Central San Joaquin Floodplain Restoration

Project Information

1. **Proposal Title:**

   Central San Joaquin Floodplain Restoration

2. **Proposal applicants:**

   Ron Stromstad, Ducks Unlimited, Inc.
   Norman Crow, West Stanislaus Resource Conservation District

3. **Corresponding Contact Person:**

   Pat Fitzmorris
   Ducks Unlimited, Inc.
   Western Regional Office 3074 Gold Canal Drive Rancho Cordova, CA 95670-6116
   916 852-2000
   pfitzmorris@ducks.org

4. **Project Keywords:**

   At-risk species, fish
   Habitat Restoration, Riparian
   Water and Sediment Quality

5. **Type of project:**

   Implementation_Pilot

6. **Does the project involve land acquisition, either in fee or through a conservation easement?**

   No

7. **Topic Area**:

   Natural Flow Regimes

8. **Type of applicant:**

   Private non-profit

9. **Location - GIS coordinates:**

   Latitude: 37.562

   Longitude: -121.159

   Datum:

Describe project location using information such as water bodies, river miles, road intersections, landmarks, and size in acres.

Project is on the San Joaquin River, immediately north of the town of Grayson. The project is 742 acres.

10. **Location - Ecozone:**

    12.1 Vernalis to Merced River, 12.2 Merced River to Mendota Pool

11. **Location - County:**

    Stanislaus

12. **Location - City:**

    Does your project fall within a city jurisdiction?

    No

13. **Location - Tribal Lands:**

    Does your project fall on or adjacent to tribal lands?

    No

14. **Location - Congressional District:**

    18

15. **Location:**

    California State Senate District Number: 12

    California Assembly District Number: 26

16. **How many years of funding are you requesting?**

    3

17. **Requested Funds:**
    a) Are your overhead rates different depending on whether funds are state or federal?

       No

       If no, list single overhead rate and total requested funds:

       Single Overhead Rate: 18.96

       Total Requested Funds: $2,175,004

    b) Do you have cost share partners already identified?

No

c) Do you have potential cost share partners?

No

d) Are you specifically seeking non-federal cost share funds through this solicitation?

No

If the total non-federal cost share funds requested above does not match the total state funds requested in 17a, please explain the difference:

18. **Is this proposal for next-phase funding of an ongoing project funded by CALFED?**

No

Have you previously received funding from CALFED for other projects not listed above?

Yes

If yes, identify project number(s), title(s) and CALFED program.

99-B02 Lower Butte Creek: Phase II CALFED

96-M22 Gorrill Dam Fish Screen CALFED

95-M105 M&T/Parrott, Pumping Station and Fish Screen CALFED

96-M21 Rancho Esquon/Adams Dam Fish Screen CALFED

97-N18 San Pablo Bay NWR, Cullinan Ranch CALFED

97-N19 San Pablo Bay NWR, Tolay Creek CALFED

19. **Is this proposal for next-phase funding of an ongoing project funded by CVPIA?**

No

Have you previously received funding from CVPIA for other projects not listed above?

Yes

If yes, identify project number(s), title(s) and CVPIA program.

11332-0J003 Lower Butte Creek CVPIA

1448-11300-97-J172 (B)(22) Administration CVPIA

113007J043 (B)(22) Administration CVPIA

1448-11332-9J006 Lower Butte Creek CVPIA

113329-9-J135 Lower Butte Creek CVPIA

11332-9-J122 Lower Butte Creek CVPIA

20. **Is this proposal for next-phase funding of an ongoing project funded by an entity other than CALFED or CVPIA?**

    No

    Please list suggested reviewers for your proposal. (optional)

21. **Comments:**

Environmental Compliance Checklist

Central San Joaquin Floodplain Restoration

1. **CEQA or NEPA Compliance**
   a) Will this project require compliance with CEQA?

      No
   b) Will this project require compliance with NEPA?

      No
   c) If neither CEQA or NEPA compliance is required, please explain why compliance is not required for the actions in this proposal.

      This project is an agricultural land use project that is exempt from CEQA and NEPA

2. **If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies).** *If not applicable, put "None".*

   CEQA Lead Agency:
   NEPA Lead Agency (or co-lead:)
   NEPA Co-Lead Agency (if applicable):

3. **Please check which type of CEQA/NEPA documentation is anticipated.**

   CEQA
   -Categorical Exemption
   -Negative Declaration or Mitigated Negative Declaration
   -EIR
   Xnone

   NEPA
   -Categorical Exclusion
   -Environmental Assessment/FONSI
   -EIS
   Xnone

   If you anticipate relying on either the Categorical Exemption or Categorical Exclusion for this project, please specifically identify the exemption and/or exclusion that you believe covers this project.

4. **CEQA/NEPA Process**
   a) Is the CEQA/NEPA process complete?

      Not Applicable

   b) If the CEQA/NEPA document has been completed, please list document name(s):

5. **Environmental Permitting and Approvals** (*If a permit is not required, leave both Required? and Obtained? check boxes blank.*)

LOCAL PERMITS AND APPROVALS

Conditional use permit

Variance

Subdivision Map Act

Grading Permit

General Plan Amendment

Specific Plan Approval

Rezone

Williamson Act Contract Cancellation

Other

STATE PERMITS AND APPROVALS

Scientific Collecting Permit

CESA Compliance: 2081

CESA Compliance: NCCP

1601/03

CWA 401 certification

Coastal Development Permit

Reclamation Board Approval

Notification of DPC or BCDC

Other

FEDERAL PERMITS AND APPROVALS

ESA Compliance Section 7 Consultation

ESA Compliance Section 10 Permit

Rivers and Harbors Act

CWA 404

Other

PERMISSION TO ACCESS PROPERTY

Permission to access city, county or other local agency land.
Agency Name:

Permission to access state land.
Agency Name:

Permission to access federal land.
Agency Name:

Permission to access private land.
Landowner Name:

6. **Comments.**

This project will take place on private lands. NRCS has purchased conservation easements on these lands and in doing so has permission to access. As a courtesy, landowners will always be notified 24 hours ahead of day of access.

Land Use Checklist

Central San Joaquin Floodplain Restoration

1. **Does the project involve land acquisition, either in fee or through a conservation easement?**

   No

2. **Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal?**

   Yes

3. **Do the actions in the proposal involve physical changes in the land use?**

   Yes

   If you answered yes to #3, please answer the following questions:

   a) How many acres of land will be subject to a land use change under the proposal?

      742

   b) Describe what changes will occur on the land involved in the proposal.

      These lands are being converted from agricultural cropland to riparian/wetland wildlife habitat.

   c) List current and proposed land use, zoning and general plan designations of the area subject to a land use change under the proposal.

Category	Current	Proposed (if no change, specify "none")
Land Use	**agricultural**	**riparian/wetland habitat**
Zoning	**Agriculture**	**None**
General Plan Designation	**Agriculture**	**None**

   d) Is the land currently under a Williamson Act contract?

      Yes

   e) Is the land mapped as Prime Farmland, Farmland of Statewide Importance, Unique Farmland or Farmland of Local Importance under the California Department of Conservation's Farmland Mapping and Monitoring Program?

      No

   f) Describe what entity or organization will manage the property and provide operations and maintenance services.

The properties are in private hands and will be managed by the landowners.

4. **Comments.**

Conflict of Interest Checklist

Central San Joaquin Floodplain Restoration

Please list below the full names and organizations of all individuals in the following categories:

- **Applicants listed in the proposal who wrote the proposal, will be performing the tasks listed in the proposal or who will benefit financially if the proposal is funded.**
- **Subcontractors listed in the proposal who will perform some tasks listed in the proposal and will benefit financially if the proposal is funded.**
- **Individuals not listed in the proposal who helped with proposal development, for example by reviewing drafts, or by providing critical suggestions or ideas contained within the proposal.**

The information provided on this form will be used to select appropriate and unbiased reviewers for your proposal.

Applicant(s):

Ron Stromstad, Ducks Unlimited, Inc.
Norman Crow, West Stanislaus Resource Conservation District

Subcontractor(s):

Are specific subcontractors identified in this proposal? Yes

If yes, please list the name(s) and organization(s):

Norm Crow	**West Stanislaus Resource Conservation District**
None	**None**
None	**None**
None	**None**
None	**None**

Helped with proposal development:

Are there persons who helped with proposal development?

No

Comments:

Other subcontractors have yet to be identified

Budget Summary

Central San Joaquin Floodplain Restoration

Please provide a detailed budget for each year of requested funds, indicating on the form whether the indirect costs are based on the Federal overhead rate, State overhead rate, or are independent of fund source.

Independent of Fund Source

Year 1												
Task No.	Task Description	Direct Labor Hours	Salary *(per year)*	Benefits *(per year)*	Travel	Supplies & Expendables	Services or Consultants	Equipment	Other Direct Costs	Total Direct Costs	Indirect Costs	Total Cost
1	Project Management	800	22400	6400	-	-	25000	-	33600	87400.0	6371	93771.00
2	Feasibility Study	100	2800	800	-	-	150000	-	4200	157800.0	29919	187719.00
3	Flood Plain Design	100	2800	800	-	-	100000	-	4200	107800.0	20439	128239.00
4	Construction	-	-	-	-	-	-	-	-	0.0	-	0.00
5	Riparin Revegetation	-	-	-	-	-	-	-	-	0.0	-	0.00
6	Upland Revegetation	-	-	-	-	-	-	-	-	0.0	-	0.00
7	Project Monitoring	-	-	-	-	-	50000	-	-	50000.0	9480	59480.00
8	Riverine Riparian Mapping	-	-	-	-	-	-	-	-	0.0	-	0.00
		1000	28000.00	8000.00	0.00	0.00	325000.00	0.00	42000.00	403000.00	66209.00	469209.00

Year 2												
Task No.	Task Description	Direct Labor Hours	Salary *(per year)*	Benefits *(per year)*	Travel	Supplies & Expendables	Services or Consultants	Equipment	Other Direct Costs	Total Direct Costs	Indirect Costs	Total Cost
1	Project Management	600	17400	4971	-	-	25000	-	27738	75109.0	14241	89350.00
2	Feasibility Study	-	-	-	-	-	-	-	-	0.0	-	0.00
3	Flood Plain Design	333	9657	2759	-	-	25000	-	15395	52811.0	10013	62824.00
4	Construction	217	6393	1798	-	-	210000	-	10032	228223.0	43271	271494.00
5	Riparian Revegetaion	100	2900	829	-	-	300000	-	4623	308352.0	58464	366816.00
6	Upland Revegetation	100	2900	829	-	-	12000	-	4623	20352.0	3859	24211.00
7	Project Monitoring	-	-	-	-	-	-	-	-	0.0	-	0.00
8	Riverine Riparian Mapping	-	-	-	-	-	-	-	-	0.0	-	0.00
		1350	39250.00	11186.00	0.00	0.00	572000.00	0.00	62411.00	684847.00	129848.00	814695.00

Year 3												
Task No.	Task Description	Direct Labor Hours	Salary *(per year)*	Benefits *(per year)*	Travel	Supplies & Expendables	Services or Consultants	Equipment	Other Direct Costs	Total Direct Costs	Indirect Costs	Total Cost
1	Project Management	500	15000	4286	-	-	25000	-	27400	71686.0	13592	85278.00
2	Feasibility Study	-	-	-	-	-	-	-		0.0		0.00
3	Flood Plain Design	-	-	-	-	-	-	-	-	0.0		0.00
4	Construction	218	6540	1868	-	-	214000	-	11964	234372.0	44437	278809.00
5	Riparian Revegegation	100	3000	857	-	-	300000	-	5480	309337.0	58650	367987.00
6	Upland Revegetation	-	-	-	-	-	-	-	-	0.0		0.00
7	Project Monitoring	200	6000	1714	-	-	100000	-	10960	118674.0	22501	141175.00
8	Riverine Riparian Mapping	150	4500	1286	-	1000	-	-	8220	15006.0	2845	17851.00
		1168	35040.00	10011.00	0.00	1000.00	639000.00	0.00	64024.00	749075.00	142025.00	891100.00

Grand Total=2175004.00

Comments.

Budget Justification

Central San Joaquin Floodplain Restoration

Direct Labor Hours. Provide estimated hours proposed for each individual.

Project Manager: Pat Fitzmorris Year 1 - 800 hrs; Year 2 - 800 hrs; Year 3 - 800 hrs (Includes Project Management, Riparian Revegetation, Upland Revegetation and Project Monitoring) Staff Engineer Jennifer Faler: Year 1 - 200 hrs.; Year 2 - 550 hrs.; Year 3 - 218 hrs. (Includes additional staff time for survey,drafting, construction staking and construction management

Salary. Provide estimated rate of compensation proposed for each individual.

Project Manager: Pat Fitzmorris Year 1 - $28.00/hr.; Year 2 - $29.00/hr.; Year 3 - $30.00/hr. Staff Engineer: Jennifer Faler Year 1 - $28.00/hr.; Year 2 - $29.00/hr.; Year 3 - $30.00/hr.

Benefits. Provide the overall benefit rate applicable to each category of employee proposed in the project.

Project Manager - 28.57% Staff Engineer - 28.57%

Travel. Provide purpose and estimate costs for all non-local travel.

Included in Other Direct Costs

Supplies & Expendables. Indicate separately the amounts proposed for office, laboratory, computing, and field supplies.

Included in Other Direct Costs

Services or Consultants. Identify the specific tasks for which these services would be used. Estimate amount of time required and the hourly or daily rate.

West Stanislaus Resource Conservation District - Norman Crow (Watershed Coordinator) Duties: Land Owner relations; Coordination with watershed groups; Steering Committee Chairman; Assist Project Manager on reporting and day-to-day management. Rate: 500 hours/yr @ $50/hr Construction will be competitively bid. Construction cost estimates based on an estimated 150,000 yards of earth excavation @ $1.00/yard; 100,000 yds of compacted fill @ 2.00/yd. (Contingency 15%) Total estimated cost in 2001 dollars = 402,500. (Inflated 3.5 % for Yr.2 $210,000 and 7.0% for Yr. 3 $214,000 for economic inflation) Riparian Revegetation will be competitively bid. Revegetation cost estimates based on $3,000/acre for 200 acres Upland Revegetation will be competitively bid. Revegetation cost estimates based on $200/acre for 60 acres Project Monitoring will be competitively bid. Project Monitoring cost estimates are based on average billing rates in the Sacramento Valley for environmental consulting companies ranging from $45-$90/hour. Using an average billing rate of $60 and 750 hours per hear, review, production, and an overhead costs of 10%, the final consulting cost is estimated at $150,000.

Equipment. Identify non-expendable personal property having a useful life of more than one (1) year and an acquisition cost of more than $5,000 per unit. If fabrication of equipment is proposed, list parts and materials required for each, and show costs separately from the other items.

None

Project Management. Describe the specific costs associated with insuring accomplishment of a specific project, such as inspection of work in progress, validation of costs, report preparation, giving presentatons, reponse to project specific questions and necessary costs directly associated with specific project oversight.

Project Management will include all management tasks required by granting entity including reporting, invoicing, and state/federal terms and conditions; Negotiating and servicing all subcontracts; Supervision of all subcontractors and consultants; Landowner/agency relations; Project access; Coordination with agencies and other San Joaquin River watershed efforts; Chairman of proposed Steering Committee

Other Direct Costs. Provide any other direct costs not already covered.

Direct Cost Rate: Year 1: $42.00/hr.; Year 2: $46.23 (est.); Year 3: $54.80 (est.) Direct expenses are those expenses directly attributable to project related hourly charges. The rates are comprised of costs for salaries, benefits, office space, general insurance, support staff, office supplies, and other various direct expenses incurred at the regional offices and conservation department at the home office.

Indirect Costs. Explain what is encompassed in the overhead rate (indirect costs). Overhead should include costs associated with general office requirements such as rent, phones, furniture, general office staff, etc., generally distributed by a predetermined percentage (or surcharge) of specific costs.

Indirect Overhead Charge $18.96% The Indirect Overhead costs primarily consists of home office costs and general support functions. The costs includes but are not limited to the following categories: Home Office salaries wages and fringe benefits; Accounting and finance; Operations & maintenance; General office expenses and supplies; Software and equipment rental/lease; Membership dues and subscriptions; Postage; Printing; Communications; Insurance; Conferences fees and travel; Legal; and, Information services.

Executive Summary

Central San Joaquin Floodplain Restoration

Executive Summary - Central San Joaquin Floodplain Restoration Project Location: The properties are approximately 10 miles west of Modesto, south of highway 132, east of highway 33 and close to the historic town of Grayson. (Between River Mile 90 and River Mile 92) Ecozone 13: East San Joaquin River - 13.2 - Tuolumne River and Ecozone 14: West San Joaquin Basin Project Type: Implementation: Pilot/Demonstration Project Project Description/Approach: The West Stanislaus Resource Conservation District, in partnership with the East Stanislaus Resource Conservation District and together with Ducks Unlimited, Inc., is proposing a floodplain restoration project along the Central San Joaquin river. This project is designed to rehabilitate stream corridor ecological processes and functional floodplains along 2.5 miles of the Central San Joaquin River to increase the natural riverine connectivity of floodplain habitat between the Merced River and the Stanislaus River. The project includes 742 acres of private riparian/wetland habitat that is currently under floodplain easements held by the Natural Resources Conservation Service (NRCS). Restoration efforts will include constructing setback levees within the floodplain easements to allow the natural floodwater to inundate these areas and to improve floodplain conditions by returning the area to a more natural setting. The project will also restore natural riparian wetland that will target sediment reduction by utilizing wetland filtration to retard runoff and reduce soils erosion and sedimentation into the San Joaquin River system. Project activities will include vegetation mapping, water quality monitoring, anadromous fish surveys, point counts for neotropical migrant birds, and small mammal surveys for riparian brush rabbits and riparian woodrats. A Central San Joaquin Riverine Stakeholder Group will formed to guide and review project implementation. Hypotheses: 1. Does increasing riparian/wetland habitat benefit neotropical migrant songbird species, riparian brush rabbits and riparian woodrats? 2. Does increasing wetland and riparian habitat increase water quality downstream from this project site? 3. Does increasing floodplain habitat on the San Joaquin River improve habitat for anadromous salmonids smolts and Sacramento splittail? Key Uncertainties: · Rate of sediment deposition. · River meander and hydrology. Expected Outcomes: · Restore functional floodplains along 2.5 miles of the Central San Joaquin River. · Improve water quality in the San Joaquin River system utilizing wetland filtration to retard runoff and reduce soil erosion and sedimentation. · Increase habitat for riparian forest/wetland species and floodplain rearing habitat for juvenile chinook salmon and Sacramento splittail. Relationship to CALFED ERP and CVPIA Goals: This project addresses the Ecosystem Restoration Goals 1, 2 & 4 and CVPIA goals, Section 3402(a): to protect, restore, and enhance fish, wildlife, and associated habitats in the Central Valleyof California; Section 3406(b)(1) - protect and restore natural channel and riparian habitat values; and, Section 3406(b)(1)(a): First priority given to measures, which protect and restore natural channel and riparian habitat values.

Proposal

Ducks Unlimited, Inc.

Central San Joaquin Floodplain Restoration

Ron Stromstad, Ducks Unlimited, Inc.
Norman Crow, West Stanislaus Resource Conservation District

Central San Joaquin Floodplain Restoration

A. Project Description: Project Goals and Scope of Work

1. Problem

Location: The properties are approximately 10 miles west of Modesto, south of highway 132, east of highway 33 and close to the historic town of Grayson. (Between River Mile 90 and River Mile 92) Ecozone 13: East San Joaquin River – 13.2 – Tuolumne River and Ecozone 14: West San Joaquin Basin

Problem Statement: The lower San Joaquin River has been the subject of agricultural encroachment in the floodway, loss of riparian habitat, non-point source water pollution, eroded sediment, riprap, and loss of off-channel and seasonal wetlands. These agricultural encroachments and water manipulations have resulted in fragmented riparian stands, poor valley oak and cottonwood regeneration, and poor water quality and reduced floodwater retention. The January 1997 floods caused extensive damage to farmland and infrastructure in this area, and have created even more incentive to restore the floodplain on the lower San Joaquin River.

Project Description: This project includes 742 acres of private riparian/wetland habitat that is located within the floodplain along the reach of the San Joaquin River between the Merced River and the Stanislaus River (**Attachment A**). The landowners of the projects are committed to restoring the floodplains and riparian/wetland habitats on their lands and this project offers a unique opportunity to restore habitat on the lower San Joaquin River. The Natural Resources Conservation Service (NRCS) in conjunction with CALFED has purchased floodplain easements through the Emergency Watershed Protection Program on the properties associated with this project.

Goals, Objectives and Hypotheses:

The goals of restoring these properties are:

- Restore functional floodplains along 2.5 miles of the Central San Joaquin River **(Milestone**).
- Improve water quality in the San Joaquin River system utilizing wetland filtration to retard runoff and reduce soil erosion and sedimentation **(Milestone).**
- Increase habitat for riparian forest/wetland species by increasing woody riparian vegetation coverage along 2.5 miles of the Central San Joaquin River **(Milestone).**
- Improve natural regeneration of Fremont cottonwood, valley oak, willow and alder.
- Improve juvenile chinook salmon and Sacramento splittail spawning and rearing habitat.
- Improve riparian habitat for neo-tropical migratory birds, riparian brush rabbits, riparian woodrats and other at-risk riparian dependent species **(Milestone).**

2. Justification (including conceptual model, hypotheses and selection of project type)

Restoring floodplains on the lower San Joaquin River will provide much needed storage for floodwaters. The natural processes driven by seasonal floodplain inundation and disturbance are crucial to the ecological health of the river ecosystem (Pinay et al. 1990, Ward and Stanford

1995a, Ward and Stanford 1995b). Inundation of floodplains is thought to benefit anadromous fish directly by increasing food supply to juveniles present in flooded lands, increasing available habitat area, as well as increasing the overall nutrient supply to the river system (Junk et al.1989).

This project represents a partnership between the West Stanislaus Resource Conservation Districts (WSRCD) and Ducks Unlimited, Inc. (DU) in close coordination with the Natural Resources Conservation Service (NRCS). This coordinated effort combines highly qualified staff to manage and implement the project scope of work. All work conducted will be thoroughly evaluated by DU engineers and surveyors, biologists, soil scientists, GIS analysts as well as the public/stakeholders and will meet all practice standards and specifications as required by NRCS Conservation Plan. The project will convene a Steering Committee (Central San Joaquin Riverine Stakeholder Group) comprised of individuals and agency representatives that are members of, but not limited to, the East Stanislaus Resource Conservation District (ESRCD) and WSRCD, and the San Joaquin River Management Program (SJRMP), the California Department of Water Resources (CDWR) and the California Department of Fish and Game (CDFG) as well as academics that have valuable experience in floodplain restoration. This Steering Committee will assist in guiding the focus and content of the work with respect to CALFED ERP restoration goals and adaptive management. The Steering Committee will interface with project stakeholders and the general public by soliciting input on the formulation of alternatives and assessment of results and development of a post-implementation monitoring plan. This collaborative effort will ensure the work conducted is a science-based adaptive management approach and is as successful as possible in achieving ecosystem restoration goals defined in this proposal.

Conceptual Model. Emphasizing set-back levees and letting the natural floodwater inundate these areas will improve floodplain conditions for anadromous fish, splittail, and other riparian and wetland species. Fish stranding issues will be given the utmost attention and prior to implementation of the project. Hydrologic modeling will be conducted with emphasis on the fisheries issues and will be used to guide the restoration activities. After implementation, monitoring will assist in determining how accurately actual inundation conditions can be predicted and help to refine an understanding of the actual use of the floodplain by anadromous fish and other species such as riparian brush rabbits and riparian woodrats. The utility and the accuracy of the pre-project modeling effort can be tested through post-project monitoring and assessment. It is expected post-project monitoring will provide an adaptive management tool to identify conditions that may result in a problem after implementation. Site conditions are expected to evolve over time as an essential part of the ecosystem function of this terrestrial/aquatic ecotone (Pinay et al. 1990, Schlosser 1991).

Hypotheses.

1. Does increasing riparian/wetland habitat benefit neotropical migrant songbird species, riparian brush rabbits and riparian woodrats?
2. Does increasing wetland and riparian habitat increase water quality downstream from this project site?
3. Does increasing floodplain habitat on the San Joaquin River improve habitat for anadromous salmonids smolts and Sacramento splittail?

3. Approach

- Through a subcontract, hydrologic modeling will be conducted for the project area (2.5 miles).

- WSRCD/DU will complete a feasibility study based on the hydrologic model. The feasibility study will include collected soil sample data and construction and riparian planting design, all of which will be done according to NRCS practice standards and specifications. A Biological Assessment will be prepared for NRCS programmatic Section 7 Consultation

- Based on the feasibility study and the hydrologic model, WSRCD/DU will begin floodplain and levee design, construction, construction management, riparian planting design, and biological monitoring and final riverine riparian mapping

- WSRCD/DU will assist with National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) compliance in the environmental assessment portion of the NRCS easement restoration process. The initial environmental focus will be to contact various agencies and tribal entities, solicit input, and identify the documents to be prepared. The data collected for the draft Biological Assessment will be used to prepare a final Environmental Assessment/Initial Study (EA/IS). It is expected that the project will obtain a Negative Declaration and Finding of No Significant Impact (FONSI). The lead agencies for the CEQA and NEPA process are Department of Fish and Game, and the U.S. Bureau of Reclamation, respectively. The permitting process will consist of preparing permit applications and coordinating with appropriate agencies. Table 1 lists the required permits and authorizations that have been identified for this project.

- The riparian planting design will include soil tests and analysis of data obtained, and detailed mapping of vegetation plantings. Additional components of the preliminary design will include geotechnical investigation and surveying to supplement the information collected during the feasibility stage. The hydrologic model report will present a summary of the investigations conducted and provide recommendations for foundation design and earthwork considerations. All design and plans will be reviewed a Steering Committee and receive comments before design's are finalized and construction takes place.

- Final engineering submittals will incorporate review comments received from the preliminary design. Comments will be solicited from the ESRCD and WSRCD, the SJRMP, other stakeholders and landowners, the U.S. Army Corps of Engineers (COE), the State of California Reclamation Board (RCB), CDFG, CDWR and the Steering Committee. The submittal will consist of a construction cost estimate, engineering drawings, bidding documents, and technical specifications for the construction design.

- The 100 percent complete final design will provide bid-ready contract documents for construction including a final construction schedule and cost estimate.

- The Biological Monitoring Plan will incorporate:

1. Point counts for neotropical migrant songbirds and small mammal surveys for riparian brush rabbits and riparian woodrats.
2. Water quality monitoring plan to be developed consistent with CALFED ERP needs. Monitoring will be for salt, organic/inorganic nutrients, pesticides, and biological oxygen demand.
3. Surveys for anadromous salmonids and splittail.

Table 1. Required Permits and Authorizations

B. Agency/Permit	Applicability	Requirements for Application
COE Engineers Section 404 Nationwide and Section 7 Individual Permits	Required when working in natural streams and rivers	• Site Plan and Section Drawings • Location Map • CVRWQCB Sect. 401 Water Quality Certification (may be done concurrently) • COE Application 4345 • Environmental Documentation
Central Valley Regional Water Quality Control Board (CVRWQCB) Section 401 Water Quality Certification	Required when working in natural streams and rivers if the construction area is less than 5 acres	• CEQA Certification • Application Form and Fee • Section 1600 Stream Alteration Agreement or note contact with CDFG • Copy of COE Application 4345
CDFG Section 1600 Stream Alteration Permit	Required when natural streambed is to be altered by construction	• Environmental Documentation • Application Form and Fee • Project Location Map • Site Plan
State Historic Preservation Officer (SHPO) and National Historic Preservation Section 106 Coordination	Required for construction	• Archeological Inventory Survey and Report
California Endangered Species Act (CESA) Consultation	Required for construction	• State lead agency designated • Threatened and endangered biological review
Reclamation Board Compliance	Required when under jurisdiction of Reclamation Board (flood control areas)	• Description of work and location • Environmental questionnaire and environmental review documents • Complete plans and specifications • Names and addresses of adjacent landowners
National Environmental Policy Act (NEPA)	Required for construction	• Federal lead agency designated • Prepare draft environmental assessment • Prepare EIS or FONSI

Compliance		
California Environmental Quality Act (CEQA)	Required for construction	• State lead agency designated • Prepare initial study • Prepare Negative Declaration or EIR

4. Feasibility

DU is recognized for expertise and experience in designing riparian habitat projects, set-back levees, and anadromous fish habitat projects. A list of other successful CALFED/DU projects is described in **Table 2**. Work will be completed within the time specified in the work schedule. The completion of the engineering final design and the environmental documentation is dependent on the timely completion of the Feasibility Study. The Feasibility Study will be completed pending the completion of the Hydrological Model.

A varied of permits may need to be secured before construction can proceed; **Table 1** lists the various agencies with applicable permit requirements. The completion of the permitting process will be subject to requirements of an Initial Study/Environmental Assessment and a Biological Assessment (BA) and Biological Opinion (BO) during the proposed phase of the project as explained in the Approach. No other constraints are anticipated to delay or impact the project such as zoning regulations or county planning ordinances.

NRCS has purchased floodplain easements through the Emergency Watershed Protection Program on the properties involved in this project. Right to access these lands is a condition of the purchases and, therefore, permission to access is already granted. As a courtesy to the landowners, we will provide constant and consistent outreach to apprise the landowners of all work plans and activities.

The following ensures feasibility of the proposed effort:

- *The involvement of agencies, the public, and experts*. All interested and affected parties will have the opportunity to participate in this process. WSRCD will work closely with the ESRCD, SJRMP Action Team and Advisory Council, NRCS and DU in implementing this project. Academic experts and other interested groups will be invited to participate in the project.
- *The commitment and availability of the applicant*. WSRCD has committed staff to carry out this work from 2002-2005 and will work closely with the ESRCD to effectively implement ERP goals. Highest priority will be assigned to this project and will be recognized as important groundbreaking restoration work.
- *The applicant's experience in completing similar projects*. DU has received several grants from CALFED and has delivered very successful contracts.

5. Performance Measures

Overall Performance Goal: Project evaluation will be performed throughout all phases of the project, from the feasibility stage to post-construction.

A list of project-specific performance measures for each of the general indicator categories defined in Attachment G of the 2002 PSP is listed in **Table 3**. These performance measures will be used to assess the project's success in relation to its goals and objectives.

Table 3. Performance Measure Plan

Performance Measure	Metric	Target	Baseline
1) Complete set of approved construction plans and necessary permits	Completed reports: Hydrologic Model, Feasibility Study, IS/EA	Final approved plans; Neg Declaration/FONSI; Permits in table 1	N/A
2) Successful completion of construction project	Final Inspection Report and Certification of Completion	Working floodplain landscape	N/A
3) Riparian Plantings	Acres and plants/acre	To be established in riparian planting plan	To be determined from Revegetation Plan
4) Upland Plantings	Acres planted	Functional upland habitat	To be determined from Revegetation Plan
5) Monitoring	Numbers of neotropical migrant birds, small mammals, anadromous fish and water quality	Peer accepted report	To be determined from Monitoring Plan

6. Data Handling and Storage

DU will handle and store restoration data including monitoring, inventory and analysis. DU biologists, in coordination with NRCS, ESRCD and WSRCD will collect, store, track and disseminate the decisions and data that drive the restoration program and implement an adaptive management approach. This information will be available to CALFED and all participating stakeholders in electronic files for easy dissemination. DU staff has considerable expertise in GIS and data management and will provide state-of-the-art digital mapping, data storage and retrieval for all aspects of this project.

7. Expected Products/Outcomes

Products:

- Feasibility Study/Hydrologic Model
- Final approved Engineering Plans

- Initial Study/Environmental Assessment
- Permits
- Riparian Planting Plan
- Monitoring Reports

Outcomes:

- Water quality monitoring data collected within the project area.
- Increased protection from sedimentation to the San Joaquin River by using the restored wetlands and filtration strips within the project area.
- Increased re-establishment of native riparian vegetation along 2.5 miles of the San Joaquin River.
- Improved habitat for Sacramento splittail, all runs of chinook salmon and steelhead and neo-tropical migratory birds.
- Increased natural riverine connectivity of floodplain habitat along the Central San Joaquin River between the Merced River and the Stanislaus River.
- 60 acres of Functional Upland habitat.
- Develop Central San Joaquin Riverine Stakeholder Group

8. Work Schedule

Task 1 – Project Management: Provide project management and watershed coordination, contract compliance, fiscal management and preparation of reports (i.e., quarterly reports, progress reports, final report, etc.), convene the Central San Joaquin River Stakeholder Group and chair the Steering Committee.
Deliverables: Project Administration and Implementation.
Timeframe: September 1, 2002 to August 31, 2005

Task 2 – Feasibility Study: A feasibility study and hydrologic modeling will be conducted to assess and evaluate proposed floodplain and levee design, and develop conceptual plans for construction of levees, riparian and upland revegetation.
Deliverables: Feasibility Study and Hydrologic Model
Timeframe*:* September 1, 2002 to March 1, 2003

Task 3 – Floodplain Design: Preliminary and final design, environmental documentation, permitting, and bid package for construction for set-back levees, sediment traps, and oxbox reconfiguration. (**Milestone**)
Deliverables: Floodplain Design, Environmental Documentation, Permits and Bid Package
Timeframe*:* March 1, 2003 to July 31, 2003

Task 4 – Construction: Construction management; Construction staking; Construction of set-back levees, sediment traps, oxbow sloughs, and excavate scours and mounds (**Milestone**).
Deliverables: Final Inspection Report and Certification of Completion (Letter of Acceptance)
Timeframe: July 1, 2003 to November 30, 2004

Task 5 – Riparian Revegetation: Design riparian revegetation of native tree/shrubs and implement revegetation plan (**Milestone**).

Deliverables: Revegetation Plan, Final Inspection Report and Certification of Completion (Letter of Acceptance)
Timeframe: July 1, 2003 to November 30, 2004

Task 6 – Upland Revegetation: Design upland planting scheme and implement plan.
Deliverables: Planting plan, Final Inspection Report and Certificate of Completion (Letter of Acceptance)
Timeframe: July 1, 2003 to November 30, 2004

Task 7 – Project Monitoring: Monitoring plans will be developed and monitoring will be conducted to evaluate the response of anadromous fish populations, neotropical migrant bird populations and measurable changes in water quality to restoration actions.

Subtask 7.1: Develop and initiate a Water Quality Monitoring Plan (Monitoring will be for salt, organic/inorganic nutrients, pesticides, and biological oxygen demand) for pre-construction and post-construction activities.

Subtask 7.2: Develop and initiate an Anadromous Fish Population Monitoring Plan for pre-construction and post-construction activities.

Subtask 7.3: Develop and initiate a Neotropical Migrant Bird Monitoring Plan for pre-construction and post-construction activities.

Deliverables: Plans and Reports for each of the three monitoring programs.
Timeframe: September 1, 2002 to August 31, 2005

Task 8– Riverine Riparian Mapping: Project area mapping will be developed to depict existing riparian vegetation, new riparian vegetation, water courses, final elevation levels.
Deliverables: Project Map.
Timeframes: January 1, 2005 to August 31, 2005

Task Priority Discussion: Tasks 2 –Feasibility Study and Task 3 – Floodplain Design and pro-rata share of Task 1 – Project Management can be completed as a separate project. The remainder of the tasks are sequential. Task 4 – Construction can be completed as a separate task, after the completion of Task 2 and 3. Task 5 – Riparian Revegetation and Task 6 – Upland Revegetation can be completed after Task 5 – Construction. Task 7 – Monitoring is dependent on completion of the construction and revegetation task.

B. Applicability to CALFED ERP and Science Program Goals and Implementation Plan and CVPIA Priorities

1. ERP, Science Program and CVPIA Priorities.

CALFED ERP Goals:

GOAL 1: At-**Risk Species**. This project will improve rearing conditions for at-risk and ESA-listed juvenile salmonids (fall-run chinook salmon and steelhead) and Sacramento splittail. Steps will be taken to minimize the potential for stranding of native fish species, give migratory fish increased river access to the floodplain, enhance ecological functionality and habitat quality of the aquatic-terrestrial zone in this reach of the San Joaquin River.

GOAL 2: **Ecosystem Processes and Biotic Communities**. This project is expected to continue to support natural ecological processes that sustain natural aquatic and terrestrial biotic communities and life-cycle requirements by restoring and supporting critical habitat in the Central San Joaquin River floodplain. This project also presents the opportunity to comprehensively assess and evaluate successive habitat growth.

GOAL 4: **Habitats**. One of the main goals of this project is to increase habitat for riparian vegetation and riparian/wetland bird species and fish. We will create riparian habitats for at-risk species such as riparian brush rabbit and riparian woodrats and neotropical migrant birds. Yellow-billed cuckoo habitat will be increased, as well. This project is also designed to rehabilitate stream corridor ecological processes, to the benefit of aquatic species and floodplain ecosytems. River-floodplain interaction is a vital component of riverine health. When inundated, floodplains provide valuable habitat for a multitude of species, including shallow water and marsh habitat species. The project also has 80 acres of upland habitat restoration. We will restore and protect these habitats.

GOAL 6: **Sediment and Water Quality.** The WSRCD is very concerned with water quality issues in the Bay-Delta ecosystem, which receives a large variety of potential toxicants (Davis et al. 1992). To support healthy and diverse aquatic ecosystems in the Bay-Delta watershed, improved water and sediment quality is imperative. Wetlands function like human kidneys for ecosystems, purifying water by filtering sediment, nutrients and pollutants. This project will contribute to CALFED's ERP goals by trapping and filtering sediment and pollutants in the created riparian and wetland areas and sediment traps.

ERP Multi-Species Conservation Strategy (MSCS) for the San Joaquin River Basin:
This project addresses the program targets established in the MSCS the San Joaquin River Region for restoring riparian forest and increasing populations of riparian brush rabbits.

San Joaquin River Region – San Joaquin River

E121602 - **Target**: Restore 50 stream miles of diverse, self-sustaining riparian community.
Programmatic Action: Develop a cooperative program to restore riparian habitat.

San Joaquin River Region – **East San Joaquin Basin**

E134101 **Target**: Establish four additional populations and increase the population of riparian brush rabbits by 200% over current estimates so that census of the population would be two times higher than the current estimate of 213 to 312 individuals.
Programmatic Action: Reestablish 500 acres of large contiguous acres of riparian forest habitat that have dense brushy understories with adjacent upland habitat. These restore/reestablished riparian forests would have adjacent upland habitat with sufficient cover. Establish five additional populations within the species historical range; each population should have self-sustaining populations with a minimum of 250 individuals each. Maintain and establish connectivity between key habitats.

E134103 **Target:** Establish four additional populations and increase the population of riparian brush rabbits by 200% over current estimates sot that a census of the population would be two times higher than the current estimate of 213 to 312 individuals.

Programmatic Action: More closely approximate the natural hydrological regime, which allows for establishment and maintenance of mature riparian forest habitat. Additionally, encourage growth of wild rose, coyote brush, native blackberries, elderberries, wild grape, box elder, valley oak, and cottonwoods to provide habitat.

Q130902 **Target:** Reduce sediment in areas to the degree that sediment does not cause negative impacts to beneficial uses of the surface water, including ecosystem benefits and municipal uses.

Programmatic Action: Manage floodplains to help diminish the negative impact of fine sediment loads from anthropogenic sources by facilitating natural deposition of floodplain surfaces.

San Joaquin River Region – **West San Joaquin Basin**

E141601 **Target:** Restore 5 miles of riparian habitat totaling 500 to 1,000 acres.

Programmatic Action: Restore riparian forest habitat on lands purchased from willing sellers or obtained via conservation easements.

CALFED Science Program Goals:

The Scope of Work proposed by this project will address the broader priorities of the Science Program by:

- *Developing performance measures* that will track the success of the actions taken (i.e., anadromous fish and wildlife populations, vegetation, and water quality within the project area)
- *Apply an Adaptive Management approach* by compiling existing baseline monitoring and tracking changes on a real-time basis before and after project actions.
- *Compare relative effectiveness of different restoration strategies* by bringing together recognized experts to contribute to restoration efforts (i.e., qualified biologists and water quality specialist at DU, CDFG and NRCS).
- *Take advantage of existing data.* This project has dedicated and active participation of key resource managers such as U.S. Fish and Wildlife Service (FWS) and the CDFG. Each of these participating agencies have initiated and are continuing gather pertinent data on this specific issue as well as private efforts to monitor and assess the current threats associated with this project. This project will continue compile, develop and disseminate valuable data that can be applied to future sites facing the same threats.

CALFED Implementation Plan Multi-Regional and Regional Priorities: This project addresses and fulfills restoration priorities for the San Joaquin Region in the following ways:

REGIONAL IMPLEMENTATION–San Joaquin Region

SJ-1 Continue habitat restoration actions including channel-floodplain reconstruction projects and habitat restoration studies in collaboration with local groups.

- *Riparian and riverine aquatic habitat restoration and research.* This project will conduct revegetation of riparian areas along the Central San Joaquin River. This project is designed to manage for and monitor riparian brush rabbit and riparian woodrat and neo-tropical migratory songbirds within the riparian restoration project area.

- **SJ-2 Restore geomorphic processes in-stream and riparian corridors.** *San Joaquin floodplain evaluation.* (Strategic Goal 4, Floodplains and Bypasses as Ecosystem Tools) This project will address the riparian restoration of a 5-mile reach of floodplain habitat along the Central San Joaquin River. A floodplain design will be developed to locate set-back levees, sediment traps and oxbow reconfiguration and revegetation on floodplain easement properties. The project will conduct baseline and on-going monitoring for changes in water quality and fish and wildlife responses to the restoration actions.
- *Biological value of floodplain habitats.* Data compiled from the monitoring activities on the floodplain restoration activities will make a valuable contribute to other natural and managed floodplains along the San Joaquin River.

Central Valley Project Improvement Act Goals: This project addresses the following Sections in TITLE 34, PUBLIC LAW 102-575: Section 3402(a): To protect, restore, and enhance fish, wildlife, and associated habits in the Central Valley of California; Section 3406(b)(1) – protect and restore natural channel and riparian habitat values; and, Section 3406(b)(1)(a): First priority given to measures, which protect and restore natural channel and riparian habitat values.

San Joaquin River Riparian Habitat Restoration Program - Section 3406(b)(1)

This project supports the goals of this program by conducting restoration activities along the main stem of the San Joaquin River.

2. Relationship to Other Ecosystem Restoration Projects.

This project is an integral part of an overall investment in ecosystem restoration programs for the lower San Joaquin River Watershed. The following is a list of the programs and projects:

- San Joaquin River Management Program
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service San Joaquin River National Wildlife Refuge (Hagemann, Vierra/El Solyo, Lara Ranches)
- Faith Ranch East Lake and Lake Marie NRCS WRP Restorations
- Bancroft-Ott NRCS Floodplain Easement
- Konynenburg/Grayson River Ranch NRCS WRP Perpetual Easement
- Venn Farms NRCS Floodplain Easement
- San Joaquin Wetland Farms NRCS WRP Restorations
- Harry Baker NRCS Floodplain Easement
- C.E. Foiada NRCS Floodplain Easement

3. Requests for Next-Phase Funding.

N/A

4. Previous Recipients of CALFED Program or CVPIA funding.

Table 2. Previous CALFED and CVPIA Projects.

Project Name:	CALFED Number:	Financial Status	Current Status

Lower Butte Creek Project: Phase II Preliminary Engineering and Environmental Analysis for Butte Sink Structural Modifications and Flow-through System	99-B02	Expenditure: $520,574.60 Income: $531,850.58 Ducks Unlimited Inc: $ 11,275.98	Ongoing Final design and Draft NEPA/CEQA complete
Gorrill Dam Fish Screen	96-M22	Expenditure: $1,548,907.86 Income: $1,523,047.43 Ducks Unlimited Inc: $ 25,860.43	Complete
M & T/Parrott, Pumping Station and Fish Screen	95-M05	Expenditure: $4,749,845.92 Income: $4,530,556.71 Ducks Unlimited Inc.: $ 219,289.21	Complete
Rancho Esquon/Adamas Dam Fish Screen	96-M21	Expenditure: $1,151,326.33 Income: $1,034,780.62 Ducks Unlimited Inc: $ 116,545.71	Construction complete Monitoring fish passage

Project Name:	**CVPIA Number:**	**Financial Status**	**Current Status**
Lower Butte Creek Project, Phase III – Butte Creek, Drumheller Exclusion Barrier Final Engineering, Permitting and Construction	1448-11332-9J006	Expenditure: $ 228,951.73 Income: $ 227,856.74 Ducks Unlimited Inc: $ 1,094.99	Construction complete Five Points design in progress
Lower Butte Creek Project, Phase II – Butte Creek, Butte Sink/Sutter Bypass Stakeholder Coordination/Facilitation	113329-9-J135	Expenditure: $ 67,151.50 Income: $ 62,263.44 Ducks Unlimited Inc: $ 4,888.06	Ongoing
Lower Butte Creek Project, Phase II – Butte Creek, Sutter Bypass East-West Diversion Dam Preliminary Engineering and Environmental Review	113329-9-J122	Expenditure: $ 298,286.93 Income: $ 250,000.00 Ducks Unlimited Inc: $ 48,286.93	Ongoing Final design and Draft NEPA/CEQA complete
Lower Butte Creek Project, Phase II – Butte Creek, Sutter Bypass Weir #5 Preliminary Engineering and Environmental Review	11332-9-J122	Expenditure: $ 298,286.93 Income: $ 250,000.00 Ducks Unlimited Inc: $ 48,286.93	Ongoing Final design and Draft NEPA/CEQA complete
Lower Butte Creek Project, Phase II – Butte Creek, Sutter Bypass Weir #3 Preliminary Engineering and Environmental Review	113329-9-J136	Expenditure: $ 298,286.93 Income: $ 250,000.00 Ducks Unlimited Inc: $ 48,286.93	Ongoing Final design and Draft NEPA/CEQA complete
Sutter Bypass, East Side	11332-0-J004	Expenditure: $ 56,633.43 Income: $ 55,370.43 Ducks Unlimited Inc: $ 1,263.00	Ongoing, Survey work complete Outreach initiated
Lower Butte Creek, Butte Slough Phase II – Preliminary File	11332-0-J003	Expenditure: $ 1,618.50 Income: $ 0.00 Ducks Unlimited Inc: $ 1618.50	Ongoing Water rights analysis complete
(B)(22) Administration	1448-11300-97-J172	Expenditure: $1,330,118.00 Income: $1,330,118.00 Ducks Unlimited Inc: $ 0	Ongoing Signup for 2002 initiated
(B)(22) Administration	113007J043	Expenditure: $ 51,476.20 Income: $ 51,476.20 Ducks Unlimited Inc: $ 0	Ongoing Signup for 2002 initiated

5. System-Wide Ecosystem Benefits.

The Delta depends on quality riparian corridors with connectivity to the upper watershed habitats. Re-connecting the river channel with a portion of its floodplain can provide several cumulative ecological benefits to the river and the downstream Bay-Delta. In conjunction with sufficient flows to mobilize fine sediments, restored floodplains can trap fine sediments, thereby

preventing sedimentation in the river channel causing degradation to spawning habitat. Floodplains also contribute woody debris and organic material to the river channel helping to create diverse aquatic habitat and stimulating food web production that supports upstream migration of adult anadromous fish and downstream migration and rearing of juvenile anadromous fish. Providing this critical habitat ensures higher mortality rates for salmon to return to the ocean through the Delta.

6. Additional Information for Proposals Containing Land Acquisition.

N/A. There will be no land acquisition in this proposal.

C. Qualifications

Norman W. Crow will serve as the Watershed Coordinator to perform community outreach and project coordination. In addition, Mr. Crow will serve as Chairman to the Steering Committee.

Mr. Crow is a fifth generation farmer from Crows Landing and a local grower of diversified vegetable and row crops, and fruit and nut tree crops, since 1975. He has been a Director and Chairman of the West Stanislaus Resource Conservation District (WSRCD) for over 25 years. As Chairman of the WSRCD, he as proactive in providing leadership to address substantial sedimentation and runoff from irrigated farmlands into the San Joaquin River Basin. His accomplishments, together with the WSRCD Board of Directors, are published in over eight studies and resource materials. The WSRCD and Mr. Crow have been given national recognition for his accomplishments in water quality enhancement in the February 1996 issue of National Geographic, *Our Polluted Runoff*. Mr. Crow's interview in National Geographic expresses his devotion to the preservation of agricultural production and the betterment of the environment and to promoting the partnership between farmers and ranchers and the urban city dwellers. Currently, he is Watershed Coordinator for the East and West Stanislaus Resource Conservation District. His top priority is improving water quality of the San Joaquin River and its tributaries. Education: University of California, Davis, B.S. in Agricultural Economics and Business Management, Modesto Jr. College, A.S. in plant science.

Dan Connelly will serve as the Project Executive Director. His duties will include helping with contract administration, participating in project coordination, executive oversight, participating and arranging for additional technical input in various panels, and overall project direction**.**

Mr. Connelly has spent his entire career working with complex wildlife issues. He has often served as the lead in organizing diverse interest groups to design, implement and evaluate a wide variety of research and management programs on an international basis. In his current capacity as coordinator for Ducks Unlimited's Valley/Bay CARE he works closely with engineering staff to design and implement complex wetland projects.

Educated at the University of Nevada, Reno with a Bachelor of Science degree and graduate work ant California State University, Fresno in Wildlife Biology, he has spent over 29 years working with complex wildlife related issues. Ducks Unlimited, Inc. (DU) currently employs Mr. Connelly as the overall program coordinator for wetland and associated habitat delivery

program in the Central Valley of California. He joined DU after a 27-year career with the California Department of Fish and Game where he conducted waterfowl and wetland research as well as administering the statewide program for Waterfowl and Upland Game.

Pat Fitzmorris will help the WSRCD in project coordinating and management. His will work closely with Mr. Crow, Watershed Coordinator ensuring that all goals, needs and expectations of the project are met. In collaboration with WSRCD field staff, Mr. Fitzmorris will coordinate all aspects of project management, i.e., subcontract, monitoring, preparing and executing reports and presentations, contract management, etc..

Mr. Fitzmorris has a Bachelor of Science degree in Wildlife Management from Humboldt State University. For Ducks Unlimited, Inc., he is the Project Biologist for the Northern San Joaquin Valley and Delta region of the Central Valley of California. In this capacity, he coordinates DU's ecosystem restoration projects on private and public land, emphasizing on wetland, riparian and upland restoration projects. Prior to this engagement, California Waterfowl Association employed Mr. Fitzmorris where he was the Wetlands Biologist for the Northern Sacramento Valley. He also has worked with the U.S. Fish and Wildlife Service, U.S. Geological Service Biological Resources Division, and for Humboldt State University in varying capacities of environmental science and management.

Jennifer Faler, M.S., P.E., will serve as regional engineer on this project. Ms. Faler will coordinate with NRCS engineers and to draw and design plans, survey properties and help with construction management and supervision.

Ms. Faler has a Masters of Science in Environmental Engineering from the University of California, Davis and a Bachelor of Science in Civil Engineering from California Polytechnic State University, San Luis Obispo. She is a Registered Professional Engineer #56339.

Ms. Faler has eight years experience in design and management of environmental restoration projects, including contaminated soil and groundwater investigation and cleanup projects. Her experience also includes working with environmental compliance programs such as Drinking Water, Storm Water, Lead-based Paint, Asbestos, Endangered Species Act, and National Environmental Policy Act. Her work for local and regional water districts includes, development of a Water Needs Study for a Master Plan, water distribution system network analysis computer modeling, surveying, construction inspections, and facility improvement designs.

D. Cost: (See CALFED Forms) The total requested budget is 2,201,276.

E. Local Involvement

Public Outreach Plan: Public outreach for this project will be enthusiastically conducted. The WSRCD Watershed Coordinator will convene a local stakeholder's group at the beginning of the project. Quarterly stakeholder/public meetings will be held to solicit input and present information on the purpose and goals of this ecosystem restoration project. Tribal consultation will commence at that time with interested Native American tribes in the area. This important

commitment to keeping the public informed on natural resource issues on the San Joaquin River will minimize conflict and misinformation between landowners, land users, governmental agencies, tribes and conservation groups. Integrating and coordinating with stakeholders and other local groups will combine valuable resources that will support the development of an adaptive management approach to restoration. Stakeholders have already shown a common interest in supporting floodplain restoration on these private lands as this action will contribute to overall downstream protection from high water flood events in the river.

The restoration activities conducted by this project will be closely reported to the SJRMP on a quarterly basis. Valuable peer review by local, state and federal resource managers cooperating with SJRMP will assist in guiding all restoration actions. Data collected will be important to the CALFED Science Program and will be presented to the CALFED Science Committee on a quarterly basis. WSRCD and DU will cooperate with landowners to ensure that restoration activities meet their requirements and that they receive the appropriate assurances from regulatory agencies concerning their continued use of the property. WSRCD staff and DU biologists and engineers will maintain a high involvement with the private landowners and their families as they conduct project tasks and restoration. All planning, design and construction will be conducted with full participation of the private landowners.

F. Compliance with Standard Terms and Conditions

DU has reviewed the standard State and Federal contract terms described in Attachments D and E included in the CALFED Ecosystem Restoration Program 2002 Proposal Solicitation Package and agrees to the standard clauses. DU finds no disagreement in the proposal or the standard terms.

G. Literature Cited

Davis, J.A., A.J. Gunther and J.M. O'Conner. 1992. Priority pollutant loads from effluent discharges to the San Francisco Estuary. Water Environment Research. 64:134-140

Junk, W.J., Bayley, P.B. and Sparks, R.E. 1989. The Flood pulse concept in river-floodplain systems. Can. Spec. Publ. Fish. Aquat. Sci., 106:110-127.

Pinay, G., Decamps, H., Chauvet, E. and Fustec, E. 1990. Functions of ecotones in fluvial systems. In Naiman, R.J. and Decamps, h. (Eds) Ecology and Management of Aquatic-terrestrial Ecotones. Parthenon, Casternon Hall., 141-169.

Schlosser, I.J. 1991. Stream fish ecology: a landscape perspective. Bioscience 41:704-712.

Ward, J.V. and Stanford, J.A. 1995a. The serial discontinuity concept: extending the model to floodplain rivers. Regulated Rivers: Research & Management, 10:159-168.

Ward, J.V. and Stanford, J.A. 1995b. Ecological connectivity in alluvial river

ecosystems and its disruption by flow regulation. Regulated Rivers: Research & Management, 11:105-119.

APPENDIX

ATTACHMENT A: PROJECT MAP