial photograph demonstrate that the vegetative conditions surrounding the gully channels have declined. The stable areas show a much more vigorous wetland vegetative component clearly visible in dark green. This indicator is not present in the vicinity of the gully reaches. Field verification supports this tendency in all reaches.

As mentioned in an earlier section, it was concluded that the topographic data collection (done in the mid-1990s) predated a portion of the gully formation. This discrepancy allows for an estimation of headcut distance from the date of the topographic survey to the present. In general, the distance seems to be in the 4,000- to 5,000-foot range over a period of 10 to 13 years. Based on this rate of extension, the major areas of gully formation and wetland habitat degradation will join in 10 to 20 years. The impact on the wetland groundwater hydrology for the entire ACWA ecosystem will be dramatic if this process is allowed to continue.

In the stable wetland reaches not yet impacted by gully formation, water tends to flow in small, narrow channels that meander through the deeply rooted native wetland grasses. When bankfull flow is carried in a single-thread channel, this type of morphology is classified by Rosgen as an "E" channel type and is very common in meadow environments. However, the ACWA floodplain contains a number of these small channels, forming a distributary system that spreads flows across a very broad lacustrine floodplain. Unlike most braided channels, such as those found across alluvial fan deposits, the distributary system is classified as a "DA" system, meaning a braided system, but in a low-gradient distributary morphology that is usually highly stable with well-vegetated banks and floodplain. These are also known as anastomosing channel systems. Due to the predominance of this stream type surrounding the degraded gully reaches, it is concluded that the historic morphology of channels within ACWA probably followed the definition of a DA stream system (or distributary stream system) without a dominant single-thread channel (*Rosgen 1996*).

The slope of the existing meadow surface, from the top of the proposed project site to the stable wetland area at the lower end, lies at an average value of 0.122 percent. Estimation of design channel sinuosity by dividing valley length into channel length yields an average design channel slope of 0.082 percent.

Past efforts that constructed ditches to drain the wet meadow have helped to speed flow through the system by two primary mechanisms. The first is by increasing the natural channel slope by straightening the flow course through ditching. This speeds velocity and helps rid the meadow of the problematic inundation of water. The second mechanism at work when natural channels are ditched is the reduction in hydraulic resistance, referred to a Manning's "n" value, or roughness coefficient. This resistance to flow is provided by the native grasses and shrubs that occur along the riparian corridor, as well as the roughness of the channel and streambed itself. By ditching a natural, well-vegetated channel, the roughness value drops and slope increases, combining to increase velocity and stream power.

The end result of efforts to dry the meadow has been gully erosion caused by a combination of the two mechanisms of increased slope and reduced roughness coefficient. The byproduct of accelerated velocity is accelerated erosion, both vertical incision and lateral bank erosion. The gully formation indeed served to dry the meadow surface, but to a degree that did not serve those dependent upon forage production for profitability. The desiccation of the landscape in the vicinity of the gullies now allows for the rapid encroachment of sagebrush and other xeric species into areas formerly dominated by wet meadow sedge and rush.

Some water quality data was collected for Ash Creek during a water quality monitoring study conducted between 2003 and 2005. Water quality parameters were collected monthly, if possible, and parameters included flow, temperature, specific conductance, turbidity, bacteria, nitrates, total suspended solids, and total organic carbon. Although water quality parameters were not collected within the project area, one monitoring station was located upstream in Adin and the second was located approximately 2 miles downstream of the project area. It was determined that the bankfull discharge of Ash Creek is approximately 800 cfs, closely following the estimation of the 1.5-year recurrence interval period. This conclusion is based primarily on gauging-station data from Adin, California, with some reference to regional curves for Wyoming, Idaho, and North Dakota. No regional discharge curves for the Great Basin were available. In these cases, the regional curves seem to overestimate the bankfull discharge, possibly due to the fractured basaltic geology of the ACWA region that tends to effectively store a significant percentage of the available runoff.

It was also noted that the upper points of the flood frequency curve do not show a good fit to the regression. It is not known what factors are involved in this inconsistency with natural instantaneous peak discharge volumes. While these points do not remain in line with expected increases in flood volume as recurrence interval increases in the upper range, they do fall into a distinct pattern after divergence with the expected trajectory. Further investigation is required to pinpoint measurement protocols that may have contributed to this phenomenon.

Discrepancies in the calculation of bankfull flow that may arise from the above-mentioned issue are not expected to alter design recommendations as no excavation of a design channel is recommended in the construction specifications.

Recreation

Existing Conditions

ACWA is designated as a Type B Wildlife Area, and public use is subject to regulations as set forth by California Code of Regulations, Title 14, Section 550-551. Current public use is about 3,000 user days per year and includes hunting, fishing, and other forms of compatible wildlife-dependent recreational uses such as bird watching, hiking, and wildlife photography.

ACWA has eight parking lots to accommodate public use. A vehicle tour route has been established for additional wildlife viewing opportunities (Figure 4).

Hunting for authorized species – waterfowl, coots, moorhens, doves, pheasants and snipe – is permitted on Saturdays, Sundays, and Wednesdays during open seasons. Doves may be taken daily during the September dove season and on waterfowl hunt days during the late dove season. Pronghorn antelope may be taken during junior hunts only. Pen-raised pheasant hunts are also

conducted for apprentice junior and women hunters in early September. ACWA has approximately 1,500 hunter user days during the waterfowl and upland game seasons.

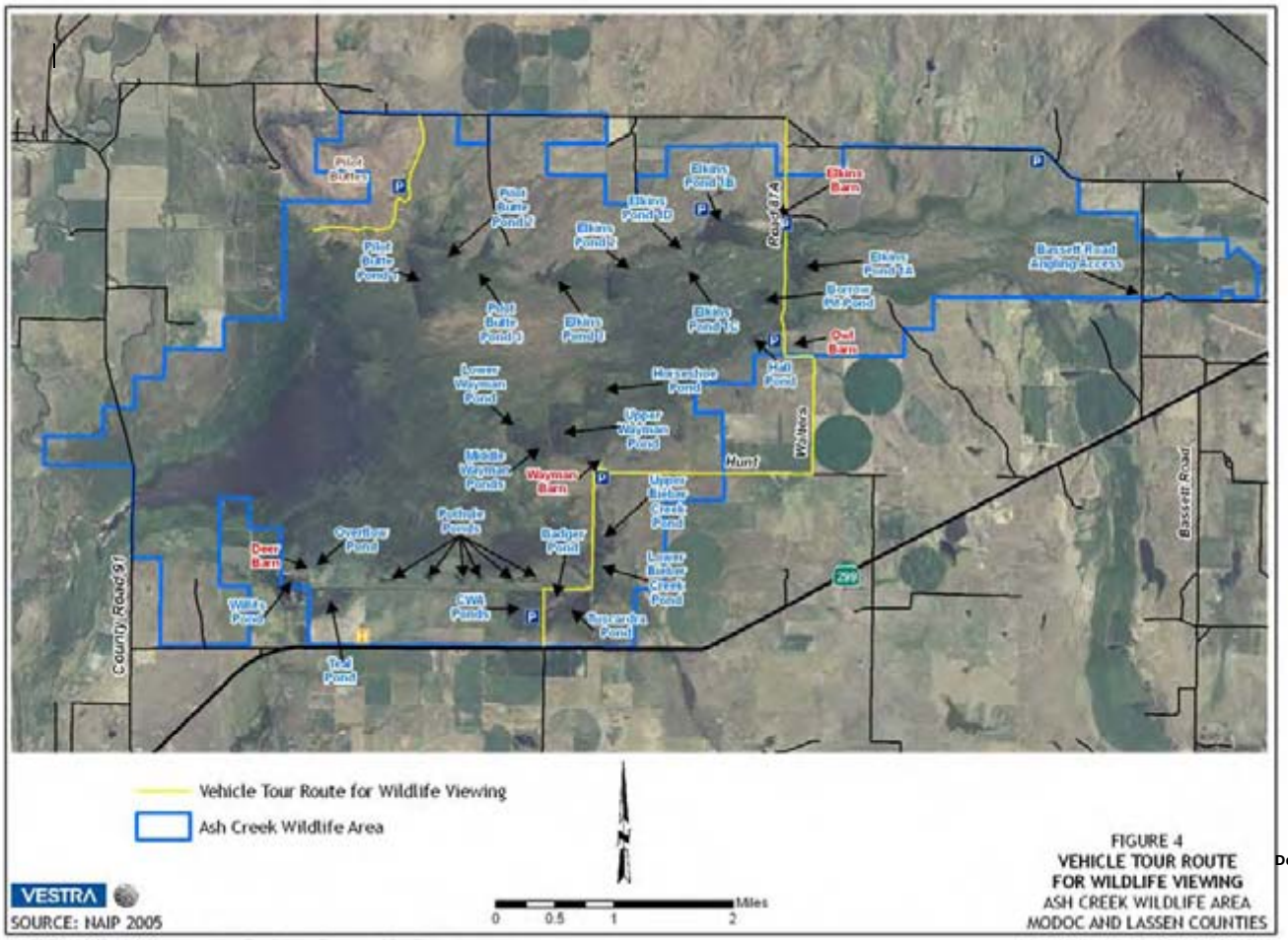

FIGURE 4
VEHICLE TOUR ROUTE
FOR WILDLIFE VIEWING
ASH CREEK WILDLIFE AREA
MODOC AND LASSEN COUNTIES

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Angling opportunities are limited on ACWA. In cooperation with the Pit River Rod and Gun Club, an annual fishing derby is conducted for hatchery-raised trout at the Bassett Road Angling Access site. Approximately 250 angler use days are expected annually.

Populations/Housing and Transportation/Traffic

Existing Conditions

Two small towns, Adin and Bieber, are located within 3 miles of the project site. In addition, there are a small number of houses that are located directly adjacent to the project area. These houses occur along CR 87A. This road system bisects the ACWA in a north-south direction. The road crosses the floodplain for a distance of roughly 3,000 ft. One house is located just south of the floodplain along CR 87A, and two more houses occur about ¼ mile north of the floodplain along CR 87A. No other road systems occur within the project area.

The residents of the houses along CR 87A typically access their properties via CR 87A from the shortest distance. For example, those living along the northern part of the floodplain access CR 87A from Adin Lookout Road, and those along the southern portion of the floodplain from Highway 299. Occasional farm equipment and vehicle traffic occurs on CR 87A during the summer months. During design-planning surveys, biologists and hydrologists estimated there was on average one vehicle each day observed during a 6- to 8-hour time period.

DFG staff use CR 87A on a daily basis during the summer to conduct activities such as wildlife area monitoring and management.

Land Use/Planning

Existing Conditions

CR 87A is currently owned and maintained by Modoc County. Maintenance is required on the road when high flood flows breach the road prism and cause erosion of the road and culverts. The county grades the road on average of once each year. The rest of the project area is owned by the State of California and managed by DFG. Most all of the wildlife area is managed for wildlife habitat and a limited amount of farming, mostly the production of hay, and livestock grazing occurs each year. DFG has a cooperative agreement with the Pit RCD to contract the haying and grazing leases each year. The wildlife area is zoned Agriculture Preserve in Modoc County.

After acquisition of the property by DFG in 1986, primary land use in the project area has shifted from cattle grazing and hay production to waterfowl and riparian migratory bird habitat. Some areas of ACWA are still grazed and mowed for hay on a contract basis, but these are primarily peripheral areas that are closely controlled to protect resource values. Studies have shown that hay harvest and grazing can be used as management tools to increase waterfowl habitat productivity. The current management structure is likely to continue in the foreseeable future. Hay production and grazing outside the proposed project area poses no threat to project stability.

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Geology/Soils

Existing Conditions

ACWA lies within the geologic province known as the Modoc Plateau and is surrounded by a basin of Tertiary or Miocene volcanic basalt. The project site, however, is predominately Quaternary alluvium in the upper reaches with Quaternary lake deposits dominating the lower valley. Volcanic rock shows surface expression only along the perimeter topographic features that rise above the alluvial plain. Ash Creek is one of many tributaries to the Pit River in the region. The Pit River is the only major river that drains the Modoc Plateau.

Biological Resources

Sources of Information and Methodology

DFG staff has conducted several projects in past years and, in association with these projects, has conducted botanical and wildlife surveys. DFG has a solid understanding of natural resources on the ACWA, and this information was used to develop a design plan and implementation schedule that would avoid biological resources associated with restoration activities. In addition to consulting DFG files and staff, wildlife, botany, and fish surveys were completed in 2008. This information was used to further understand habitat needs of species and evaluate the extent of the restoration benefits to these species.

Wildlife surveys were conducted throughout May and June. During surveys, a biologist walked meandering transects throughout the project area and surveyed isolated wetland areas for nesting species. Binoculars and a spotting scope were used to visually search for nesting species, and individual trees within and adjacent to the project area (e.g. ¼ mile) were searched for nesting raptors.

A fisheries biologist conducted surveys in late July and early August by visually searching for fish, hand netting, electroshocking, and placing minnow traps. Deeper pools were angled using artificial spinners, and one night survey was conducted. Surveys were conducted between County Road 91 and the Bassett Road Angling Access location.

Botanical surveys were conducted in late June and once in August. Two botanists walked through the habitat types found in the project area and evaluated the potential for rare plants. Higher search intensity was given to higher-quality habitat areas, and special attention was given in surveying and assessing the potential for presence of the two listed species with potential to occur in the region (i.e., Boggs Lake hedge-hyssop and slender orcutt grass). All plant species encountered were identified to the taxonomic level necessary to determine legal status and scientific significance. Plants not readily identified in the field were collected and determinations made later in the Cal State Chico Herbarium.

Existing Conditions

ACWA supports numerous wildlife species. Waterfowl concentrations are at their greatest during spring when arctic nesting geese (i.e., Ross geese, snow geese, and white-fronted geese) rest, loaf, and feed in various areas on the ACWA. Several thousand migratory ducks also occur during the spring. During the summer, these large concentrations of waterfowl have gone to northern breeding areas, and resident species (i.e. mallard, Canadian goose, gadwall) are the most abundant and

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common waterfowl. Several other nesting species such as greater sandhill crane, common snipe, white-faced ibis, and Forster's tern are common on the ACWA. Common grassland birds include western meadowlark, savannah sparrow, and horned lark. The number and diversity of mammals is smaller compared to birds, but pronghorn are commonly observed foraging in the large open expansive areas. Occasionally, mule deer also occur and, although not often visible, the presence (e.g. lodges and burrows) of introduced muskrat occur along the levee areas.

Fish species composition in lower Ash Creek is dominated by an appropriate assemblage of native fishes typical of warmer, lower-gradient riverine habitats in the upper Pit River drainage. Fish sampling in the last century has been infrequent (five studies) and has mostly occurred near the town of Adin. Thirteen species have been recorded in the general area of the project site and include six species of Cyprinids (Sacramento pikeminnow, tui chub, speckled dace, fathead minnow, golden shiner, hardhead). An additional Cyprinid (Pit roach) may also occur but has not yet been detected. Two introduced species are known to occur in lower Ash Creek (green sunfish, mosquitofish), and a third, the brown bullhead, likely occurs. Redband/rainbow trout have been observed immediately upstream of the project site, and surveys conducted as part of this project documented Pit brook lamprey. This species had not yet been documented from earlier fish surveys and requires specialized equipment for effective sampling.

The project study area supports a complex mosaic of intergrading wetland and upland vegetation types. Major plant communities encompassed by the approximately 2,000-acre zone of hydrologic influence include Transmontane Freshwater Marsh, Transmontane Alkali Marsh, Alkali Meadow, Transmontane Alkali marsh/Alkali Meadow Hybrid Zone, Modoc-Great Basin Riparian Scrub, Vernal Pools (undefined type), Upland Sagebrush Steppe, and Non-Native Annual Plant Communities. The distribution and composition of these plant communities varies across the study area and is influenced by soils, hydrology, and disturbance history. Botanical surveys in 2008 revealed the presence of six special-status plants (Lemmon's milk-vetch, Howell's thelypodium, Sheldon's sedge, Great Basin downingia, *Crateagus castlegarensis*). Others may occur in the project site but would require more detailed surveys to document presence.

Appendices C and D identify special-status species and their potential to occur within the project area.

Issues:	Potentially Significant Impact	Less Than Signif. With Mitigation Incorporated	Less Than Signif. Impact	No Impact
• AESTHETICS. Would the project:				
Have a substantial adverse effect on a scenic vista? (By restoring the historic hydrology and attendant vegetative communities, the project is expected to have a positive aesthetic scenic effect.)	☐	☐	☐	☒
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (The project is not along a designated scenic highway.)	☐	☐	☐	☒

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Issues:	Potentially Significant Impact	Less Than Signif. With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Substantially degrade the existing visual character or quality of the site and its surroundings? (The opposite will be true. The visual character of the meadow itself will be restored.)	☐	☐	☐	☒
Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? (The only glare associated with this restoration project would be more sunlight reflecting off water retained in wet meadow areas or in the ponds.)	☐	☐	☐	☒
• AGRICULTURE RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (No farmland conversion will occur.)	☐	☐	☐	☒
Conflict with existing zoning for agricultural use, or a Williamson Act contract? (No conflicts with zoning or Williamson Act contracts will occur.)	☐	☐	☐	☒
Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? (No other changes in the existing environment can result in conversion of farmland.)	☐	☐	☐	☒
• AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
Conflict with or obstruct implementation of the applicable air quality plan? (See comment below.)	☐	☐	☐	☒
Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (See comment below.)	☐	☐	☒	☐

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Issues:	Potentially Significant Impact	Less Than Signif. With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (See comment below.)	☐	☐	☐	☒
Expose sensitive receptors to substantial pollutant concentrations? (See comment below.)	☐	☐	☐	☒
Create objectionable odors affecting a substantial number of people? (See comment below.)	☐	☐	☐	☒

This project will not release anything into the atmosphere. There is no evidence that this project will result in a violation of any air quality standard or contribute to an existing or projected air quality violation. It will not expose sensitive receptors to pollutants; alter air movement, moisture, or temperature; cause any change in climate; or create objectionable odors. Any dust generated during construction activities will be mitigated by watering with a water truck.

BIOLOGICAL RESOURCES – IMPACT MECHANISMS

Biological resource surveys within the ACWA have been conducted in the past by DFG staff, and biologists conducted several evaluations during the design phase of this project in the spring/summer of 2008. More surveys are planned for the ACWA, but the initial evaluation was thorough enough to evaluate impacts and propose avoidance, minimization, and mitigation measures.

Vegetation, wildlife, and fishery resources could be directly and indirectly affected by meadow restoration activities. Construction-related impacts could result in the temporary, short-term, or permanent loss of vegetation, wildlife, and fisheries in the project study area. In assessing the magnitude of potential impacts, the following assumptions were made regarding construction-related impacts on vegetation, fish, and wildlife:

- All vegetation could potentially be removed in areas that are used for pond creation and gully fill, resulting in removal of potential wildlife habitat.
- Vegetation adjacent to construction areas could be temporarily disturbed or stressed by heavy equipment, sidecasting of material, or compaction of soil, resulting in potential disturbance of wildlife habitat.
- Aquatic habitat could be temporarily affected by heavy equipment or construction activities, potentially affecting fish and wildlife habitat.
- Noise and other human activities could result in abandoned nest sites, burrows, or dens of wildlife species.

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Wildlife and fisheries resources could be directly or indirectly affected during construction through the following activities:

- Removal of vegetation from excavating,
- disturbing of channel substrate from excavation and equipment movement,
- temporary stockpiling of soil or other materials, and
- noise disturbance from construction equipment.

CRITERIA FOR DETERMINING SIGNIFICANCE

The following criteria were used in determining the level of significance of an impact on biological resources. An impact was considered significant if it would:

- Substantially affect a special-status plant or animal or the species' habitat;
- interfere substantially with the movement of any resident wildlife species;
- substantially affect, reduce the number of, or restrict the range of an endangered species or the habitat of the species;
- substantially diminish the acreage or value of local habitat for wildlife or plants;
- cause the deterioration of existing wildlife habitat;
- adversely affect significant riparian lands, wetlands, or other wildlife habitats;
- result in the filling of jurisdictional wetlands;
- reduce acreage of any agricultural crop that serves as valuable foraging or nesting habitat; or
- introduce or further spread invasive species.

• BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

Special-status species that may be impacted from the proposed project include the greater sandhill crane, Swainson's hawk, Lemmon's milk-vetch, Sheldon's sedge, Howell's thelypodium, Castlegar Hawthorne, Boggs Lake hedge-hyssop, and Pit roach. Potential impacts on each of these species are described below. The project design and timing were structured to avoid and minimize any potential impacts; however, mitigation measures are proposed to ensure impacts on these species are reduced to less than significant.

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Greater Sandhill Crane
Greater sandhill cranes nest throughout the ACWA. Nest locations are highly variable. Any construction-related impacts on sandhill cranes during the nesting season could constitute "take" because the species is listed as threatened under the California Endangered Species Act. This potential impact would be considered significant.

Greater sandhill cranes typically begin nesting on ACWA in early April, and most young fledge by July 15; however, some individual nests have been found after July 15, likely representing pairs that lost a nest during the first attempt and therefore make a second attempt that extends longer into the nesting season. Because of the short construction window (estimated at 90 days), activities would need to start in the summer as soon as cranes have completed nesting (i.e. July 15).

Modoc Sucker
Modoc suckers are a state and federally listed species known to occur in the Pit River Watershed. The species is also known to occur in upper Ash Creek in the headwaters within Ash Valley. Stewart Reid (July 2008 pers. comm.), an expert biologist on Modoc sucker and DFG Fisheries Biologist Paul Chappel (retired) does not believe the species is present in lower Ash Creek (i.e. below Adin). Rather, suckers found in lower Ash Creek have been identified as Sacramento suckers. Based on previous collections and habitat conditions, this project does not have the potential to affect this species.

Swainson's Hawk
The Swainson's hawk is listed as a threatened species under the California Endangered Species Act. Swainson's hawk nest throughout the Great Basin, and individuals historically nest in isolated trees at ACWA. The last Swainson's hawk nest was documented in the 1990s near the Bean Barn by CR 87A. No nesting Swainson's hawk have since been observed on the ACWA, although the species has been observed during migration on the wildlife area. The nearest known Swainson's hawk nest is located approximately one mile from the project area boundary. In general, there are relatively few (three to four pair) Swainson's hawk nesting in the Big Valley area (Hunt pers. comm.).

Howell's Thelypodium
Howell's thelypodium is a CNPS List 1B.2 species. The species was encountered during surveys in 2008 in wet-meadow habitats at two closely juxtaposed sites on the floodplain of Ash Creek approximately .5 miles southwest of the Ducks Unlimited Diversion Structure. Howell's thelypodium is a perennial herbaceous member of the Mustard Family and occur in moist meadows and seeps. No ground-disturbance activities are planned for this area, but the population may be negatively affected if future habitat conditions change to more mesic conditions.

Sheldon's Sedge
Sheldon's sedge is a CNPS List 2.2 species. It was encountered during the surveys in numerous sites in the study area, where it is associated with meadows on the floodplain of Ash Creek, banks of the mainstem and distributary channels, and within the edges of a few of the bermed ponds. The species is a perennial rhizomatous member of the Sedge family. This grass-like species forms dense, almost homogenous colonies in moist habitats. Populations of this species may be directly impacted from ground-disturbance activities, but the overall populations within the ACWA will likely benefit from the raised water table and improved hydrologic conditions in the floodplain.

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Castlegar Hawthorne
Castlegar hawthorne is a CNPS List 3 species. The species is a medium- to large-size shrub of the Rose family. It grows as individuals and in thickets in moist, often rocky loam in riparian settings. There is a relatively homogonous stand growing along the bank of the mainstem of Ash Creek, near the eastern boundary of the study area in the vicinity of the old Ash Creek diversion dam. Direct impacts could occur from construction activities, and changes in the groundwater hydrology may also affect the species.

Lemmon's Milk-Vetch
Lemmon's milk-vetch is a CNPS List 1B.2 species that was encountered at multiple locations on the south side of the Ash Creek floodplain. The species inhabits the moist edges of the floodplain meadow near the transitional ecotone within the drier and topographically higher upland sagebrush steppe habitat. Lemmon's milk-vetch is a sprawling perennial herb in the pea family that inhabits moist habitats. In California, there are nine occurrences of the species recorded with the California Natural Diversity Database. Of these nine occurrences, one is from Lassen County and one is from Modoc County. Populations of Lemmon's milk-vetch may be directly impacted from construction activities. Changes in groundwater hydrology will likely not significantly affect this population as it occurs in areas that are generally at a higher elevation than the hydrologic influence zone.

Boggs Lake Hedge-Hyssop
Boggs Lake hedge-hyssop is a state endangered species and a CNPS List 1B species. The species is not known to occur at the ACWA, but habitat type in the seasonally managed wetlands may be suitable. It is an annual species that typically occurs in vernal pools and along marshy areas in the margins of lakes and reservoirs. Not all areas could be surveyed adequately during 2008, and construction activities conducted in potentially suitable habitat could affect this species if it does occur.

Other Special-Status Species
Several other special-status wildlife species are known to occur or have the potential to occur within the project area. These species include pronghorn, American white pelican, double-crested cormorant, northern harrier, short-eared owl, sharp-shinned hawk, Cooper's hawk, Ferruginous hawk, American peregrine falcon, prairie falcon, long-billed curlew, white-faced ibis, black tern, western burrowing owl, loggerhead shrike, bald eagle, golden eagle, redband trout, pit roach, harhead, northwestern pond turtle, Macoun's buttercup, marsh skullcap, Howell's triteleia, volcanic daisy, Great Basin downingia, and sweet marsh ragwort.

Most all project impacts on these species would be avoided or minimized based on the project design location and timing of construction. In some instances, mitigation measures are provided to ensure impacts are considered less than significant. Brief rationale is provided below for several special-status species that do not require mitigation measures.

Since the project will be constructed during the late summer (i.e. late July through early August), there will be minimal impacts on pronghorn or potential nesting birds (i.e. white-faced ibis, black tern, northern harrier, short-eared owl, loggerhead shrike, long-billed curlew, and short-eared owl). Other special-status birds (American white pelican, Cooper's hawk, sharp-shinned hawk, bald eagle, golden eagle, Ferruginous hawk, American peregrine falcon, and prairie falcon) do not nest in the project area but do forage in the area during the breeding season, migration time periods, or in

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winter. Habitat and prey availability is common elsewhere, and any changes from project activities that may affect habitat will be minimal and will not substantially alter the species foraging requirements. In general, most special-status species will benefit from changes in aquatic habitat and vegetation expected from restoration activities.

Impacts on fish species are not expected to occur. Redband trout is not known to occur in the project area. It is assumed that redband trout may occur in the project area during the winter when water temperatures become colder. The project is expected to decrease water temperature and increase flow during the summer, thereby potentially improving conditions for redband trout. Pit roach occur in the Ash Creek watershed, but any impacts on this species will not result in a substantial reduction in their local populations.

Impacts from restoration activities on certain special-status plants, including Sheldon's sedge, Great Basin downingia, Macoun's buttercup, marsh skullcap, and sweet marsh ragort, will likely benefit these species as a result of increased "wetland" conditions and increases in the amount of seasonally inundated areas. Other species are considered "upland" plants (Howell's triteleia, volcanic daisy) and occur outside of direct impacts and beyond the zone of hydrologic influence from restoration.

Habitat changes from the restoration will only negatively impact special-status species that prefer grassland or sagebrush communities or muddy/silty aquatic conditions within gullied streams. After project activities, these habitat types will be decreased. One bird species, the loggerhead shrike, may be impacted. During repeated wildlife observations during the nesting season, however, only one loggerhead shrike was observed. It is unknown if this species is nesting in the ACWA.

Impact W-1. Potential Impact on Nesting Greater Sandhill Cranes and Swainson's Hawk (Less Than Significant). The project could potentially cause the loss of greater sandhill crane and Swainson's hawk nest(s) if the species are found nesting near or within the project area. These impacts could occur from disturbance by construction activities between April 1 through August 15 which could cause the destruction of eggs/young or abandonment of active nest(s). DFG Code 3503.5 prohibits the destruction of raptor nests, and any loss of eggs or individuals would be considered a significant impact. Additionally, impacts on these two species would be considered "take" under the California Endangered Species Act. These potential impacts, however, will be reduced to less than significant by adopting the following mitigation measures:

Mitigation Measure W-1. Conduct pre-construction surveys for greater sandhill crane if construction activities will occur before August 1. Greater sandhill cranes typically begin nesting on ACWA in early April, and most young fledge by July 15. However, some individual nests have been found after July 15, likely representing pairs that lost a nest during their first attempt, and their second attempt therefore extends longer into the nesting season. Because of the short construction window (estimated at 90 days), activities will need to start in the summer as soon as cranes have completed nesting (i.e. late July). A qualified wildlife biologist will monitor the proposed construction areas during the later part of the nesting season (July) to determine if any cranes are still nesting. Once the biologist determines that cranes are no longer nesting within the project area, construction activities may begin, and no further mitigation measures would be required.

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Mitigation Measure W-2. Conduct pre-construction surveys for Swainson's Hawk if construction activities will occur before August 1. Swainson's hawk typically begins nesting in the Big Valley area in early May, and most young fledge by mid-August. However, some individual nests may be active after August 15, likely representing pairs that lost a nest during the first nest attempt, consequently the second attempt extends longer into the nesting season; or successful pairs that have successfully fledged young but are still in the post-fledging dependency period and "attached" to the nest site. Because of the short construction window (estimated at 90 days), activities will need to start in the summer as soon as possible (i.e. late July). A qualified wildlife biologist will monitor the proposed construction areas during the latter part of the nesting season (July) to determine if Swainson's hawks are nesting. If the biologist determines that no Swainson's hawks are nesting within .5 miles of the construction areas, no further mitigation is required.

Impact W-3. Potential Impacts on Special-Status Plants (including Lemmmon's milk-vetch, Castlegar hawthorne, Boggs Lake hedge-hyssop, and Howell's thelypodium). The project could potentially cause the loss of individuals and/or colonies of the above special-status plant species. These impacts could occur from direct disturbance during construction activities or from changes in the groundwater hydrology and resulting vegetative responses as a result of restoration of the project site. The loss of individuals and/or colonies of these species could be considered a significant impact if a substantial portion of the local population is affected. However, this potential impact has been reduced to a less than significant level by adopting the following mitigation measure:

Mitigation Measure W-3. Conduct pre-construction surveys for special-status plant species in ground disturbance areas prior to construction. Prior to construction in ground-disturbing areas, wet meadow edge habitat, and large vernal pools/seasonally managed wetlands, a qualified botanist familiar with the identification of special-status plant species will conduct presence/absence surveys for Lemmmon's milk-vetch, Castlegar hawthorne, Boggs Lake hedge-hyssop, and Howell's thelypodium. If any of these species are found in ground-disturbance areas, construction will avoid or minimize impacts if feasible. If construction activities cannot avoid Lemmon's milk-vetch colonies or minimize impacts on them, the upper 1 to 4 inches of soil will be stockpiled and replaced as the top soil layer after construction to replace fragmented plant parts and seeds potentially present in the soil profile. Populations of Sheldon's sedge that cannot be avoided will be excavated for propagation and/or direct planting in "new" moist sites, such as banks of the design channels or margins of newly created wetland areas. Individual Castlegar hawthorne shrubs will be avoided if possible. If avoidance is not feasible, individual shrubs will be relocated, or fruits/seeds and/or cuttings will be used for planting in suitable habitat within the project area. If Boggs Lake hedge-hyssop is found, construction activities will avoid direct impacts on this species. If it is found and cannot be avoided, DFG will be consulted for appropriate actions. If none of the above special-status plant species are found during surveys, no further mitigation is required.

Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐

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Substantial statewide decline of riparian communities in recent years has increased concerns regarding dependent plant and wildlife species, leading state and federal agencies to adopt policies to arrest further loss. Riparian vegetation has a variety of functions such as providing bank stabilization, erosion control, and wildlife habitat. The DFG has adopted a no-net-loss policy for riparian habitat value. In addition, the U.S. Fish and Wildlife Service (USFWS) mitigation policy identifies California's riparian habitats in Resource Category 2 for which no net loss of existing habitat value is recommended (46 FR 7644, January 23, 1981).

Impact V-1. Potential Impact on Seasonal Wetlands and Riparian Habitat in the Project Area (Less Than Significant). The project would not have a substantial adverse effect on seasonal wetlands and riparian habitat based on the project design. Although disturbance of seasonal wetlands and riparian vegetation within the gully is necessary, the long-term benefits of increased wetland conditions and riparian vegetation along Ash Creek is considered beneficial. Additionally, nearly all riparian vegetation that is removed within the gully will be replanted to enhance stabilization and increase structural diversity. Therefore, although the project will temporarily result in the loss of seasonal wetlands and a small amount of riparian habitat, these impacts will be minimized by following the guidelines set forth in the project design and required permits for the project (see below mitigation measure for Impact V-2). Therefore, based on the amount of habitat that will be disturbed, the implementation of MM-V1 (see below) and long-term benefits associated with the project (i.e., increased wetland acreage and conditions, increased riparian conditions), the impacts to these resources are considered less than significant.

Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐

Impact V-2. Short-Term Disturbance of Waters of the United States from Construction Activities (Less Than Significant). The project will have a short-term effect on federally protected wetlands (including other waters of the United States). Ash Creek, a perennial drainage, is located within the construction area and would be considered "other waters" of the United States subject to jurisdiction under section 404 of the CWA. In addition, DFG regulates activities that would interfere with the natural flow of, or substantially alter the channel, bed, or bank of, a lake, river, or stream. These activities are regulated under CDFG Code Section 1601 for public agencies and Section 1603 for private individuals. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. Conditions that may be required by DFG include avoidance or minimization of vegetation removal, use of standard erosion-control measures, limitations on the use of heavy equipment, limitations on work periods to avoid impacts on fisheries and wildlife resources, and requirements to restore degraded sites or compensate for permanent habitat losses. Impacts to Ash Creek are considered less than significant because the Pit RCD has incorporated the following Mitigation Measures into the proposed project:

Mitigation Measure MM-V1: Comply with state and federal permit conditions. The Pit RCD will coordinate with the U.S. Army Corps of Engineers (Corps) to confirm that the work is authorized under a Nationwide Permit (NWP). The Pit RCD will also coordinate with DFG to

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obtain the required streambed alteration agreements. Based on past similar projects and consultation with the Corps, the project will qualify for a NWP 27.

Under the NWP 27, the Corps authorizes the restoration of pool and riffle patterns and restoration of riparian areas. The Pit RCD will incorporate all state and federal permit conditions into the final project design and site restoration plans.

Mitigation Measure MM-V2: Restore drainage topography to naturally functioning conditions. The Pit RCD will require contractors to follow the supervision of the restoration design consultant responsible for implementing the restoration design plan in order to ensure that naturally functioning drainage topography occurs following construction. Most of the "new" channels that will transport flow within the project area are remnant stream channels within the meadow that are well vegetated and occurred prior to gully incisement. These channels will function to restore the stream and floodplain to natural conditions. A small portion of design channel will be constructed in order to redirect the stream to these natural channels. Detailed analysis of the design channel was calculated and presented in the restoration design plan.

Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐

Impact W-4: Temporary Disturbance of Common Wildlife and Fish Species and Interference with Migratory Corridors (Less than Significant). The proposed project will disturb the movements of native resident wildlife and fish species on the project site. This disturbance will result from construction activities. In addition, the proposed project will temporarily affect the natural flow of water in Ash Creek when the flow is redirected to the remnant channels at the start of the construction period. However, water will continue to flow downstream to provide habitat for downstream resident fish and wildlife species in the remnant channel(s). The remnant channels will allow the stream to function properly to transport bedload and suspended sediment, provide natural gravel for fish, and eliminate downstream scour from heavy flood flows. The gully channel will no longer be receiving flow and will slowly dry as water seeps into the ground. Because of this, some resident fish may become stranded as pools dry and become isolated. These fish may then be potentially impacted from desiccation, predation, or direct impacts from construction activities. Significant impacts could occur if construction activities affected a substantial portion of the local populations. These potential impacts, however, will be reduced to less than significant by adopting the following mitigation measure. Because the flow will be completely redirected away from the gully, it is not possible to slowly decrease the flow in the gully. The gully will continue to have water as it slowly dries, allowing the following mitigation measure to be performed:

Mitigation Measure -W4. Conduct rescue surveys for fish and western pond turtle stranded in aquatic habitat within the incised gully channel and relocate them to undisturbed areas. Rescue surveys will be conducted for fish and northwestern pond turtle that become stranded within the incised gully channel once flow has been redirected to the remnant channels on the meadow floodplain. It is assumed that most fish and turtles will move to other areas when aquatic conditions become dry. However, in case they do not or cannot move, a

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qualified wildlife biologist familiar with the biology of these species will conduct surveys at appropriate times to detect and capture them. The biologist will also obtain and/or hold the necessary permits to capture and move the fish and turtles to suitable habitat. If no fish or turtles are found within the aquatic habitat, no further mitigation would be required. No further mitigation measures are required once surveys have been conducted and fish and turtles have been relocated.

Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (The project would not conflict with any local policies or ordinances protecting biological resources such as preservation policies or ordinances. Modoc County does not have a county tree ordinance.)	☐	☐	☐	☒
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (The proposed project will not conflict with the provisions of any habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans.)	☐	☐	☐	☒

CUMULATIVE EFFECTS

The proposed project has accepted the mitigation measures proposed herein. The short-term impacts to any wildlife, fish, and the riparian corridor caused by construction activities are relatively insignificant when compared to the long-term benefits of reducing continued degradation of the aquatic and upland habitat and associated impact on wildlife, riparian vegetation, and fisheries resources from existing conditions. The restoration of the functioning condition of the stream and floodplain will result in numerous resource benefits (see Project Description).

Two other restoration projects in the general area of the proposed project are related and will beneficially affect the proposed project. The Pit RCD implemented restoration projects on Dutch Flat Creek and the North Fork of Ash Creek in Round Valley located approximately 10 miles upstream of the project site. Both projects involved improving water-quality conditions with either bank stabilization techniques or channel morphology changes. Within the ACWA, one other project, replacement of two bridges at CR 87A, is proposed for 2010. When considered with this project, impacts on biological resources are minimal and would not result in cumulative impacts.

CULTURAL RESOURCES – IMPACT MECHANISMS

Cultural resources were surveyed in early 2000 associated with seasonal wetland development projects on ACWA. During these surveys, prehistoric sites were located and mapped for DFG. These locations were avoided when designing this project. However, the entire floodplain of this proposed project has not yet been surveyed. Therefore, other prehistoric sites may be present and be affected from restoration activities. These effects could result from excavating the pipeline, ponds, and diversion structures, or filling gullies. Indirect effects could also result from vegetation changes resulting from restoration activities (i.e. conversion of grassland and sagebrush habitat to wet meadow). It is possible, although highly unlikely, that noncultural soil deposits have buried cultural sites. If a cultural deposit is uncovered during construction activities, potential construction-

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related impacts on cultural resources could include the following:

- Discovery of human remains of Native American origin is highly unlikely due to the location of the work being within a wet meadow habitat type.
- There is a potential for discovery of culturally significant items during earth-disturbing activities.

CRITERIA FOR DETERMINING SIGNIFICANCE

The criteria for determining significance of impacts to cultural resources generally follow the State CEQA Guidelines, with DFG acting as the lead agency. The criteria for determining significance of impacts to historical properties fall under the U.S. Bureau of Reclamation, serving as the lead agency for the National Environmental Policy Act.

• CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5? (See below mitigation measures.)	☐	☒	☐	☐
Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? (See below mitigation measures.)	☐	☒	☐	☐
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (See below mitigation measures.)	☐	☒	☐	☐
Disturb any human remains, including those interred outside of formal cemeteries? (See below mitigation measures.)	☐	☒	☐	☐

Impact CR-1: Potential Adverse Change in the Significance of a Historical and/or Archeological Resource (Less Than Significant). Restoration and construction activities could potentially cause an adverse change in the significance of a historical and/or archeological resource. These adverse changes could result from ground-disturbing activities or changes in vegetation communities. These potential impacts, however, will be reduced to less than significant by adopting the following mitigation measure:

Mitigation Measure CR-1: Review archeological records, conduct preconstruction archeological surveys, and prepare an archeological resource management report. Prior to construction activities, a qualified archeologist will review the archeological records compiled by the Northeast Information Center, Chico, and the DFG and conduct a complete heritage-resource

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inventory of the area of potential effects (APE). The APE includes the active work zone and access routes as well as meadow areas to be affected by restored groundwater elevations. The APE will be flagged prior to initiation of survey work with flagging to facilitate survey. A complete inventory entails a systematic pedestrian examination of the surface of all identified portions of the project area. It may also require resurveying previously inventoried properties or "spot-checking" to ensure the adequacy of previous coverage. Beyond the exposure of the ground surface for assistance in ground visibility, no subsurface excavation is authorized.

The archeologist will also record sites utilizing "Historic Property Recording Specification" format. All newly discovered prehistoric, ethnographic, and historical heritage resources encountered within and directly adjacent to the project areas(s) will be recorded. Boundaries of all heritage resources will be identified using red- and black-striped flagging and/or other appropriate means as agreed to with the F/D HPM, e.g. Area Controlled Signs. Heritage resource sites will be recorded using State Historic Preservation Office (DPR – 523) site forms. Site boundaries will be recorded using a resource-grade Global Positioning System (GPS). The archeologist will also obtain California State Trinomial numbers for sites in the project area for inclusion in the final report. In-Situ Artifact Recording procedures will be followed during both inventory and site-recording activities. No collection of artifacts is authorized.

A draft report will be submitted to and reviewed by DFG and the Pit RCD prior to construction. The inventory report will conform to guidelines in the State of California Department of Parks and Recreation "Archaeological Resource Management Reports: Recommended Contents and Format" or Secretary of Interior's "Standards & Guidelines for Archaeology and Historic Preservation: Reporting Identification Results." This includes preparing a Heritage Resources Inventory Report (HRIR) with site records attached for each separate undertaking. The report shall describe the results of the prefield literature search and sensitivity assessment, methodology, and results of inventory efforts. At minimum, the report will include vicinity, project location, inventory coverage, previous coverage, site location, and isolated data figures.

Impact CR-2: Potential to Inadvertently Disturb Human Remains During Ground-Disturbing Activities (Less Than Significant). Although not expected, ground-disturbing activities have the potential to disturb human remains. This potential is considered low, however, because most construction is located in a habitat type (wet meadow) that was not regularly used for burying humans due to its wet nature and difficulty of digging. This potential impact is considered less than significant because the project proponent has incorporated the following mitigation measures:

Mitigation Measure CR-2: State compliance. Whenever human remains of Native American origin are discovered, close compliance with state requirements will be followed. This includes immediate cessation of work and notification of the appropriate authorities.

Impact CR-3: Potential for Damage to Buried Archaeological Sites (Less Than Significant). Although not expected, ground-disturbing activities have the potential to damage buried archaeological sites. This potential is considered low, however, because the habitat type (wet meadow) was not regularly used to bury human remains due to its wet nature and difficulty of digging. This potential impact is considered less than significant because the project proponent has incorporated the following mitigation measure:

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Mitigation Measure CR-3: Work stoppage. Immediately upon discovery of any cultural resources, work will be stopped in the immediate area. Work will only be started again upon notification of the appropriate authorities and approval for restart.

• GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: (N/A)	☐	☐	☐	☒
Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (This project is not located in a known earthquake fault.)	☐	☐	☐	☒
Strong seismic ground shaking? (N/A)	☐	☐	☐	☒
Seismic-related ground failure, including liquefaction? (N/A)	☐	☐	☐	☒
Landslides? (N/A)	☐	☐	☐	☒
Result in substantial soil erosion or the loss of topsoil? (Restoration efforts to improve floodplain function by filling gullies and restoring stream flow to the meadow surface will decrease current rates of erosion.)	☐	☐	☐	☒
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (The project will actually improve soil stability.)	☐	☐	☐	☒
Be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial risks to life or property? (The project is not located on expansive soil.)	☐	☐	☐	☒
Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water? (N/A)	☐	☐	☐	☒

HAZARDS AND HARARDOUS MATERIALS – IMPACT MECHANISMS

Potential construction-related impacts of hazardous materials could include the following:

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- Accidental spill related to the fueling or servicing of construction equipment.
- Accidental spill related to construction equipment that leaks fuel or other fluid due to disrepair, onsite accident, collision, or other means.
- Leaking containers.
- Wildland fire caused by construction equipment or crew.

CRITERIA FOR DETERMINING SIGNIFICANCE

The criteria for determining significance of impacts of various hazardous materials possible follow CEQA, Occupational Safety and Health Administration (OSHA) and Environmental Safety and Health (ES&H) agencies.

• HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (This project does not cause a substantial hazard in the area.)	☐	☐	☐	☒
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

Impact HM-1: Potential Impacts on Terrestrial and Aquatic Resources from Hazardous Materials (Less Than Significant). Impacts on aquatic and terrestrial resources could potentially result from the accidental release of hazardous materials into creeks or ground surfaces. This impact is considered less than significant because the project proponent has proposed the following mitigation measure:

Mitigation Measure HN-1: Fueling and Maintenance outside of riparian and aquatic areas. Refueling and equipment maintenance will be conducted in designated areas outside of the riparian and aquatic zones. The designated area will be located in an upland area on "flat" ground.

Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (No existing or proposed schools occur within 2 miles of the project area.)	☐	☐	☒	☐

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Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (This project is not located in a hazardous materials site.)	☐	☐	☐	☒
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (This project is not located near a public airport.)	☐	☐	☐	☒
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (This project is not located in the vicinity of a private airstrip.)	☐	☐	☐	☒
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (This project does not conflict with any emergency response or evacuation plan.)	☐	☐	☐	☒
Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (The project area is managed for wildlife habitat, cattle grazing, and haying, and will remain in these uses resulting in no negative change in fire hazard as a result of the project. Project construction will be in moist channel areas where there is minimal fire hazard. A water truck will be onsite during construction.)	☐	☐	☐	☒

• HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Violate any water quality standards or waste discharge requirements? (The project will cause no violations of any water quality standards.).	☐	☐	☐	☒

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This project is expected to improve water quality parameters including temperature, dissolved oxygen, sediment, and turbidity. The poor water quality attribute of high summer temperatures should be improved by augmented summer flows. The increased volume of summer flows, a narrow, deeper channel, and expected improvement of riparian vegetation and associated shade should lower summer water temperatures. Decreased temperature and increased hyporheic exchange within the floodplain will result in higher dissolved oxygen levels. By removing flood flows out of channels with unstable, unvegetated gully walls, and restoring floodplain function, the current severe erosion and turbidity should decrease. Before construction begins, surface water flow will be diverted into the remnant channel so work will not occur in an active flowing channel.

Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

This project is expected to increase groundwater recharge during winter flows for slower release throughout the drier summer. The groundwater table is expected to rise to within 1.5 ft of the meadow surface, reducing wide seasonal fluctuations in water levels and providing for late winter/spring saturation of the meadow.

Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

This project is a stream channel and meadow restoration activity. One of the objectives of the project is to substantially alter the existing drainage pattern because the existing pattern is degraded and "trending" toward more degradation. However, the project has been designed so that little to no erosion will occur after the gully is filled and the remnant stream channels become reconnected to the floodplain.

Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site	☐	☐	☒	☐

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This project is a stream channel and meadow restoration activity. One of the objectives of the project is to improve absorption rates, drainage patterns, and the rate and amount of runoff. Absorption rates would be improved by elevating the stream channel out of its current gullied depth back onto the meadow elevation. This in turn is expected to reverse the vegetative trend from xeric species and bare, compacted soils to a vigorous community of wet meadow species. The root system of this community, as well as the restored function of the floodplain, is expected to increase absorption rates, thereby attenuating flood flows and increasing summer base flows. This improved timing of the drainage pattern, and the rate and amount of runoff, is another project objective. No significant change in drainage pattern locations is expected. Flows will be returned to historic remnant channels on the surface of the meadow, which have been abandoned due to the relatively recent (last 50 years) channel incision.

Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? (This project will attenuate storm water flows by allowing higher flows to access the floodplain and result in greater absorption and reduced velocity.)	☐	☐	☐	☒
Otherwise substantially degrade water quality. (See response to "a" above.)	☐	☐	☐	☒
Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (There is no housing in the proposed project area.)	☐	☐	☐	☒
Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (No structures are proposed for this project.)	☐	☐	☐	☒
Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (There are no structures or people in the proposed area that could be affected.)	☐	☐	☐	☒
Inundation by seiche, tsunami, or mudflow? (The proposed project will have no impact in this area.)	☐	☐	☐	☒

• LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Physically divide an established community? (There is no community established in the area. The closest communities are Adin and Bieber, which are approximately 2 to 3 air miles away.)	☐	☐	☐	☒

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Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? (See below discussion.)	☐	☐	☒	☐

The project area is currently zoned Agriculture Preserve. Land-use protection measures for this site are intended to maintain agricultural areas. Agricultural uses will be maintained and enhanced by the project objectives of restoring the functionality of the floodplain and productivity of the meadow. Grazing management will be coordinated between the private lands, National Resources Conservation Service, and Fall River RCD.

The proposed design plan initially recommended the removal of CR 87A. However, DFG felt this road system was needed to be maintained for a variety of reasons, so the final design plan recommended changing the access of CR 87A from year-round to seasonal. Since Modoc County currently is responsible for CR 87A maintenance, they have agreed to remove CR 87A from their year-round maintained road list. However, CR 87A will be still passable during most of the year and only affect motorists during flood events.

Conflict with any applicable habitat conservation plan or natural community conservation plan? (There are no conflicts because these plans are not present on the site.)	☐	☐	☐	☒

- MINERAL RESOURCES. Would the project:

Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (No known mineral resources are known to occur on the project area, and completion of the project would not cause their loss if they did occur.)	☐	☐	☐	☒
Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (No locally important mineral resources are delineated on any local plans.)	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
• NOISE. Would the project result in:				
Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒

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The construction portion of the project will not change current noise levels. Noise from heavy equipment during construction will not be greater than truck noise. The noise easily disperses in the large meadow systems where there are no people.

Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (There are no people in the construction area.)	☐	☐	☐	☒
A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (No noise made from the project will be permanent.)	☐	☐	☐	☒
A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (See explanation A.)	☐	☐	☐	☒
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (N/A)	☐	☐	☐	☒
For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (N/A)	☐	☐	☐	☒

• POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)? (This project will not affect population or housing because it is not in a community with residences.)	☐	☐	☐	☒
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (This project will not affect population or housing because it is not in a community with residences.)	☐	☐	☐	☒
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (This project will not affect population or housing because it is not in a community with residences.)	☐	☐	☐	☒

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• PUBLIC SERVICES. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☐	☒

Restoration of the site will limit road access across CR 87A during flood flows. This may cause some minor changes in the amount of time firetrucks, police, or individuals using the ACWA would travel if using CR 87A. However, since CR 87A is a dirt road, the project proponent is not aware of the local firetrucks or police using this road as a means to increase response time to their duties. Individuals recreating within ACWA will have to travel around using the paved county roads to the access points on the north and south ends of CR 87A if access is needed during flood flows. However, it is anticipated that access during these times will be minimal when compared to the actual use and need for access. Few people, other than DFG staff, use CR 87A in the project area for access.

• RECREATION. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (The project may increase the use by tourists or people recreating within ACWA due to increased visual aesthetics, habitat improvements, or increases in wildlife concentrations. However, these potential increases would be minimal as the ACWA is remote and does not attract numerous visitors from the local community or noncommunity members.)	☐	☐	☒	☐

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Does the project include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment? (The project does not include recreational facilities nor require their construction or expansion.)	☐	☐	☐	☒

There is no evidence that the project will directly affect existing recreational opportunities. However, one expected benefit of the project is improved fish and wildlife habitat, which may result in improved hunting and fishing opportunities for the public. DFG currently manages the timing and duration of these activities and has the authority to change them if impacts are occurring as a result of this project.

• TRANSPORTATION / TRAFFIC. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? (The project will not cause an increase in traffic.)	☐	☐	☐	☒
Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? (No service standard will be exceeded.)	☐	☐	☐	☒
Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (No air traffic patterns will be altered.)	☐	☐	☐	☒
Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (See comment below.)	☐	☐	☒	☐
Result in inadequate emergency access? (See comment below.)	☐	☐	☒	☐
Result in inadequate parking capacity? (No parking capacity will be affected.)	☐	☐	☐	☒
Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? (No alternative transportation plans will be affected by the project.)	☐	☐	☐	☒

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This project will not substantially increase hazards or result in inadequate emergency access. However, it will slightly change how motorists will use CR 87A. The restoration will result in slight flooding (1 inch to 1 ft) of CR 87A during flood events. Even at this flooding, the road will be "hardened" so that a vehicle could still pass during a flood event, although that route would not be recommended. Using CR 87A under this condition is not required because there are two other routes (one to the east and one to the west) on county roads that allow motorists to cross the creek and floodplain during flood flows. There will be an insignificant short-term increase in vehicle trips during the construction phase of the project, but this estimate is minimal (ca. four vehicles per day for 3 months).

• UTILITIES AND SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (N/A)	☐	☐	☐	☒
Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (See below comment.)	☐	☐	☒	☐
Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (This project will not result in the construction of new storm water drainage facilities.)	☐	☐	☐	☒
Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (In making this determination, the District shall consider whether the project is subject to the water supply assessment requirements of Water Code Section 10910, et. seq. (SB 610) and the requirements of Government Code Section 664737 (SB 221).	☐	☐	☐	☒

The proposed project will result in the installation of two pipelines to convey water that is currently being conveyed through existing stream and gullied channels. The pipeline locations have been designed to avoid and minimize impacts on the environment, and construction will occur at a time to avoid impacts on biological resources.

The project is expected to benefit the water supply by increasing the water within the meadow and groundwater.

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Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (N/A)	☐	☐	☐	☒
Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (There will be no solid waste disposal needs. The earth that will be excavated will be used in the project itself.)	☐	☐	☐	☒
Comply with federal, state, and local statutes and regulations related to solid waste? (N/A)	☐	☐	☐	☒

• MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Signif. Impact	No Impact
Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat or a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒

As mentioned, the objective of the project is to improve the quality of the environment by restoring the water table, aquatic habitat, and terrestrial habitat within the project area. It is believed that the gullies in the meadow have formed due to over a century of land-use practices that did not consider stream and meadow morphological principles (i.e. roads, culverts, bridges, farming, and overgrazing). These practices caused the current degraded situation that the project seeks to address. The project will improve the quality of the habitat, benefiting populations of fish and wildlife species.

Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	☐	☒

The pond-and-plug technique used in this restoration is a long-term, sustainable solution to degradation-related problems in the area. The technique addresses the root problem - loss of channel access to the floodplain and the subsequent dewatering of the meadow. By obliterating the gully and restoring the natural functionality of the system, the ecosystem will be able to maintain its environmental integrity over the long term, naturally adjusting to local, regional, and long-term climatic variability. Long-term benefits expected from this project include: transition from arid vegetative species like grasses and shrubs to a community of wet meadow species, increased

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absorption rates and groundwater levels, improved timing of drainage patterns resulting in attenuated flood flows, and increased summer base flows.

Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐

The Pit RCD conducted a Watershed Management Strategy in 2006 to assess natural resource issues and provide a strategy to improve those resource conditions. All stakeholders within the Pit RCD boundary were engaged for input, including DFG, and the resulting report was successful in identifying actions to improve resource conditions such as poor water quality and degraded habitat for fish and wildlife. Both DFG and the Pit RCD have implemented projects to improve resource issues. There is only one known project planned in the general area of this proposed project that has the potential to impact water quality, biological, and archeological resources. This project is sponsored by Modoc County and includes the replacement of two bridges on CR 87A. The project applicant and DFG have met with Modoc County and discussed the two projects. Both projects will incorporate similar measures to avoid, minimize, and mitigate impacts on the environment. It is unknown if the proposed projects may occur during the same year, but if they did, any potential impacts, when combined from each project, will still be less than significant. The bridge replacement footprint is a small fraction on the scale of this project and will not add any project effects or constraints. In fact, this proposed project eliminates the need for the second (most northern) bridge to be replaced by Modoc County, thereby saving funds and reducing any impacts associated with the replacement of that bridge.

Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (Since there is little human activity in the area, and the project is in accordance with current uses of the area, this project does not have environmental effects which will cause direct or indirect adverse effects on human beings.)	☐	☐	☐	☒

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Photo Comparisons
Project Name: Ash Creek Wildlife Area Restoration Project

1. Aerial photo of incised gullies w/ dessicated landscape.

2. Upstream of incised gullies in pristine reach.

3. End of intact channel, headcut in background.

4. Incised and channelized reach (see left center, photo 1).

Photo Comparisons
Project Name: Ash Creek Wildlife Area Restoration Project

5. Headcut initiation point.

6. Headcut initiation point.

7. Gully formation just below headcut point.

8. Lateral expansion of incised gully.

Appendix B
ACWA Cut and Fill Balance Worksheet

Appendix B POND SIZES AT ASH CREEK WILDLIFE AREA RESTORATION PROJECT		
Borrow Site Site No.	**Pond (square ft)**	**Pond (acres)**
1	176,368	4.0
2	353,795	8.1
3	574,989	13.2
4	459,461	10.5
5	118,907	2.7
6	143,281	3.3
7	140,684	3.2
8	148,583	3.4
9	319,725	7.3
10	130,871	3.0
11	71,802	1.6
12	404,350	9.3
13	263,713	6.1
14	170,933	3.9
15	346,252	7.9
16	67,709	1.6
17	288,162	6.6
18	526,142	12.1
19	372,113	8.5
20	427,504	9.8
21	135,244	3.1
22	116,493	2.7
23	163,595	3.8
24	99,907	2.3
25	164,092	3.8
26	149,593	3.4
27	55,888	1.3
28	156,661	3.6
29	150,793	3.5
30	82,557	1.9
31	61,906	1.4
32	59,970	1.4
33	49,637	1.1
34	49,373	1.1
35	49,854	1.1
36	57,014	1.3

37	46,248	1.1
38	73,497	1.7
39	70,592	1.6

Appendix C
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT

Common Name Scientific Name	Status [a] Federal/State	California Distribution	Habitats	Pote
American white pelican *Pelecanus erythrorhynchos*	--/SSC	Historically, nested at large lakes throughout California; only breeding colonies in the state occur at lower Klamath National Wildlife Refuge, Siskiyou County, and at Clear Lake, Modoc County; winters along the California coast from southern Sonoma County south to San Diego County; inland, occurs at the Salton Sea, inland from the San Francisco Bay through the Delta region, and in areas in Kings, Kern, Riverside, and Imperial Counties and the Sacramento Valley	Freshwater lakes with islands for breeding; inhabits river sloughs, freshwater marshes, salt ponds, and coastal bays during the rest of the year	Known 10)occas managed young ha habitat o
Double-crested cormorant *Phalacrocorax auritus*	--/SSC	Winters along the entire California coast and inland over the Coast Ranges into the Central Valley from Tehama County to Fresno County; a permanent resident along the coast from Monterey County to San Diego County, along the Colorado River, Imperial, Riverside, Kern, and King Counties, and the islands off San Francisco; breeds in Siskiyou, Modoc, Lassen, Shasta, Plumas, and Mono Counties; also breeds in the San Francisco Bay Area and in Yolo and Sacramento Counties	Rocky coastlines, beaches, inland ponds, and lakes; needs open water for foraging, and nests in riparian forests or on protected islands, usually in snags	Known forage in wetlands onsite.
Osprey *Pandion haliaetus*	MIS/SSC	Nests along the north coast from Marin County to Del Norte County, east through the Klamath and Cascade Ranges, and the upper Sacramento Valley; important inland breeding populations at Shasta Lake, Eagle Lake, and Lake Almanor and small numbers elsewhere south through the Sierra Nevada; winters along the coast from San Mateo County to San Diego County	Nests in snags or cliffs or other high, protected sites near the ocean, large lakes, or rivers with abundant fish populations	Low; lik wetlands suitable onsite
White-faced ibis *Plegadis chihi*	--/SSC	Both resident and winter populations on the Salton Sea and in isolated areas in Imperial, San Diego, Ventura, and Fresno Counties; breeds at Honey Lake, Lassen County, at Mendota Wildlife Management Area, Fresno County, and near Woodland, Yolo County; winters in Merced County and along the Sacramento River in Colusa, Glenn, Butte, Sutter, and Yolo Counties	Prefers freshwater marshes with tules, cattails, and rushes, but may nest in trees and forage in flooded agricultural fields, especially flooded rice fields	Known managed wildlife last ten y region d
Sage grouse *Centrocercus urophasianus*	MIS/SSC	Great Basin lands in eastern California in Modoc, Lassen, and northern Inyo Counties	Dependent on sage-brush (*Artemisia tridentata*) for food and cover; restricted to flat plains or rolling hills	Not kno to occur sighting
White-tailed kite *Elanus leucurus*	--/FP	Lowland areas west of Sierra Nevada from head of Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging	Known on one k winter (F

Appendix C
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT

Common Name Scientific Name	Status [a] Federal/State	California Distribution	Habitats	Pote
Bald eagle *Haliaeetus leucocephalus*	T/E,FP	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin; reintroduced into central coast; winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierras, and east of the Sierra Nevada south of Mono County; range expanding	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, a reservoir, a stream, or the ocean	Known observe are know
Golden eagle *Aquila chrysaetos*	FSS/SSC, FP	Foothills and mountains throughout California; uncommon nonbreeding visitor to lowlands such as the Central Valley	Cliffs and escarpments or tall trees for nesting; annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals for prey	Known on the W
Northern harrier *Circus cyaneus*	--/SSC	Throughout lowland California; has been recorded in fall at high elevations	Grasslands, meadows, marshes, and seasonal and agricultural wetlands providing tall cover	Known observe area.
Sharp-shinned hawk *Accipiter striatus*	--/SSC	Permanent resident on the Sierra Nevada, Cascade, Klamath, and north Coast Ranges at midelevations and along the coast in Marin, San Francisco, San Mateo, Santa Cruz, and Monterey Counties; winters over the rest of the state except very high elevations	Dense canopy ponderosa pine or mixed-conifer forest and riparian habitats	Known migratio habitat is
Cooper's hawk *Accipiter cooperii*	--/SSC	Throughout California except high altitudes in the Sierra Nevada; winters in the Central Valley, southeastern desert regions, and plains east of the Cascade Range; permanent residents occupy the rest of the state	Nests primarily in riparian forests dominated by deciduous species; also nests in densely canopied forests from digger pine-oak woodland up to ponderosa pine; forages in open woodlands	Known migratio habitat is
Swainson's hawk *Buteo swainsoni*	FSS,MIS/T	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley; the state's highest nesting densities occur near Davis and Woodland, Yolo County	Nests in oaks or cottonwoods in or near riparian habitats; forages in grasslands, irrigated pastures, grain fields, and vegetable crops	Known on the W nest site area (Hu occasion during th nesting t were insp surveys.

Appendix C
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT

Common Name Scientific Name	Status [a] Federal/State	California Distribution	Habitats	Pote
Ferruginous hawk *Buteo regalis*	SC/SSC	Does not nest in California; winter visitor along the coast from Sonoma County to San Diego County, eastward to the Sierra Nevada foothills and southeastern deserts, the Inyo-White Mountains, the plains east of the Cascade Range, and Siskiyou County	Open terrain in plains and foothills where ground squirrels and other prey are available	Known foraging
Merlin *Falco columbarius*	--/SSC	Does not nest in California; rare but widespread winter visitor to the Central Valley and coastal areas	Forages along coastlines, open grasslands, savannas, and woodlands; often forages near lakes and other wetlands	Moderat may occ during n
American peregrine falcon *Falco peregrinus anatum*	--/E,FP	Permanent resident on the north and south Coast Ranges; may summer on the Cascade and Klamath Ranges south through the Sierra Nevada to Madera County; winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large populations of other bird species	Known foraging managed project s onsite ar region.
Prairie falcon *Falco mexicanus*	MIS/SSC	Found as permanent resident on the south Coast, Transverse, Peninsular, and northern Cascade Ranges, the southeastern deserts, Inyo-White Mountains, Modoc, Lassen, and Plumas Counties, and the foothills surrounding the Central Valley; winters in the Central Valley, along the coast from Santa Barbara County to San Diego County, and in Marin, Sonoma, Humboldt, Del Norte, and Inyo Counties	Cliffs or escarpments for nesting; adjacent dry, open terrain or uplands, marshes, and seasonal marshes for foraging	Known foraging nesting h was not
Greater sandhill crane *Grus canadensis tabida*	FSS,MIS/T,FP	Breeds on the plains east of the Cascade Range and south to Sierra County; winters in the Central Valley, southern Imperial County, Lake Havasu National Wildlife Refuge, and the Colorado River Indian Reserve	Summers in open terrain near shallow lakes or freshwater marshes; winters in plains and valleys near bodies of fresh water	Known suspecte
Long-billed curlew *Numenius americanus*	--/SSC	Nests in northeastern California in Modoc, Siskiyou, and Lassen Counties; winters along coast or in interior valleys west of Sierra Nevada	Nests at high-elevation grasslands adjacent to lakes or marshes during migration and in winter; frequents coastal beaches and mudflats or interior grasslands and agricultural fields	Known observed areas. T project a
Black tern *Chlidonias niger*	--/SSC	Spring and summer resident of the Central Valley, Salton Sea, and northeastern California where suitable emergent wetlands occur	Freshwater wetlands, lakes, ponds, moist grasslands, and agricultural fields; feeds mainly on fish and invertebrates while hovering over water	Known been do past surv nesting c onsite.

Appendix C
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT

Common Name Scientific Name	Status [a] Federal/State	California Distribution	Habitats	Pote
Western burrowing owl *Athene cunicularia hypugea*	--/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast	Rodent burrows in sparse grassland, desert, and agricultural habitats	Not kno observec observec
Short-eared owl *Asio flammeus*	--/SSC	Permanent resident along the coast from Del Norte County to Monterey County although very rare in summer north of San Francisco Bay, in the Sierra Nevada north of Nevada County, in the plains east of the Cascades, and in Mono County; small, isolated populations also nest in the Central Valley; winters on the coast from San Luis Obispo County to San Diego County, in the Central Valley from Tehama to Kern County, in the eastern Sierra Nevada from Sierra County to Alpine County, on the Channel Islands, and in Imperial County	Freshwater and salt marshes, lowland meadows, and irrigated alfalfa fields; needs dense tules or tall grass for nesting and daytime roosts	Known been obs habitats; nesting during e habitat.
Red-breasted sapsucker *Sphyrapicus rubber*	MIS/---	Coastal mountains from Del Norte County to Sonoma Counties, through Cascades to Lassen County; south in Sierra Nevada to Kern County	Coniferous forests and mixed woodlands; nests in cavities in large trees or snags	High; su suitable
Loggerhead shrike *Lanius ludovicianus*	--/SSC	Resident and winter visitor in lowlands and foothills throughout California; rare on coastal slope north to Mendocino County, occurring only in winter	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches	Known during st project a
Yellow warbler *Dendroica petechia*	MIS/---	Nests over all of California except the Mojave Desert region, and high altitudes in the Sierra Nevada; winters along the Colorado River and in parts of Imperial and Riverside Counties; two small permanent populations in San Diego and Santa Barbara Counties	Primarily nests in riparian habitats adjacent to creeks and rivers	Known during m project s
Tricolored blackbird *Agelaius tricolor*	--/SSC	Largely endemic to California; permanent residents in the Central Valley from Butte County to Kern County; at scattered coastal locations from Marin County south to San Diego County; breeds at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grain fields;	Low; sui species the site low qual
Pronghorn *Antilocapra americana*	MIS/---	Eastern slope of Cascade and Sierra Nevada Ranges in Modoc, Lassen, Plumas, and Sierra Counties.	Forage mostly in sagebursh scrub and juniper woodlands; use forested areas during migration	Known site; a he observec
Mule deer *Odocoileus hemionus*	MIS/---	Cascade Range and Great Basin Eastern	Summer at higher elevations in coniferous forests and riparian areas; winter in lower elevations near valley edges	High; sp site

Appendix C
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT

Common Name Scientific Name	Status [a] Federal/State	California Distribution	Habitats	Pote
Western red bat *Lasiurus blossevillii*	FSS/---	Distribution scattered and unclear in California	Riparian areas; roost in tree foliage	Unknow surveys. very den
Pale Townsend's (western) big-eared bat *Corynorhinus townsendii pallescens*	--/SSC	Klamath Mountains, Cascades, Sierra Nevada, Central Valley, Transverse and Peninsular Ranges, Great Basin, and the Mojave and Sonora Deserts	Mesic habitats; gleans insects from brush or trees and feeds along habitat edges	Unknow but none
Pygmy rabbit *Brachylagus idahoensis*	--/SSC	Found in the Great Basin in portions of Modoc, Lassen, and Mono Counties	Associated with tall, dense sagebrush, bitterbrush, and piñon-juniper habitats	Not kno site is ou
Pit Roach *Lavinia symmetricus mitrulus*	--/SSC	Upper Pit River drainage	Associated with small, warm intermittent streams	Not kno tributari
Hardhead *Mylopharodon conocephalus*	--/SSC	Sacramento-San Joaquin River drainage - Pit River to Kern River	Clear deep pools with sand-gravel-boulder substrate with slow water velocities	Known
Western Pond Turtle *Actinemys marmorata marmorata*	FSS/SSC	San Francisco north to British Columbia, west of the crest of the Cascades and Sierra Nevada.	Ponds, lakes, streams, marshes and irrigation ditches with abundant vegetation and rocky or muddy bottoms.	Known

[a] Status definitions:
E=Listed as Endangered under the federal or state Endangered Species Act
T=Listed as Threatened under the federal or state Endangered Species Act
SSC=California species of special concern
FP=California fully protected species
FSS=United States Forest Service Sensitive Species
BLMSS=Bureau of Land Management Sensitive Species
MIS=United States Forest Service Management Indicator Species

Appendix D
SPECIAL-STATUS VASCULAR PLANTS WITH POTENTIAL TO OCCUR AT THE ASH CREEK WILI
LASSEN AND MODOC COUNTIES, CALIFORNIA

Common Name Scientific Name	Status* (CNPS)	Geographic Range (CA Counties; States)	CNPS Habitats† (Elevation)	
Hillside Arnica *Arnica fulgens*	2.2	Lassen, Modoc, Plumas, Siskiyou?, and elsewhere	GBScr, LCFrs, Medws/mesic (1495-2700 m)	
Lemmon's Milkvetch [1] *Astragalus lemmonii*	1B.2	Lassen, Modoc, Mono, Plumas, Sierra, Shasta; Nevada and Oregon	GBScr, Medws, MshSw (Lake shore) (1007-2200 m)	
Long-haired Star Tulip *Calochortus longebarbatus var. longebarbatus.*	1B.2	Lassen, Modoc, Shasta, Siskiyou; Oregon and Washington	GBScr, LCFrs (openings and drainages Medws, VnPls/clay, mesic (1200-1900 m)	
Awned Sedge *Carex atherodes*	2.2	Lassen, Modoc; Idaho, Nevada, New Mexico, Oregon, Utah, Washington and elsewhere	Medws, MshSw, PJWld/mesic (1300-1400 m)	
Liddon's Sedge *Carex petasata*	2.3	Alpine, Lassen, Mono, Modoc; Oregon and elsewhere	BUFrs, LCFrs, Medws, PJWld (600-3320 m)	
Sheldon's Sedge [1] *Carex sheldonii*	2.2	Lassen, Modoc, Placer, Plumas; Idaho, Oregon, Utah and elsewhere	LCFrs (mesic), MshSw (freshwater), R (1200-2012 m)	
Castlegar Hawthorne *Crataegus castlegarensis*	3	Shasta, Modoc: Oregon, Washington, Idaho, Utah, Wyoming and Canada	RpScr, moist rocky loam (0-975)	
Doublet *Dimeresia howellii*	2.3	Lassen, Modoc; Idaho, Nevada and Oregon	LCFrs, PJWld/ volcanic, xeric (1340-2380 m)	
Great Basin Downingia [1] *Downingia laeta*	2.2	Lassen, Modoc, Siskiyou; Idaho, Nevada, Oregon, Utah, Wyoming, and elsewhere	GBScr (mesic), Medws, MshSw (shallo freshwater), PJWld/ mesic, VnPls (1220-2200 m)	
Volcanic Daisy *Erigeron elegantulus*	4.3	Lassen, Modoc, Shasta, Siskiyou and Tehama; and from Oregon	GBScr, PJWld, UCFrs, AlpBr, SCFrs/volcanic; (1000-2665 m)	
Prostrate Buckwheat *Eriogonum prociduum*	1B.2	Lassen, Modoc; Nevada and Oregon	GBScr, PJWld, UCFrs/volcanic (1300-2705 m)	
Aleppo Avens *Geum aleppicum*	2.2	Lassen, Modoc, Siskiyou; Oregon and elsewhere	GBScr, LCFrs, Medws (450-1500 m)	
Boggs Lake Hedge-hyssop *Gratiola heterosepala*	1B.2 SE	Fresno, Lake, Lassen, Madera, Merced, Modoc, Placer, Sacramento, Shasta, Siskiyou, San Joaquin, Solano, Tehama; Oregon	MshSw(lake margin), VnPls/clay (10-2375 m)	
Baker's Globemallow *Iliamna bakeri*	4.2	Lake, Lassen, Mendocino, Modoc, Shasta, Siskiyou, Tehama, Trinity; Oregon	Chprl, GBScr, LCFrs (openings), PJWld/volcanic-often burn areas (1000-2500 m)	
Raven's Lomatium *Lomatium ravenii*	2.3	Lassen, Modoc; Idaho, Nevada, Oregon and Utah	GBScr (adobe, alkaline) (1000-3000 m)	

Appendix D
SPECIAL-STATUS VASCULAR PLANTS WITH POTENTIAL TO OCCUR AT THE ASH CREEK WILI
LASSEN AND MODOC COUNTIES, CALIFORNIA

Common Name Scientific Name	Status* (CNPS)	Geographic Range (CA Counties; States)	CNPS Habitats† (Elevation)	
Cusick's Monkeyflower *Mimulus cusickii*	2.3	Modoc; Idaho, Nevada, Oregon and Washington	GBSrs, LCFrs/roadside, gravelly, scre volcanic (600-1830 m)	
Ephemeral Monkeyflower *Mimulus evanescens*	1B.2	Lassen, Modoc, Siskiyou; Idaho, Nevada, Oregon	GBScr, LCFrs, PJWld/gravelly or rock (1250-1740 m)	
Egg Lake Monkeyflower *Mimulus pygmaeus*	4.2	Lassen. Modoc, Plumas, Shasta, Siskiyou; Oregon	GBScr, LCFrs, Medws, PJWld/mesic, streamsides, volcanic, clay (500-1840m)	
Slender Orcutt Grass *Orcuttia tenuis*	1B.1 SE,FE	Lake Lassen, Plumas, Sacramento, Shasta, Siskiyou and Tehama	VnPls (35-1760 m)	
Janish's Beardtongue *Penstemon janishiae*	2.2	Lassen, Modoc; Idaho, Nevada and Oregon	GBScr, LCFrs, PJWld/gravelly, volcan (1065-2350 m)	
Profuse-flowered Pogogyne *Pogogyne floribunda*	1B.2	Lassen, Modoc, Shasta, Siskiyou; Oregon	VnPls (945-1745 m)	
Eel-grass Pondweed *Potamogeton zosteriformis*	2.2	Contra Costa, Lake, Lassen, Modoc, Shasta	MshSw (freshwater) (0-1860 m)	
Black Rock Potentilla *Potentilla basaltica*	2.2	Lassen; Nevada	GBScr, Medws, PJWld (mesic) 1400-1800 m)	
Macoun's Buttercup [2] *Ranunculus macounii*	2.2	El Dorado, Lassen, Mendocino, Modoc: Arizona, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming and elsewhere	GBScr, Medws, PJWld (mesic) (1400-1800 m)	
Marsh Skullcap [2] *Scutellaria galericulata*	2.2	El Dorado, Lassen Modoc, Nevada, Plumas, Shasta, San Joaquin, Siskiyou?; Oregon and elsewhere	LCFrs, Medws, MshSw (0-2100 m)	
Sweet Marsh Ragwort *Senecio hydrophilnides*	4.2	Lassen, Modoc, Mono, Plumas, and Siskiyou Counties; Oregon, Nevada and elsewhere	LCFrs, Medws (mesic); 490-2800 m)	
Marsh Hedge Nettle *Stachys palustris* ssp. *pilosa*	2.3	Modoc, Shasta, Siskiyou; Arizona, Nevada, New Mexico, Oregon, Utah, Washington and elsewhere	GBSrc (mesic), Medws, (1200-1770 m)	
Woolly Stenotus *Stenotus lanuginosus*	2.2	Lassen. Modoc; Idaho, Oregon, Washington and elsewhere	GBSrc, Medws, PJWld (gravelly loam) (1500-1910 m)	
Howell's Thelypodium [1] *Thelypodium howellii* ssp. *howellii*	1B.2	Lassen, Modoc, Shasta; Oregon and Washington	GBScr, Medws (alkaline) (1200-1830 m)	

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LASSEN AND MODOC COUNTIES, CALIFORNIA

Common Name Scientific Name	Status* (CNPS)	Geographic Range (CA Counties; States)	CNPS Habitats† (Elevation)	
Plummer's Clover *Trifolium gymnocarpon* var. *plummarae*	2.3	Lassen, Modoc, Sierra?; Arizona, Idaho, Nevada, New Mexico, Oregon, Utah, Wyoming and elsewhere	GBScr, PJWld, (1500-1920 m)	
Howell's Triteleia [2] *Triteleia grandiflora* var. *howellii*	2.1	Modoc, Siskiyou; Oregon, Washington and elsewhere	GBScr, PJWld (700-1500 m)	
Flat-leaved Bladderwort *Utricularia intermedia*	2.2	Butte, Fresno, Modoc, Plumas, Tulare; Idaho, Nevada, Utah, Washington and elsewhere	BgFns, Medws (mesic), MshSw (lake n (1200-2700 m)	

[1] Plant species encountered during the 2008 surveys
[2] Plant species documented in the CNDDB from the ACWA or immediate vicinity
*** California Native Plant Society (CNPS) Status Codes:**
List **1B** = Rare, Threatened, or Endangered in CA and elsewhere
List **2** = Rare, Threatened or Endangered in CA but more common elsewhere.
List **4** = Limited Distribution in CA
Threat ranks: **0.1** = high; **0.2** = moderate; **0.3** = low
† Plant Community Association Codes: BgFns = Bogs and Fens; **BUFrs** = Broadleafed Upland Forest; **Chprl** = Chaparral; **GBScr** = Great Basin Scrub; **LCFrs** = Low
Medws = Meadows and Seeps; **MshSw** = Marshes and Swamps; **PJWld** = Pinyon Juniper Woodland; **UCFrs** = Upper Montane Coniferous Forest; **VnPls** = Vernal Pools

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Ash Creek Wildlife Area Restoration

Lead Agency: California Department of Fish and Game — Contact Person: Steve Burton

Mailing Address: 1724 Ball Mtn. Road — Phone: (530) 459-1129

City: Montague — Zip: CA — County: Siskiyou

Project Location: County: Lassen/Modoc — City/Nearest Community: Bieber

Cross Streets: State Highway 299 and Bieber Lookout Road — Zip Code: 96009

Longitude/Latitude (degrees, minutes and seconds): 41° 11' 14.54" N / 121° 01' 43.48" W — Total Acres: 3,500

Assessor's Parcel No.: 0003-0010-0008, 0012-0180-0028, 0012-0190-0007 and 0008, 0012-0200-0012 — Section: 22,27,28,29,30,31,32,33

Twp.: 39N — Range: 8E — Base: Mt. Diablo Meridian

Within 2 Miles: State Hwy #: 299 — Waterways: Ash Creek

Airports: Bieber — Railways: None — Schools: Bieber/Adin

Document Type:

CEQA: ☐ NOP ☐ Early Cons ☐ Neg Dec ☒ Mit Neg Dec ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ☐ Other:

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other:

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan
☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan
☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.)
☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☒ Other: Habitat Restoration

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Development Type:

☐ Residential: Units ____ Acres ____
☐ Office: Sq.ft. ____ Acres ____ Employees ____
☐ Commercial: Sq.ft. ____ Acres ____ Employees ____
☐ Industrial: Sq.ft. ____ Acres ____ Employees ____
☐ Educational: ____
X Recreational: Wetland/Riparian Habitat Type Restoration
☐ Water Facilities: Type ____ MGD ____

☐ Transportation: Type ____
☐ Mining: Mineral ____
☐ Power: Type ____ MW ____
☐ Waste Treatment: Type ____ MGD ____
☐ Hazardous Waste: Type ____
☐ Other: ____

Project Issues Discussed in Document:

☐ Aesthetic/Visual
☐ Agricultural Land
☐ Air Quality
☒ Archeological/Historical
☒ Biological Resources
☐ Coastal Zone
☐ Drainage/Absorption
☐ Economic/Jobs
☐ Fiscal
☒ Flood Plain/Flooding
☐ Forest Land/Fire Hazard
☐ Geologic/Seismic
☐ Minerals
☐ Noise
☒ Population/Housing Balance
☐ Public Services/Facilities
☒ Recreation/Parks
☐ Schools/Universities
☐ Septic Systems
☐ Sewer Capacity
☒ Soil Erosion/Compaction/Grading
☐ Solid Waste
☐ Toxic/Hazardous
☒ Traffic/Circulation
☒ Vegetation
☒ Water Quality
☐ Water Supply/Groundwater
☒ Wetland/Riparian
☐ Growth Inducement
☐ Land Use
☐ Cumulative Effects
☐ Other: ____

Present Land Use/Zoning/General Plan Designation:

Agriculture and wetland management/Agricultural Preserve/Agriculture general and Agricultural exclusive

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Project Description: *(please use a separate page if necessary)*

The Ash Creek Widlife Area (ACWA) provides important habitat for a variety of biological species and is one of the major nesting areas for the State threatened greater sandhill crane. Existing habitat and natural resources along Ash Creek and its associated floodplain are degraded and continue to degrade due to a variety of past management practices which occurred prior to the State's purchase of the property. A proven restoration method, known as the "pond-and-plug" technique, is proposed to restore approximately 3,500 acres on the ACWA by allowing flood flows access to the floodplain.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2010

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

____	Air Resources Board	X	Office of Historic Preservation
____	Boating & Waterways, Department of	____	Office of Public School Construction
____	California Emergency Management Agency	____	Parks & Recreation, Department of
____	California Highway Patrol	____	Pesticide Regulation, Department of
____	Caltrans District # ____	____	Public Utilities Commission
____	Caltrans Division of Aeronautics	X	Regional WQCB # 5
____	Caltrans Planning	____	Resources Agency
____	Central Valley Flood Protection Board	____	Resources Recycling and Recovery, Department of
____	Coachella Valley Mtns. Conservancy	____	S.F. Bay Conservation & Development Comm.
____	Coastal Commission	____	San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
____	Colorado River Board	____	San Joaquin River Conservancy
____	Conservation, Department of	____	Santa Monica Mtns. Conservancy
____	Corrections, Department of	____	State Lands Commission
____	Delta Protection Commission	____	SWRCB: Clean Water Grants
____	Education, Department of	X	SWRCB: Water Quality
____	Energy Commission	____	SWRCB: Water Rights
____	Fish & Game Region # ____	____	Tahoe Regional Planning Agency
____	Food & Agriculture, Department of	____	Toxic Substances Control, Department of
____	Forestry and Fire Protection, Department of	____	Water Resources, Department of
____	General Services, Department of		
____	Health Services, Department of	X	Other: Modoc County Planning Department/Public Works
____	Housing & Community Development	X	Other: Lassen County Community Development/Public Works
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date 7/1/10 Ending Date 7/30/10

Lead Agency (Complete if applicable):

Consulting Firm: Vestra Resources Inc.
Address: 5300 Aviation Dr.
City/State/Zip: Redding/CA/96002
Contact: ____
Phone: (530) 223-2585

Applicant: ____
Address: ____
City/State/Zip: ____
Phone: ____

Signature of Lead Agency Representative: Mark Taylor **Date:** 6/24/2010

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.