

I. EXECUTIVE SUMMARY/ FORMAL PROPOSAL

a. Project Title and Applicant Name

Project Title: Rancho Esquon (Adams Dam) Fish Screen and Fishway Project

Applicant Name: Ducks Unlimited, Inc.

b. Project Description and Primary Biological/Ecological Objectives

Project Description: The proposed project provides a state-of-the-art positive barrier-type fish screen on an existing diversion. The fish screen will be designed to accommodate a diversion of 125 cfs while complying with standards of the California Department of Fish and Game (CDFG) and the National Marine Fisheries Service. It will be constructed of stainless steel wedge wire and employ an air screening cleaning system. Facilities for enhancing fish passage for the two distinct operating conditions; the dam "in" for irrigation (April - September), and the dam "out" during the non-irrigation season. For the dam "in" condition, a step-pool fish ladder will be constructed on the left bank. For the dam "out" condition, a roughened chute will be constructed in the existing dam. The irrigation diversion is 135-cfs.

Primary Biological/Ecological Objectives: Butte Creek supports a generally declining anadromous fishway of spring-run and fall-run chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (*Oncorhynchus mykiss*). Both the spring-run chinook and steelhead are subject to listing as endangered species. Unscreened diversions entrain juvenile salmon and inadequate fish passage over diversion dams delay or block adult migration and contribute to the decline. Documentation indicates that Adams Dam and the operation for irrigation contribute to the problem. The biological benefits of the project are: (1) improved passage of anadromous fish, both juvenile and adults, and (2) curtailed juvenile fish in the diversion. The project is one component of a comprehensive program that is underway to enhance fish passage through the upper and lower Butte Creek system.

c. Approach/Tasks/Schedule

Approach: In the interest of advancing the project, the landowner, Ranch Esquon Partners, with funding from the Tracy Pumps Mitigation Funding, worked with the California Department of Fish Game and the California Department of Water Resources to complete preliminary engineering and environmental analyses. To continue toward implementing the project, Rancho Esquon Partners solicited proposals and, through a competitive bid process, a Joint Venture Team involving Pacific Engineering Contractors (PEC) and Ray Toney & Associates, Inc. (RTA), was selected to implement the proposed project under a design-build, fixed-price contract. Ducks Unlimited, Inc. (DU), as the applicant, will oversee the management of the Joint Venture and administer the design-build contract.

Tasks: Specific tasks to be performed under the design-build contract include:

- Performing Project Management for Engineering and Construction
- Performing Project Coordination with Ducks Unlimited, Inc., Rancho Esquon, and Regulatory and Funding Agencies
- Preparing Environmental Documentation for CEQA/NEPA Compliance
- Obtaining Permits
- Performing Surveys for Design and Construction
- Preparing Construction Plans and Specifications
- Constructing Facilities and Installing Equipment
- Preparing Operations and Maintenance Manuals and Training Operators
- Evaluating Fish Behavior with New Facilities

Schedule: The work is scheduled to facilitate construction in the summer of 1998. The preconstruction work including: environmental documentation to comply with CEQA and NEPA; obtaining permits; and preparing construction plans and specifications, will be essentially completed in the fall and winter of 1997.

- d. Justification for Project and Funding by CALFED** -- Adams Dam is a known barrier to the upstream migration of adult spring-run and fall-run chinook salmon and steelhead in Butte Creek, and the associated agricultural diversion is known to entrain outmigrating juvenile salmonids. Construction of the proposed project will contribute to the restoration of the anadromous fishery in Butte Creek by improving upstream passage around Adams Dam and reducing entrainment in the diversion structure. The proposed fish passage improvement project has been recommended in several programs to increase anadromous fish production in the Central Valley, including the CVPLA's Anadromous Fish Restoration Program and CALFED Bay-Delta Program to address identified stressors.
- e. Budget Costs and Third Part Impacts** -- The total project cost is \$1,116,385. No third-party impacts are anticipated from the project.
- f. Applicant Qualifications** -- DU is skilled in overall management of environmental restoration type activity and in the administration of contracts for design and construction of projects involving water control structures and pump stations. The Joint Venture Team selected to implement the project is well qualified by demonstrated performance in the design and construction of fish screening and fish passage projects.
- g. Monitoring and Data Evaluation** -- As performed on similar projects, B&A will prepare and implement a monitoring program in consultation with the Anadromous Fish Screen Program (AFSP) Technical Team. The data and observation of fish behavior will be reviewed and evaluated in consultation with the AFSP Technical Team as well.
- h. Local Support/Coordination with other Programs/Compatibility with CALFED objectives** -- The proposed project is identified for implementation in the CVPLA Action Program and is identified in the Stressors and Example Restoration Actions prepared by the Technical Teams that have been working with the CALFED Bay-Delta Program.

II. TITLE PAGE

- a. **Title of Project** -- Rancho Esquon (Adams Dam) Fish Screen and Fishway Project
- b. **Name of Applicant** -- Ducks Unlimited, Inc. 3074 Gold Canal Drive, Rancho Cordova, California 95670-6116; Telephone: 916-952-2000; Fax: 916-852-2200; E-Mail: wroducts@gte.net
- c. **Type of Organization and Tax Status** -- Non Profit Cooperation
- d. **Tax Identification Number** -- 68-0226740
- e. **Technical and Financial Contact Persons**
- Technical: Francis E. Borcalli, Borcalli & Associates, Inc., 4620 Northgate Boulevard, Suite 120, Sacramento, California 95834; Telephone: 916-564-3300; Fax: 916-564-7622; E-Mail: borcalli@aol.com
- Financial: Holly Andree, Ducks Unlimited, Inc. 3074 Gold Canal Drive, Rancho Cordova, California 95670-6116; Telephone: 916-952-2000; Fax: 916-852-2200; E-Mail: wroducts@gte.net
- f. **Participants/Collaborators in Implementation**
- Rancho Esquon Partners: Project Owner/Sponsor
- Ducks Unlimited: Project Owners, Project Manager, Overall Project Management, Environmental Documentation
- Pacific Engineering Contractors/Ray Toney & Associates (PEC/RTA): Joint Venture to Design and Construct Project
- Borcalli & Associates, Inc.: Subcontractors to PEC/RTA to Provide Construction Plans, Specifications and Quality Assurance
- FishPro: Provide Technical Expertise in Fisheries Engineering and Biology
- Beak Consultants: Provide Environmental Documentation and Assistance in Obtaining Permits
- Anadromous Fish Screen Program Technical Team: Review Design Criteria and Design
- g. **RFP Project Group Type** --
- Group 3: Services - Design, Environmental Permit Documents, and Construction Quality Assurance
- Group 1: Public Works/Construction Projects - Construction

III. PROJECT DESCRIPTION

- a. **Project Description and Approach** -- The proposed project has been configured to utilize state-of-the-art technology for both fish screens and fish passage. A positive-barrier fish screen consisting of stainless steel wedge wire screen with an air scouring cleaning system will be employed. Special provisions have been incorporated into the project layout to protect the facilities from damage during high runoff conditions. Fish passage will be enhanced substantially with facilities tailored to function during Rancho Esquon's two operating conditions: dam "in" and dam "out." With the dam "in" for diverting irrigation water, a step-pool fish ladder will be constructed for fish passage. With the dam "out," a roughened chute will be constructed.

The sizing and design of respective fish screen and fish passage facilities will be based upon established or accepted design criteria and design parameters that have been reviewed with the California Department of Fish and Game, the California Department of Water Resources, and the National Marine Fisheries Service.

The project will be implemented under a design-build approach by a Joint Venture Team consisting of Borcalli & Associates, Inc. (program manager and design engineers), Ray Toney & Associates, (contractor), Beak Consultants (environmental consultants), and FishPro (fisheries engineering and biology). This Joint Venture team was selected through a competitive bid requiring "risk-based" cost proposals.

- b. **Location and/or Geographic Boundaries of Project** -- The project is located on Butte Creek in the Butte Creek watershed approximately six miles south of the City of Chico, in Butte County (Figure 1).
- c. **Expected Benefit(s)** -- The primary purpose of the proposed Adams Dam Project is to improve both the upstream and downstream movement of anadromous salmonids, specifically spring-run chinook salmon and steelhead (priority species) as well as fall-run chinook salmon. Adams Dam is a known migration barrier to the upstream movement of adult salmonids, and entrainment of outmigrating juvenile salmonids into the associated diversion has been documented. Agreements negotiated during implementation of the M&T Project resulted in an additional 40 cfs flowing in Butte Creek from October through June. The proposed project will enhance the benefits to be derived from this instream flow augmentation.

The proposed Adams Dam Project includes construction of an improved fish ladder and installation of a fish screen on the existing unscreened diversion. Each component of the project has a specific benefit:

- The existing fish ladder is inefficient due to the size of the ladder, the volume of water flowing through the ladder, and the ladder's ineffective entrance. The proposed project will replace the existing ladder with a new design that directs all flows less than 100 cfs through the ladder, and provides for fish passage under all flow regimes greater than 10 cfs. This would provide an effective method of removing the migration barrier and,

therefore, benefit anadromous salmonids in Butte Creek (i.e., spring-run and fall-run chinook salmon, steelhead).

- A fish screen will be added to the existing unscreened diversion, which is known to entrain juvenile fish. The fish screen will be designed to meet criteria to protect steelhead fry, which require a smaller screen opening than chinook salmon. Accordingly, the project will benefit all anadromous fish by reducing the number of fish entrained into the Adams Dam diversion.

- d. Background and Biological/Technical Justification** – Butte Creek originates on the western slope of the Sierra Nevada, and is largely fed by rainfall and snow melt. The creek reaches the Sacramento Valley southeast of Chico, flowing southwesterly after reaching the valley until draining into the Sacramento River and Sutter Bypass system south of Colusa. Butte Creek is an extremely complex system with water imports from other sources (e.g., Little Chico Creek), agricultural diversions, and agricultural return flows.

Butte Creek supports a small and generally declining anadromous fishery of spring-run and fall-run chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (*Oncorhynchus mykiss*). Historical weather patterns and stream flows are favorable for both fish that immigrate and spawn during the fall/winter (fall-run chinook salmon) or immigrate in the spring and hold over in pools during the summer before spawning in the fall (spring-run chinook salmon). Prior to 1965, Butte Creek supported an average of about 2,500 spring-run chinook salmon; however, from 1965 to 1991, an average of only 350 spring-run chinook have spawned in the creek. It is estimated that up to 1,000 fall-run chinook salmon spawn in Butte Creek. No information is available on the number of steelhead present in Butte Creek, although they are known to occur.

The decline of salmon populations in Butte Creek has been attributed to inadequate flows, unscreened diversions, inadequate fish passage over diversion dams, unlocked drains that attract and strand fish, siltation, lack of suitable gravel, inadequate cover and shade, and poor water quality (i.e., temperature). Adams Dam contributes to these problems by blocking upstream passage of adult fish and entraining juvenile fish migrating downstream. During periods of low flow, the dam is a barrier to both adult spring-run and fall-run chinook salmon. Fish delayed or trapped during these periods are subject to increased mortality resulting from poaching and elevated water temperatures. The existing unscreened diversion is also responsible for losses of juvenile salmon that are entrained in the diversion canal. Based upon fish sampling data collected in the diversion canal at the Adams Dam facility by CDFG in 1991, an estimated 263 spring-run chinook salmon fry were lost at the facility during the spring of that year. This number is expected to be higher for fall-run juveniles due to their greater abundance near the dam during the height of the diversion season.

As described above, the expected benefits of the project are: (1) improved upstream passage of anadromous fish around Adams Dam, and (2) curtailed entrainment of juvenile fish at the Adams Dam diversion. Fish migration problems in Butte Creek have been acknowledged for many years, and recently several projects have been initiated that are designed to improve fish migration. In addition to the Adams Dam project, other current or potential

Category III-funded projects are under consideration at Parrot-Phelan Dam, Durham Mutual Dam, Gorrill Dam, and for a series of diversions operated by the Western Canal Water District. Additionally, the Nature Conservancy and National Fish and Wildlife Foundation, in coordination with resource agencies and landowners, are investigating alternatives to enhance fish migration in the lower Butte Creek system. Accordingly, the Adams Dam Project represents one component of a comprehensive program to restore the Butte Creek anadromous fishery. The project has undergone preliminary engineering analysis and environmental assessment by the California Department of Water Resources and CDFG.

- e. **Proposed Scope of Work** -- The principal tasks and activities to be performed to implement the Rancho Esquon (Adams Dam) Project are described below.

1.0 PROJECT MANAGEMENT

- 1.1 Prepare and Implement Project Management Plan -- B&A will prepare a Project Management Plan (PMP) and provide the basis for conducting, coordinating, and guiding the team in performing the work for design and construction. A Quality Assurance Plan (QAP) is an integral part of the PMP. The QAP will provide guidelines for the Quality Assurance Committee to review and check work performed by B&A and subconsultant staff to ensure quality in design and construction.
- 1.2 Prepare Monthly Status Reports -- Brief written reports will be submitted to Rancho Esquon each month to describe the status of the work and budget. The status of the work will be described in relation to the work completed and planned over the following two weeks.

2.0 PROJECT COORDINATION

- 2.1 Coordinate With Rancho Esquon -- B&A will coordinate its day-to-day activities during the period of design and environmental review with DU's program manager.
- 2.2 Coordinate With Funding and Regulatory Agencies -- The USFWS manages an AFSP Technical Team comprised of agencies having regulatory and resource management responsibility. B&A will meet with the Technical Team and/or CDFG, as appropriate, as early as possible to advise them of DU's project and schedule and to keep them apprised of progress and receive input on the layout and design to ensure acceptance of the developed project.

3.0 ENVIRONMENTAL DOCUMENTATION

- 3.1 Prepare CEQA Documentation -- Beak Consultants will update the draft Initial Study prepared by the CDFG, dated March, 1997. Key components of this task include the following.
 - a. Revise the Project Description in accordance with new specifications developed by the project team.
 - b. Update the Initial Study Checklist and Discussion Section to comply with current CEQA Standards.
 - c. Incorporate the results of 1997 botanical surveys recently performed by DWR staff.

- d. Obtain a list of sensitive species from the USFWS Endangered Species Office and incorporate into the Initial Study, as appropriate.
- e. Expand on the discussion of fish impacts.
- f. Develop a mitigation monitoring plan.
- g. Write the Negative Declaration.

Other information contained in the Initial Study is assumed to be adequate to satisfy the requirements of the lead agency. Beak will reformat and edit the draft Initial Study, as appropriate.

- 3.2 Distribute CEQA Documentation -- Beak will coordinate the distribution of the Initial Study/Negative Declaration in accordance with CEQA Standards.
- 3.3 Agency Decisionmaking -- Prior to the approval of the project, Beak and the lead agency will consider comments received on the Negative Declaration. The Negative Declaration will then be adopted by the lead agency (California Department of Fish and Game) through their own internal processes.
- 3.4 Prepare NEPA Documentation -- Based upon recent conversations with USFWS, the USFWS will be the lead agency for NEPA documentation due to anticipated CVPIA funding. The USFWS staff indicated that they have determined that an Environmental Assessment (EA) would be required for Rancho Esquon's fish passage improvement project, and expect that a Finding of No Significant Impact (FONSI) could be prepared.

Final acceptance of the environmental documentation and approval of the project will occur through USFWS's internal processes.

4.0 PERMITS

- 4.1 Obtain CDFG Streambed Alteration Permit -- Under Sections 1601-1606 of the CDFG Code, the CDFG has regulatory jurisdiction over the removal of materials and/or alteration of river bottoms.
- 4.2 Obtain State Reclamation Board Encroachment Permit -- Approval by the State Reclamation Board will be required since the project encroaches into the waterway.
- 4.3 Obtain California Regional Water Quality Control Board Section 401 Water Quality Certification -- A Section 401 Water Quality Certification will be obtained from the Central Valley Regional Water Quality Control Board.
- 4.4 Obtain U.S. Army Corps of Engineers: N33 and N4 Permits -- Compliance with Section 404 of the Clean Water Act is required. Issuance of Nationwide Permits 33 and 4 will satisfy Section 404 requirements.
- 4.5 Comply With Endangered Species Act -- Although there are no specific permit requirements associated with the Federal Endangered Species Act (ESA), the ESA is an important consideration in virtually all the environmental processes identified above. The ESA is an especially important consideration due to the potential listing of the spring-run chinook and Central Valley steelhead as an endangered species.

- 4.6 Inform Butte County Public Works Department -- No permits are required from Butte County; however, B&A will advise the Public Works Department when work is to begin.

5.0 SURVEYING AND MAPPING

- 5.1 Perform Design Surveys -- The surveying and mapping performed by DWR for preliminary engineering work will be used and augmented as required for purposes of design and construction.
- 5.2 Perform Construction Surveys -- One set of construction stakes will be provided, which would include a maximum of eight horizontal control points set to control the construction of the fish screen structure and fish ladder. A temporary benchmark will be provided.

6.0 ENGINEERING DESIGN

- 6.1 Prepare Design Report -- B&A will prepare a Design Report that sets forth the overall concept of the project, conditions for operation, and measurement of water, design, and the design criteria.
- 6.2 Perform Design and Prepare Construction/Procurement Plans and Specifications -- B&A and its subconsultants will perform engineering designs and prepare construction plans and specifications for the civil, mechanical, and electrical features of the Project.
- 6.3 Perform Design Quality Assurance -- The Quality Assurance Plan referenced in Task 1.1 will identify the schedule and procedures for conducting Quality Assurance reviews of the design. RTA will participate in these reviews.
- 6.4 Prepare As-Built Drawings -- B&A will provide DU with as-built drawings at the conclusion of the Project.

7.0 CONSTRUCTION/EQUIPMENT INSTALLATION

- 7.1 Coordinate Irrigation Shutdown -- B&A/RTA will coordinate with Rancho Esquon regarding the shutdown of irrigation deliveries so that the cofferdam and dewatering facilities can be installed in July 1997.
- 7.2 Perform Design Liaison -- Liaison from design to construction will be provided through the project engineers for design and construction, as required.
- 7.3 Manage Construction -- RTA will manage the construction and installation of materials and equipment and coordinate such activities with B&A personnel.
- 7.4 Perform Construction Project Administration -- In carrying out this activity, B&A will:
- a. Keep informed of the work and work schedule.
 - b. Coordinate the work and minimize any impact to Rancho Esquon's farm operations.
 - c. Receive, review, and document drawings and product/material specifications.
 - d. Make clarifications and interpretations of the plans and specifications when needed and transmit clarifications and interpretations to contractors.
 - e. Ensure that RTA complies with the terms and conditions for permits issued to DU for construction of the project.
 - f. Maintain orderly files for correspondence, reports of job conferences, and shop drawings.

- g. Furnish DU periodic reports on the progress and RTA's compliance with the construction schedule and submittals.
- h. Process Payment Requests -- Review progress payments requested for consistency with work performed.
- i. Compile Certificates and Prepare Maintenance and Operations Manual.
- j. Completion of the Work -- Issue a Certificate of Substantial Completion, upon completion of the project to the satisfaction of DU and Rancho Esquon.

7.5 Perform Construction Quality Assurance -- In carrying out the construction Quality Assurance, B&A will review work, reject defective work, inspect, and order tests as required.

8.0 OPERATIONS AND MAINTENANCE

- 8.1 Prepare O&M Document -- B&A will compile all manufacturers' instructions for operation and maintenance of equipment that has been incorporated into the project.
- 8.2 Provide Operations Training -- Upon completion of the construction, B&A/RTA will review the O&M documents with Rancho Esquon and train personnel.

9.0 FISH PASSAGE ENHANCEMENT

- 9.1 Observe fish behavior to determine if hydraulic conditions associated with the spillway and entrance inhibit the upstream migration of adults.
- 9.2 Refine fishway entrance to the extent the hydraulic conditions at the fishway entrance appear to be inhibiting the movement of fish.

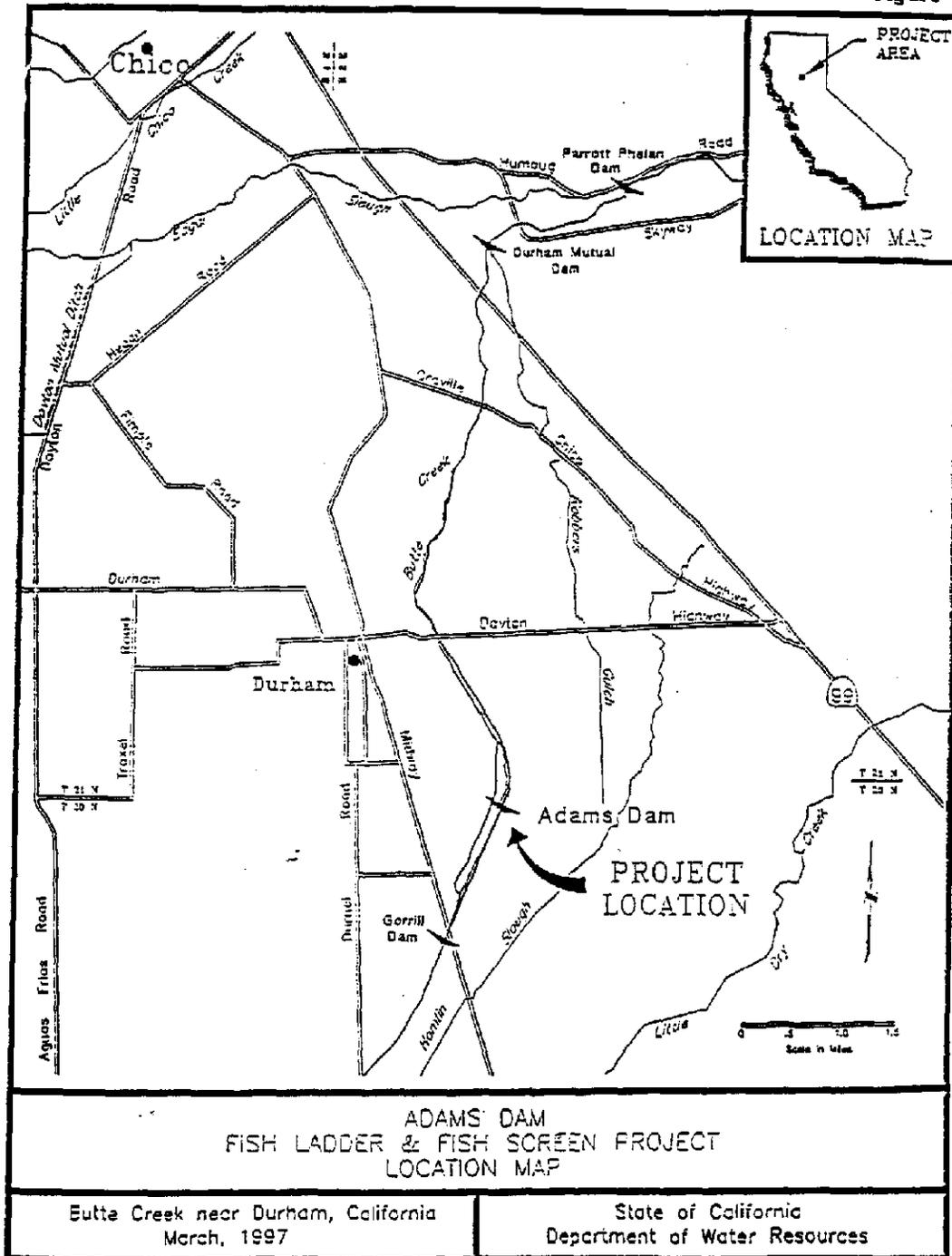
f. **Monitoring and Data Evaluation** -- A program will be prepared in consultation with the AFSP Technical Team to confirm that the screen approach velocities are within criteria. As noted in the scope of work, Item 9.0, fish behavior at the entrance and movement through the ladder will be monitored and evaluated in coordination with the CDFG.

g. **Implementability** -- The environmental assessment of the project will be conducted in compliance with CEQA and NEPA; and the design will be performed with adherence to established design criteria and parameters. The facilities will be designed within established parameters applied to the hydrology of Butte Creek.

Butte Creek is a critical habitat for the potentially listed spring-run chinook salmon and Central Valley steelhead. Significant effort is underway in nearby projects to enhance fish migration in the upper reaches of Butte Creek, and the lower Butte Creek system is currently being investigated to identify and evaluate alternatives to enhance fish passage.

The enhancement of fish passage on Butte Creek ranks high on the action programs of both federal and state resource agencies including the CVPIA Action Program and CALFED's Stressors and Example Actions. Rancho Esquon Partners, who own and operate Adams Dam for irrigated agriculture and wetland management, are willing participants of the project and provided the leadership in soliciting and reviewing proposals to facilitate the timely design and construction of the project.

Figure 1



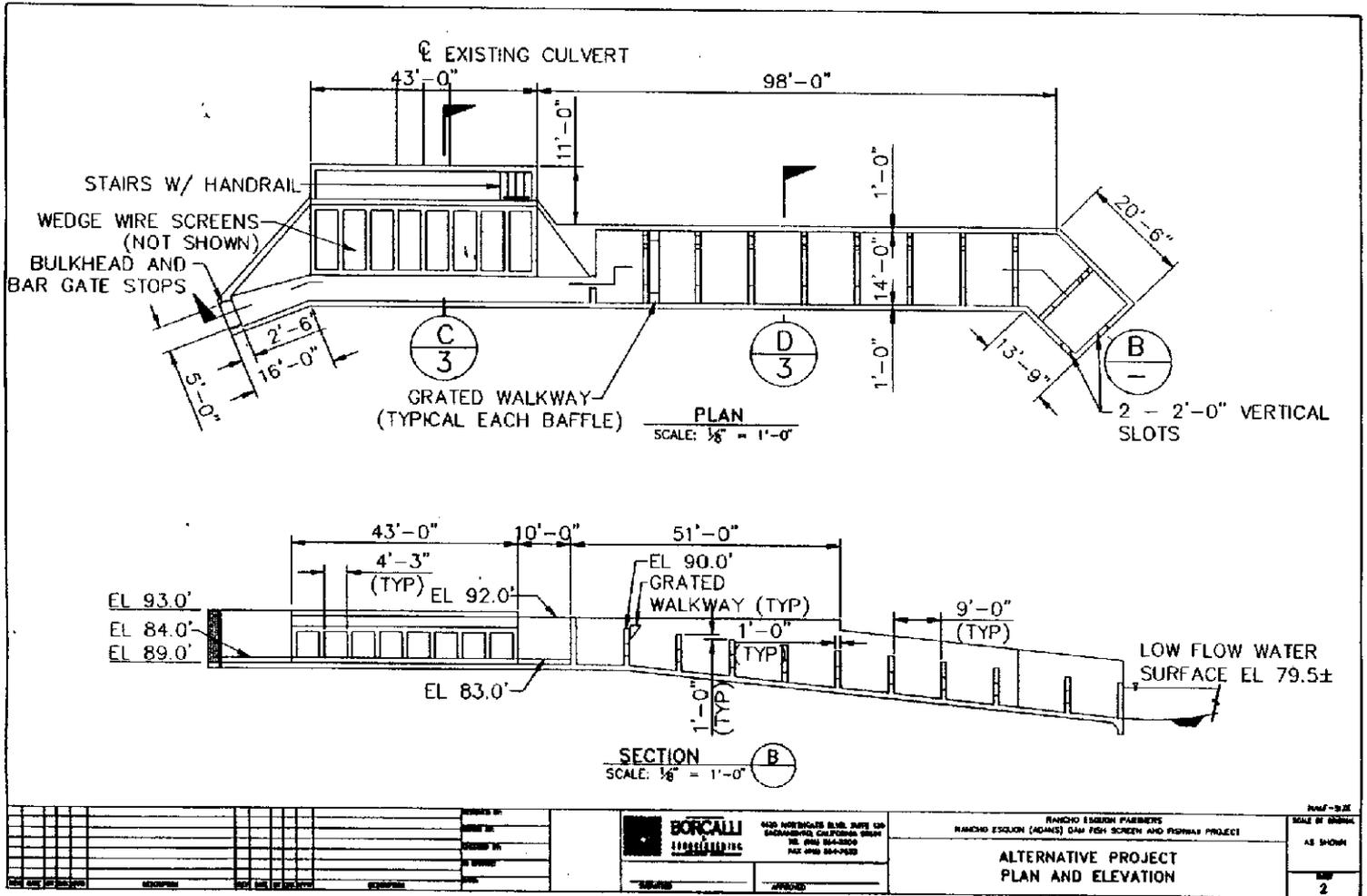
ADAMS DAM
FISH LADDER & FISH SCREEN PROJECT
LOCATION MAP

Eutia Creek near Durham, California
March, 1997

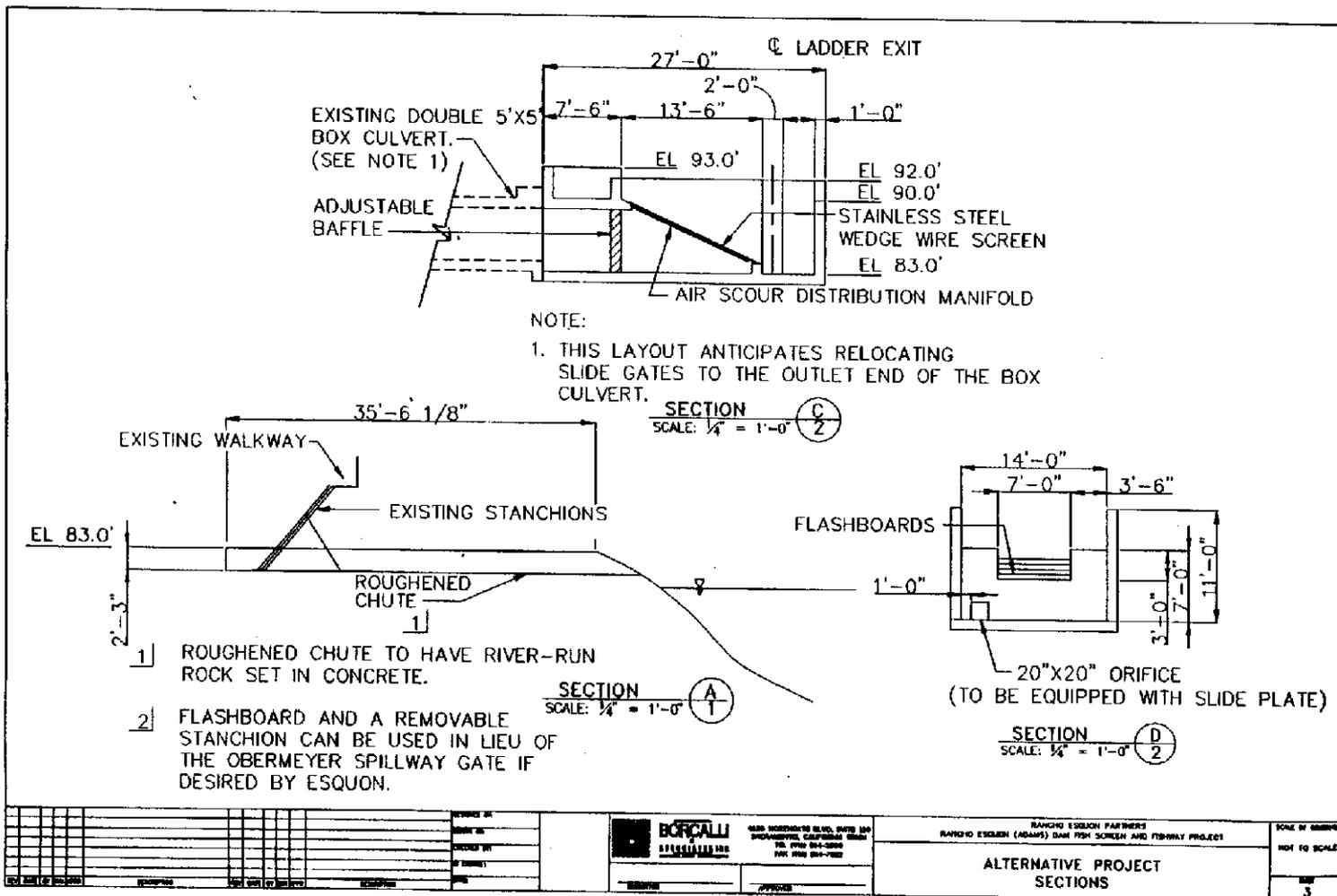
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Department of Water Resources

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IV. COST AND SCHEDULE TO IMPLEMENT PROPOSED PROJECT

- a. **Budget Costs** -- An "at risk" or "firm price" budget was prepared by the Joint Venture selected to design and construct the proposed project. The Joint Venture budget according to the respective tasks and activities for performing the work, is presented on Table 1. Presented on Tables 2 through 5 (tables from the Joint Ventures proposals), are breakdowns of effort and costs for the "at-risk" price. The hourly rates presented for personnel in Table 3, include salary, benefits, overhead, and profit. The total project cost including DU's program management budget and the Joint Venture budget is as follows:

Item	Amount, \$
DU Program Management	100,000
Joint Venture Design and Construction	1,016,385
TOTAL	1,116,385

The cost for operations and maintenance including energy and labor is estimated to be approximately \$10,000 annually.

CALFED funding is critical to implementing this important project. The funding commitments and pursuits are identified below.

Source of Funding	Amount, \$	Status
Applicant	150,000	Committed
CVPIA	533,100	Requested ^{1/}
CALFED	433,285	Requested with this proposal
TOTAL	1,116,385	

^{1/} Assumed 50 percent contribution from CVPIA.

In April 1997, in the interest of advancing the Rancho Esquon (Adams Dam) Fish and Fishway Project, the landowners formally solicited a proposal to design and construct the project. Through this process, the Joint Venture team was selected, which is comprised of Borcalli & Associates, Inc. and Ray Toney & Associates, Inc.

- b. **Schedule Milestones** -- Presented on Figure 2 is the Joint Venture's schedule for performing the work with the objective of completing construction in the summer of 1998.

Specific tasks and activities are presented in Table 1. The dispersement of funds will generally track the time periods reflected on Figure 2.

Practically speaking, the majority of the funds for Tasks 1 through 6, totaling approximately \$133,000, will be expended in the last half of 1997, whereas the balance, amounting to approximately \$883,000, will be expended in the last half of 1998.

- c. **Third Party Impacts** -- There will be no third-party impacts resulting from implementing the project.

TABLE 1
RANCHO ESQUON (ADAMS) DAM
FISH SCREEN AND FISHWAY PROJECT
JOINT VENTURE BUDGET

Task/Activity	Amount, \$
1. PROJECT MANAGEMENT	
1.1 Prepare and Implement Project Management Plan	6,176
1.2 Prepare Monthly Status Reports	2,200
Subtotal	8,376
2. PROJECT COORDINATION	
2.1 Coordinate with Ducks Unlimited and Rancho Esquon	3,220
2.2 Coordinate with Funding and Regulatory Agencies	920
Subtotal	4,140
3. ENVIRONMENTAL DOCUMENTATION	
3.1 Prepare CEQA Documentation	8,155
3.2 Distribute CEQA Documentation	1,200
3.3 Agency Decision Making	1,315
3.4 Prepare NEPA Documentation	5,415
Subtotal	16,085
4. PERMITS	
4.1 Obtain Streambed Alteration Permit	1,390
4.2 Obtain State Reclamation Board Permit	420
4.3 Obtain RWQCB Section 401 Water Quality Certification	1,100
4.4 Obtain Corps of Engineers N33 and N4 Permits	5,560
4.5 Comply with Endangered Species Act	1,400
4.6 Inform County Public Works Department	80
Subtotal	9,950
5. SURVEYING AND MAPPING	
5.1 Perform Design Surveys	2,160
5.2 Perform Construction Surveys	3,000
Subtotal	5,160
6. ENGINEERING DESIGN	
6.1 Prepare Design Report	3,340
6.2 Perform Design and Prepare Construction/Procurement Plans and Specifications	80,130
6.3 Perform Design Quality Assurance	4,356
6.4 Prepare As-Built Drawings	1,800
Subtotal	89,626
7. CONSTRUCTION/EQUIPMENT INSTALLATION	
7.1 Coordinate Irrigation Shutdown	230
7.2 Perform Design Liaison	1,960
7.3 Manage and Perform Construction	806,800
7.4 Perform Construction Project Administration	25,480
7.5 Perform Construction Quality Assurance	33,580
Subtotal	868,050
8. OPERATION AND MAINTENANCE	
8.1 Prepare O&M Document	7,472
8.2 Provide Operations Training	2,682
Subtotal	10,154
9. FISH PASSAGE ENHANCEMENT	
9.1 Observe Fish Behavior	2,844
9.2 Enhance Fishway Entrance	2,000
Subtotal	4,844
TOTAL	1,016,385

TABLE 2
 RANCHO ESQUON PARTNERS -- GREEN AND FISHWAY PROJECT
 PERSONNEL EFFORT (hours)

Task/Activity	FB	RB	JP	DM	DC	MF	TF	ED	RS	SS	LP	MII	Tech	CAD	WP	Cler	Total
1. PROJECT MANAGEMENT																	
1.1 Prepare and Implement PMP	32							16							16	8	
1.2 Prepare Monthly Status Report	16														8		
Subtotal	48	0	0	0	0	0	0	16	0	0	0	0	0	0	24	8	96
2. PROJECT COORDINATION																	
2.1 Coordinate with Esquon	28																
2.2 Coordinate with Agencies	8																
Subtotal	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
3. ENVIRONMENTAL DOCUMENTS																	
3.1 Prepare CEQA Docs	1			8	8	72	16										
3.2 Distribute CEQA Docs						16											
3.3 Agency Decision Making	1					16											
3.4 Prepare NEPA Docs	1				8	48	12										
Subtotal	3	0	0	8	16	152	28	0	0	0	0	0	0	0	0	0	2
4. PERMITS																	
4.1 Obtain Streambed Alt Permit	2			2													
4.2 Obtain Slatic Rec Bd Permit				3										4			
4.3 Obtain CRWQCB W.Q. Cert						8											
4.4 Obtain COE N33 & N4 Perm					8	28	32							4			
4.5 Comply with ESA					8	8											
Subtotal	2	0	0	5	16	44	32	0	0	0	0	0	0	8	0	0	107
5. SURVEYING AND MAPPING																	
5.1 Perform Design Surveys				2													
5.2 Perform Construction Surveys																	
Subtotal	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
6. ENGINEERING DESIGN																	
6.1 Prepare Design Report	4			24					10								
6.2 Perf Design & Prep P & S	16		80	200				32	48	54	68	82	64	370	24	28	
6.3 Perform Design QA	16							16	4	4	4	4					
6.4 Prepare As-Built Drawings				16										8			
Subtotal	36	0	80	240	0	0	0	48	58	58	72	86	64	378	24	28	1177
7. CONSTRUCTION																	
7.1 Coordinate Irrigation Shutdown	2																
7.2 Perform Design Liaison				12													
7.3 Manage and Perform Constr																	
7.4 Perform Constr Project Admin	24	80	140	40													
7.5 Perform Construction QA			278	40													
Subtotal	26	80	418	92	0	0	0	12	0	0	12	0	4	0	24	72	740
8. OPERATION & MAINTENANCE																	
8.1 Prepare O&M Document	8			24				16			24				16	8	
8.2 Provide Operations Training	8							10			8				2		
Subtotal	16	0	0	24	0	0	0	26	0	0	32	0	0	0	18	8	124
9. FISH PASSAGE ENHANCEMENT																	
9.1 Observe Fish Behavior	12							12		4							
9.2 Enhance Fishway Entrance	8							8		4							
Subtotal	20	0	0	0	0	0	0	20	0	8	0	0	0	0	0	0	48
TOTAL	187	80	498	371	32	196	60	122	58	66	116	86	68	386	90	116	2532

RANCHO ESQUON PARTNERS - SCREEN AND FISHWAY PROJECT
PERSONNEL COST (dollars)

Task/activity	FB	RB	JP	DM	DC	MF	TF	ED	RS	SS	LP	MI	Tech	CAD	WP	Clcr	Total
	90	70	80	100	75	75	96	96	78	89	78	70	65	45	30		
1. PROJECT MANAGEMENT	115																
1.1 Prepare and Implement PMP	3,680	0	0	0	0	0	1,536	0	0	0	0	0	0	0	720	240	
1.2 Prepare Monthly Status Report	1,840	0	0	0	0	0	0	0	0	0	0	0	0	360	0	0	
Subtotal	5,520	0	0	0	0	0	1,536	0	0	0	0	0	0	1,080	240	0	8,376
2. PROJECT COORDINATION																	
2.1 Coordinate with Esquon	3,220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2 Coordinate with Agencies	920	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	4,140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,140
3. ENVIRONMENTAL DOCUMENTS																	
3.1 Prepare CEQA Docst	115	0	0	640	800	5,400	1,200	0	0	0	0	0	0	0	0	0	0
3.2 Distribute CEQA Docs	0	0	0	0	0	1,200	0	0	0	0	0	0	0	0	0	0	0
3.3 Agency Decision Making	115	0	0	0	0	1,200	0	0	0	0	0	0	0	0	0	0	0
3.4 Prepare NEPA Docs	115	0	0	0	800	3,600	900	0	0	0	0	0	0	0	0	0	0
Subtotal	345	0	0	640	1,600	11,400	2,100	0	0	0	0	0	0	0	0	0	16,085
4. PERMITS																	
4.1 Obtain Streambed All Permit	230	0	0	160	0	0	0	0	0	0	0	0	0	0	0	0	0
4.2 Obtain State Rec Bd Permit	0	0	0	240	0	600	0	0	0	0	0	0	0	0	0	0	260
4.3 Obtain CRWOQB W/Q Cert	0	0	0	0	0	600	0	0	0	0	0	0	0	0	0	0	260
4.4 Obtain COE N33 & N4 Perm	0	0	0	0	800	2,100	2,400	0	0	0	0	0	0	0	0	0	260
4.5 Comply with ESA	0	0	0	0	800	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	230	0	0	400	1,600	3,300	2,400	0	0	0	0	0	0	0	0	0	8,450
5. SURVEYING AND MAPPING																	
5.1 Perform Design Surveys	0	0	0	160	0	0	0	0	0	0	0	0	0	0	0	0	0
5.2 Perform Construction Surveys	0	0	0	160	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	320	0	0	0	0	0	0	0	0	0	0	0	0	320
6. ENGINEERING DESIGN																	
6.1 Prepare Design Report	460	0	0	1,920	0	0	0	960	0	0	0	0	0	0	0	0	0
6.2 Perform Design & Prep P & S	1,840	0	5,600	16,000	0	0	3,072	4,608	4,212	6,052	6,396	4,480	24,050	1,080	840	0	840
6.3 Perform Design QA	1,840	0	0	0	0	0	1,536	0	312	356	312	0	520	0	0	0	0
6.4 Prepare As-Built Drawings	0	0	0	1,280	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	4,140	0	5,600	19,200	0	0	4,608	5,568	4,524	6,408	6,708	4,480	24,570	1,080	840	0	87
7. CONSTRUCTION																	
7.1 Coordinate Irrigation Shutdown	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.2 Perform Design Liaison	0	0	0	960	0	0	0	0	0	0	0	0	0	0	0	0	0
7.3 Manage and Perform Constr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.4 Perform Constr Project Admin	2,760	7,200	9,800	3,200	0	0	0	0	0	0	0	0	0	1,080	1,440	0	0
7.5 Perform Construction QA	0	0	19,460	3,200	0	0	1,152	0	0	1,068	0	280	0	0	720	0	0
Subtotal	2,990	7,200	29,260	7,360	0	0	1,152	0	0	1,068	0	280	0	1,080	2,160	0	57,550
8. OPERATION & MAINTENANCE																	
8.1 Prepare O&M Document	920	0	0	1,920	0	0	1,536	0	0	2,136	0	0	0	720	240	0	0
8.2 Provide Operations Training	920	0	0	1,920	0	0	960	0	0	712	0	0	0	90	0	0	0
Subtotal	1,840	0	0	3,840	0	0	2,496	0	0	2,848	0	0	0	810	240	0	10,134
9. FISH PASSAGE ENHANCEMENT																	
9.1 Observe Fish Behavior	1,380	0	0	0	0	0	1,152	0	312	0	0	0	0	0	0	0	0
9.2 Enhance Fishway Entrance	920	0	0	0	0	0	768	0	312	0	0	0	0	0	0	0	0
Subtotal	2,300	0	0	0	0	0	1,920	0	624	0	0	0	0	0	0	0	0
TOTAL	21,505	7,200	34,860	29,680	3,200	14,700	4,500	11,712	5,568	5,148	10,324	6,708	4,760	25,080	4,050	3,480	192,485

TABLE 4
RANCHO ESQUON PARTNERS
FISH SCREEN AND FISHWAY PROJECT
ENGINEERING AND ENVIRONMENTAL COSTS

Item	Amount, \$ Alternative Project
Labor:	
Engineering	
Borcalli	21,505
Bowman	7,200
Peterson	34,860
Matthies	29,680
Donahue	11,712
Schmudde	5,568
Sawdy	5,148
Pauls	10,324
Hassebrock	6,708
Technician, Sr.	4,760
CAD	25,090
Word Processor	4,050
Clerical	3,480
Subtotal	170,085
Environmental	
Christophel	3,200
Franck	14,700
Fisher	4,500
Total Labor	22,400
Other Direct Costs:	
Communications	1,900
Transportation	6,800
Reproduction	1,000
Environmental Permits/Fees	1,500
Laboratory Testing	500
Photographs	400
Total Other Costs	12,100
TOTAL ENGINEERING AND ENVIRONMENTAL	204,585

TABLE 5

**RANCHO ESQUON PARTNERS
FISH SCREEN AND FISHWAY PROJECT**

**CONSTRUCTION COSTS
(dollars)**

Item	Alternative Project
1. Control of Water	105,300
2. Fish Screens and Intake Structure ^{1/}	380,200
3. Fishway ^{2/}	160,300 ^{3/}
4. Site Work	78,500
Subtotal	724,300
5. Mobilization, Surveys, Indirect Cost, Etc.	87,500
TOTAL	811,800

^{1/} Includes grouted riprap on spillway apron and includes grouted riprap to protect left bank of Butte Creek

^{2/} Includes grouted riprap upstream of the fish screen

^{3/} Include the step and pool ladder and roughened chute. (Alternative Project Only)

FIGURE 2

RANCHO ESQUON (ADAMS) DAM
FISH SCREEN AND FISHWAY PROJECT
PROJECT DEVELOPMENT SCHEDULE

Task/Activity	1997			1998											
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1. PROJECT MANAGEMENT															
1.1 Prepare and Implement Project Management Plan															
1.2 Prepare Monthly Status Reports															
2. PROJECT COORDINATION															
2.1 Coordinate with Ducks Unlimited and Rancho Esquon															
2.2 Coordinate with Funding and Regulatory Agencies															
3. ENVIRONMENTAL DOCUMENTATION															
3.1 Prepare CEQA Documentation															
3.2 Distribute CEQA Documentation															
3.3 Agency Decision Making															
3.4 Prepare NEPA Documentation															
4. PERMITS															
4.1 Obtain Streambed Alteration Permit															
4.2 Obtain State Reclamation Board Permit															
4.3 Obtain RWQCB Section 401 Water Quality Certification															
4.4 Obtain Corps of Engineers N33 and N4 Permits															
4.5 Comply with Endangered Species Act															
4.6 Inform County Public Works Department															
SURVEYING AND MAPPING															
5.1 Perform Design Surveys															
5.2 Perform Construction Surveys															
6. ENGINEERING DESIGN															
6.1 Prepare Design Report															
6.2 Perform Design and Prepare Construction/Procurement Plans and Specifications															
6.3 Perform Design Quality Assurance															
6.4 Prepare As-Built Drawings															
7. CONSTRUCTION/EQUIPMENT INSTALLATION															
7.1 Coordinate Irrigation Shutdown															
7.2 Perform Design Liaison															
7.3 Manage and Perform Construction															
7.4 Perform Construction Project Administration															
7.5 Perform Construction Quality Assurance															
8. OPERATION AND MAINTENANCE															
8.1 Prepare O&M Document															
8.2 Provide Operations Training															
9. FISH PASSAGE ENHANCEMENT															
9.1 Observe Fish Behavior															
9.2 Enhance Fishway Entrance															

To be Scheduled with Agencies →
To be Scheduled with Agencies →

V. APPLICANT QUALIFICATIONS

DU is the nationally recognized authority on the restoration and enhancement of wetlands. Since its inception in 1937, DU has raised over \$1 billion for restoring and enhancing over one million acres of wetlands in North America. Qualified biologists and engineers on staff at the Western Regional Office, Rancho Cordova, California, are skilled in the restoration activities like cut and fill excavation, selection and installation of appropriate water control structures and design and construction of pump stations. DU is skilled in construction management and is able to administer design and construction projects, provide bid packages to potential contractors, and ensure the project is completed to specifications. DU has recently completed the M&T, Category III, CVPIA project in the north Sacramento Valley.

DU will be overseeing the work on the Joint Venture selected to implement the Fish Screen and Fishway Project under a design-build arrangement. The Joint Venture team is extremely well qualified by demonstrated experience in the design and construction of numerous projects similar in scope and purpose as well as handling all environmental assessments and permitting.

Brief biosketches of key personnel identified in the Functional Organization Chart (Figure 3) are presented below.

Program Manager

Francis E. Borcalli, P.E. -- Licensed Civil Engineer, Agricultural Engineer, and Engineering Contractor with 33 years of experience in the planning, design, and management of water resources projects. As Project Manager and major participant in numerous projects, Mr. Borcalli has been responsible for assembling and managing multidisciplined teams, preparing design reports and construction drawings, preparing construction and procurement specifications, and providing construction management services.

Construction Plans and Specifications

Daniel J. Matthies, P.E. -- Licensed Civil Engineer with eight years of experience in planning and designing water resources projects. Mr. Matthies has served as Design Engineer on several water resources projects, including pumping plants, fish screens, fish ladders, hydraulic structures and levees.

Fisheries Engineering

Edward E. Donahue, P.E. -- Licensed Civil Engineer with 33 years of experience in civil and hydraulic engineering, which focused on fisheries facilities, natural resource projects, complex water control requirements required at fish hatcheries and fish passage facilities.

Construction Quality Assurance

Robert O. Bowman, P.E. -- Licensed Civil Engineer with 15 years of experience in the planning and design of water resources projects. Mr. Bowman is Project Engineer for an anadromous fish screen project on the Sacramento River and served as Project Engineer for the design and design liaison for a 100 cfs pumping plant incorporating positive-barrier fish screens.

Environmental Documentation

David Christophe -- Biologist with over 12 years of experience in California fish and wildlife resource issues and projects and has extensive experience in government, and will oversee all of Beak's involvement.

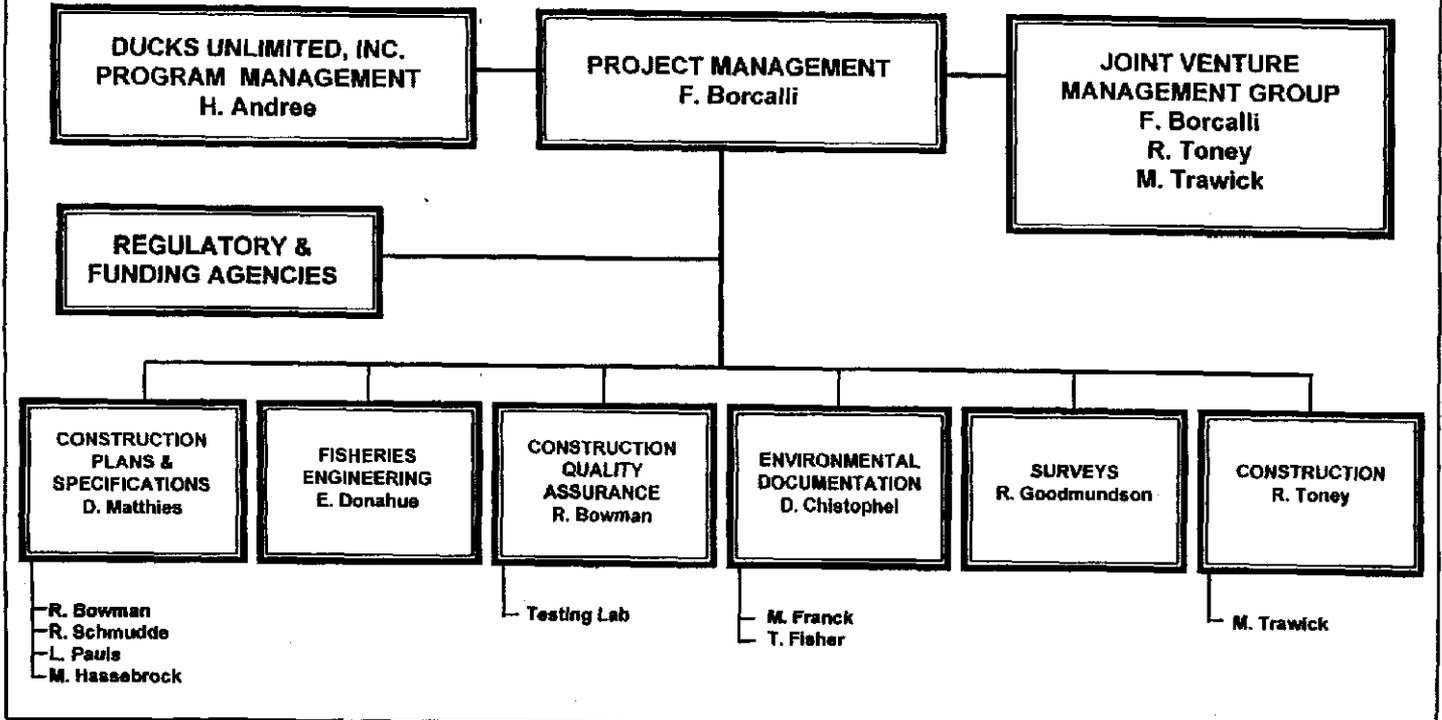
Construction

Ray E. Toney -- Licensed Civil Engineer and Engineering Contractor with 30 years of experience in engineering and construction involving several types of diversion dams, fish screens, fish ladders, substation, and powerhouses. The diversion structures include ogee, grouted rock fills, reinforced concrete walls, and crib wall types.

FIGURE 3

DUCKS UNLIMITED, INC.
RANCHO ESQUON (ADAMS) DAM
FISH SCREEN AND FISHWAY PROJECT

FUNCTIONAL ORGANIZATION



I - 0 0 7 1 1 6

I-007116

VI. COMPLIANCE WITH STANDARD TERMS AND CONDITIONS

DU has administered multiple government contracts with applicable compliance standards and has or will comply with the requirements of CALFED, thus, no deviations are being requested. The Joint Venture to perform the design and construction of the proposed project was selected through a competitive bidding process.

Specific Documents submitted with the proposal are as follows:

1. Bidders Bond (Item 7)
2. Nondiscrimination Compliance (Item 8)
3. Noncollusion (Item 11)
4. Proof of Contractors License (Item N/A)

Agreement No. _____

Exhibit _____

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS**

STATE OF CALIFORNIA)
)ss
COUNTY OF Sacramento)

Holly Andree _____, being first duly sworn, deposes and
(name)
says that he or she is _____ of
Director, State and Federal Coordination
(position title)
Ducks Unlimited, Inc.

(the bidder)

the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

DATED: 7/27/97 By Holly Andree
(person signing for bidder)



(Notarial Seal)

Subscribed and sworn to before me on
7/25/97
Jenny C. Pullen
(Notary Public)

State of California
County of Sacramento

On 7/25/97 before me, Jenny C. Pullen Notary Public
(DATE) (NAME/TITLE OF OFFICER(S); IF JANE DOE, NOTARY PUBLIC)
personally appeared Holly Hopkins Andree
(NAME(S) OF SIGNER(S))

personally known to me -OR-

proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Witness my hand and official seal.

(SEAL)

Jenny C. Pullen
(SIGNATURE OF NOTARY)

ATTENTION NOTARY

The information requested below and in the column to the right is **OPTIONAL**. Recording of this document is not required by law and is also optional. It could, however, prevent fraudulent attachment of this certificate to any unauthorized document.

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT DESCRIBED AT RIGHT:

Title or Type of Document _____
Number of Pages _____ Date of Document _____
Signer(s) Other Than Named Above _____

RIGHT THUMBPRINT (Optional)



CAPACITY CLAIMED BY SIGNER(S)
 INDIVIDUAL(S)
 CORPORATE _____

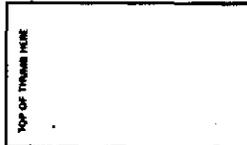
OFFICER(S) _____
TITLE

PARTNER(S) LIMITED
 GENERAL

ATTORNEY IN FACT
 TRUSTEE(S)
 GUARDIAN/CONSERVATOR
 OTHER: _____

SIGNER IS REPRESENTING:
(Name of Person(s) or Entity(ies))

RIGHT THUMBPRINT (Optional)



CAPACITY CLAIMED BY SIGNER(S)
 INDIVIDUAL(S)
 CORPORATE _____

OFFICER(S) _____
TITLE

PARTNER(S) LIMITED
 GENERAL

ATTORNEY IN FACT
 TRUSTEE(S)
 GUARDIAN/CONSERVATOR
 OTHER: _____

SIGNER IS REPRESENTING:
(Name of Person(s) or Entity(ies))

WOLCOTT'S FORM 63237 Rev. 3-84 (price class B-2A) © 1984 WOLCOTT'S FORMS, INC.
ALL PURPOSE ACKNOWLEDGMENT FOR CALIFORNIA WITH SIGNER CAPACITY/REPRESENTATION/TWO FINGERPRINTS



BIDDER'S BOND

We DUCKS UNLIMITED, INC.
3074 Gold Canal Drive, Rancho Cordova, CA 95670-6116
 _____ as PRINCIPAL, and
UNITED PACIFIC INSURANCE COMPANY
Suite 400, 5660 New Northside Drive, Atlanta, GA 30328

as SURETY, are held and firmly bound unto the State of California in the penal sum of TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named submitted by said Principal to the State of California, acting by and through the Resources, for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, to the _____ to which said bid was submitted, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

Secretary of the Resources Agency
 a no case shall the liability of the surety here under exceed the sum of \$ _____

THE CONDITION OF THIS OBLIGATION IS SUCH,

That whereas the Principal has submitted the above-mentioned bid to the State of California, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at

_____ California on _____
 (insert name of city where bids will be opened) (insert date of bid opening)
 or 1997 Category III, Ecosystem Restoration, Wetlands Restoration and
Fish Screen Projects

(Copy here the exact description of work, including location, as it appears on the proposal)

NOW, THEREFORE, if the aforesaid Principal is awarded the contract and, within the time and manner required under the specifications, for the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in accordance with the bid, and files the bonds with the Department, one to guarantee faithful performance and the other to guarantee payments for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall be and remain in full force and virtue.

IN WITNESS WHEREOF, We have hereunto set our hands and seals on this 28th

day of July, 19 97.

DUCKS UNLIMITED, INC. (Seal)

BY: Yvelly Andree (Seal)

Director, State and Federal Coordination (Seal)

Principal (Seal)

UNITED PACIFIC INSURANCE COMPANY (Seal)

BY: Alan J. Warner (Seal)

Alan J. Warner, Attorney-in-Fact (Seal)

Address Suite 400, 5660 New Northside Drive,
Atlanta, GA 30328

NOTE: Signatures of those executing for the surety must be properly acknowledged.

INDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including V and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

DATE EXECUTED

EXECUTED IN THE COUNTY OF

PROSPECTIVE CONTRACTOR'S SIGNATURE

PROSPECTIVE CONTRACTOR'S TITLE

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

ADMINISTRATIVE OFFICE, PHILADELPHIA, PENNSYLVANIA

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that RELIANCE SURETY COMPANY is a corporation duly organized under the laws of the State of Delaware, and that RELIANCE INSURANCE COMPANY and UNITED PACIFIC INSURANCE COMPANY, are corporations duly organized under the laws of the Commonwealth of Pennsylvania and that RELIANCE NATIONAL INDEMNITY COMPANY is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called "the Companies") and that the Companies by virtue of signature and seals do hereby make, constitute and appoint Edward T. Edwards, David E. Armstrong, Alan J. Wermer, Martha Fish, Bettye J. Brown, Richard M. Miller, Jr., of Nashville, Tennessee their true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver for and on their behalf, and as their act and deed any and all bonds and undertakings of suretyship and to bind the Companies thereby as fully and to the same extent as if such bonds and undertakings and other writings obligatory in the nature thereof were signed by an Executive Officer of the Companies and sealed and attested by one other of such officers, and hereby ratifies and confirms all that their said Attorney(s)-in-Fact may do in pursuance hereof.

This Power of Attorney is granted under and by the authority of Article VII of the By-Laws of RELIANCE SURETY COMPANY, RELIANCE INSURANCE COMPANY, UNITED PACIFIC INSURANCE COMPANY, and RELIANCE NATIONAL INDEMNITY COMPANY which provisions are now in full force and effect, reading as follows:

ARTICLE VI - EXECUTION OF BONDS AND UNDERTAKINGS

1. The Board of Directors, the President, the Chairman of the Board, any Senior Vice President, any Vice President or American Vice President or other officer designated by the Board of Directors shall have power and authority to (a) appoint Attorney(s)-in-Fact and to authorize them to execute on behalf of the Companies, bonds and undertakings, recognitions, contracts of indemnity and other writings obligatory in the nature thereof, and (b) to remove any such Attorney(s)-in-Fact at any time and revoke the power and authority given to them.

2. Attorney(s)-in-Fact shall have power and authority, subject to the terms and limitations of the Power of Attorney issued to them, to execute deliver on behalf of the Company, bonds and undertakings, recognitions, contracts of indemnity and other writings obligatory in the nature thereof. The corporate seal is not necessary for the validity of any bonds and undertakings, recognitions, contracts of indemnity and other writings obligatory in the nature thereof.

3. Attorney(s)-in-Fact shall have power and authority to appoint officers required to be attached to bonds, recognitions, contracts of indemnity or other conditional or obligatory undertakings and they shall also have power and authority to certify the financial statements of the Company and to certify the By-Laws of the Company or any article or section thereof.

This Power of Attorney is signed and sealed by facsimile under and by authority of the following resolution adopted by the Executive and Finance Committees of the Boards of Directors of Reliance Insurance Company, United Pacific Insurance Company and Reliance National Indemnity Company by Unanimous Consent dated as of February 26, 1984 and by the Executive and Finance Committee of the Board of Directors of Reliance Surety Company by Unanimous Consent dated as of March 21, 1984.

"Provided that the signatures of such directors and officers and the seal of the Company may be affixed to any such Power of Attorney or any certificate relating thereto by facsimile and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company and any such Power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company, in the future with respect to any bond or undertaking to which it is attached."

IN WITNESS WHEREOF, the Companies have caused these presents to be signed and their corporate seals to be hereto affixed, this July 21, 1995.



RELIANCE SURETY COMPANY
RELIANCE INSURANCE COMPANY
UNITED PACIFIC INSURANCE COMPANY
RELIANCE NATIONAL INDEMNITY COMPANY

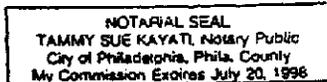
Charles B. Schmalz

STATE OF Pennsylvania
COUNTY OF Philadelphia

ss.

On this, July 21, 1995, before me, Tammy Sue Kayati, personally appeared Charles B. Schmalz, who acknowledged himself to be the Executive Vice President of the Reliance Surety Company, and the Vice President of Reliance Insurance Company, United Pacific Insurance Company, and Reliance National Indemnity Company and that as such, being authorized to do so, executed the foregoing instrument for the purpose therein contained by signing the name of the corporation by himself as its duly authorized officer.

In witness whereof, I hereunto set my hand and official seal.



Tammy Sue Kayati
Notary Public in and for the State of Pennsylvania
Residing at Philadelphia

I, Anita Zippert, Secretary of RELIANCE SURETY COMPANY, RELIANCE INSURANCE COMPANY, UNITED PACIFIC INSURANCE COMPANY, and RELIANCE NATIONAL INDEMNITY COMPANY do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 28th of July 19 97.

Anita Zippert
Secretary



**Certificate of Incorporation
of
DUCKS UNLIMITED, INC.**

WE, THE UNDERSIGNED, being all of full age and citizens of the United States and a majority of whom are citizens and residents of the District of Columbia, desiring to form a membership corporation pursuant to and in conformity with Chapter Five of Title Five of the Code of Laws of the District of Columbia, DO HEREBY CERTIFY:

FIRST: The name of the corporation shall be:

DUCKS UNLIMITED, INC.

SECOND: The corporation shall have perpetual existence.

THIRD: The particular business and objects of the corporation are:

To restore and perpetuate wild ducks and other wild waterfowl on the North American continent; to promote, carry on, conduct, and foster scientific research, education, training, and publication in the ornithological sciences; to establish departments of research and scientific study with particular reference to the enhancement of knowledge concerning the waterfowl of the North American continent; to establish, promote, assist, contribute to, or otherwise encourage the study of conservation, restoration, and management of wild waterfowl and its habitat; and in connection therewith, to grant scholarships, prizes and rewards;

To maintain sanctuaries for wild life, and to take, receive, hold, and convey real and personal estate necessary for the purposes of the corporation as stated in this certificate, and other real and personal property the income from which shall be applied to the purposes of the corporation.

In pursuance of, and not in limitation of the general powers conferred by law, and the objects and purposes herein set forth, it is expressly provided that this corporation shall have the following powers:

To do all such acts as are necessary or convenient to attain the objects and purposes herein set forth, to the same extent and as fully as any natural person could or might do, and as are not forbidden by law or by this Certificate of Incorporation or by the By-Laws of this corporation;

To take and hold by bequest, devise, gift, purchase, or lease, either absolutely or in trust, for any of its purposes, any property real or personal, without limitation as to amount of value, except such limitation, if any, as may be imposed by law; to transfer and convey the same, and to invest and re-invest the principal and income thereof, and to deal with and expend the principal and income of the corporation in such manner as in the judgment of the Trustees will best promote its objects; and in order properly to prosecute the objects and purposes as above set forth, the corporation will have full power and authority to purchase, lease, and otherwise acquire, hold, mortgage, convey and otherwise dispose of all kinds of property, both real and personal, both in the District of Columbia, and in any or all of the states of the United States, the territories or colonies of the United States, Alaska, the Dominion of Canada, Newfoundland, Mexico, the Central American countries, and other foreign countries, and colonies or dependencies thereof, and generally to perform all acts which may be deemed necessary for the proper and successful prosecution of the objects and purposes for which this corporation is created.

To have offices and promote and carry on its objects and purposes, within or without the District of Columbia, and in all the states, territories or foreign possessions of the United States, and in foreign countries.

To have all powers that may be conferred upon corporations formed under Chapter Five of Title Five of the Code of Laws of the District of Columbia.

The corporation shall be non-political, shall not promote the candidacy of any person seeking public office; and shall not by its activities, or any substantial part thereof, attempt to influence legislation by propaganda or otherwise.

FOURTH: The corporation shall be without capital stock. All property, real and personal, which the corporation shall receive shall be used exclusively for educational and scientific purposes, including the

restoration and perpetuation of wild ducks and other wild waterfowl on the North American continent; and no part of the income from the same shall inure to the benefit of any private shareholder or individual; provided, however, that reasonable compensation may be paid to an officer, member, or employee for services actually rendered the corporation.

FIFTH: The property of the officers, trustees and members of this corporation shall not be subject to or chargeable with the payment of corporate debts or obligations to any extent whatsoever.

SIXTH: The Board of Trustees shall have the power to make, alter, change, and amend by-laws for the government of the corporation and for the admission and withdrawal of members thereof.

SEVENTH: The meetings of the members and of the Trustees of this corporation may be held in the District of Columbia, or elsewhere within or without the confines of the United States or its possessions.

EIGHTH: The number of Trustees of the first Board of Trustees of this Corporation shall be FIVE, with power to change or increase and add to their number in accordance with provisions of the By-Laws.

The Board of Trustees shall have the power to appoint from their own members an Executive Committee consisting of all of the officers of the corporation including all vice presidents, all living past presidents and such other persons as may be designated by the Board of Trustees, five of whom, or such other number as may be specified by the By-Laws, shall constitute a quorum, who, when the Board of Trustees is not in session, shall have and shall exercise all the powers of the Board of Trustees, unless otherwise provided in the corporation's By-Laws. The Board of Trustees shall elect at its first meeting from its own members a President, and shall appoint a Treasurer and a Secretary and such other officers as may be provided for by the By-Laws, who need not be members of the Board. The Board of Trustees shall at such meeting select from their number, one-fifth of the number thereof to serve for one year, one-fifth to serve for two years, one-fifth to serve for three years, one-fifth to serve for four years, one-fifth to serve for five years; and each subsequent election of Trustees shall be for a period of one year or until their successors are duly elected and qualify. Vacancies occurring by death, resignation, or otherwise shall be filled by the remaining Trustees in such manner as the By-Laws shall prescribe and the persons so elected shall thereupon become Trustees.

NINTH: The names and post-office addresses of the Trustees until the first meeting are:

Arthur M. Bartley
500 Fifth Avenue, New York, N.Y.
Dr. John A. Hartwell
2 East 103rd Street, New York, N.Y.
Newbold L. Herrick
25 Cedar Street, New York, N.Y.
John C. Huntington
500 Fifth Avenue, New York, N.Y.
Wayne Johnson
50 Broadway, New York, N.Y.

TENTH: The Registered Office of this corporation in the District of Columbia shall be at 918-16th Street, N.W., in care of CT Corporation System, the corporation's Registered Agent, Washington, D.C.

WITNESS our hands and seals this 29th day of January One Thousand Nine Hundred and Thirty-Seven.

CHRISTABEL E. HILL

(Witness)

DISTRICT OF COLUMBIA: ss:

I, CHRISTABEL E. HILL, a Notary Public in and for the District of Columbia, do hereby certify that ERNEST O. PALAND, WINSTON E. HOBBS, and JOSEPH V. McBRIDE, parties to a certificate of incorporation bearing date of January 29th, 1937, and hereto annexed, personally appeared before me in said District, the said ERNEST O. PALAND, WINSTON E. HOBBS and JOSEPH V. McBRIDE being personally known to me as the persons who executed the said certificate of incorporation and acknowledged the same to be their act and deed.

GIVEN under my hand and seal this 29th day of January, 1937.

CHRISTABEL E. HILL
Notary Public
DISTRICT OF COLUMBIA

My Commission Expires July 15, 1940

ERNEST O. PALAND (SEAL)

WINSTON E. HOBBS (SEAL)

JOSEPH V. McBRIDE (SEAL)

CHRISTABEL E. HILL
Notary Public

NONDISCRIMINATION COMPLIANCE STATEMENT

FD-19 (REV. 3-85) FMC

COMPANY NAME

Ducks Unlimited, Inc.

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

James L. Ware

DATE EXECUTED

12/18/95

EXECUTED IN THE COUNTY OF

Shelby In

PROSPECTIVE CONTRACTOR'S SIGNATURE

Senior Group Manager

PROSPECTIVE CONTRACTOR'S TITLE

Ducks Unlimited, Inc.

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

PERSONNEL POLICIES AND PRACTICES

EQUAL EMPLOYMENT OPPORTUNITY

Statement of Policy

At Ducks Unlimited, Inc. it is our policy to recruit and hire employees without regard to or discrimination because of age, race, creed, color, national origin, sex, handicap or veteran status. This policy of nondiscrimination applies to all phases of employee relations – hiring, compensation, performance rating, promotion, transfer and other personnel matters.

Our employment objective is to select individuals who meet the organization's high standards of character, education and occupational qualifications; who can carry out the organization's work competently; who have capacity for growth; and, who will become an active part of our organization.

We know that our strength and future growth depend directly upon the contribution made by each person within our organization. Productivity and efficiency result from real job satisfaction and from the opportunity each person has for his or her individual self-development. Our employment policy is designed to:

- Place each employee, insofar as practicable, in a position which best suits the individual's natural and acquired aptitudes and skills.
- Offer each employee opportunity for self-development and advancement through training and on-the-job experience.
- Accord fair and equitable treatment to every employee at all times.
- Recognize the importance of the work of each employee to the overall success of the organization.

SEXUAL HARASSMENT

Statement of Policy

Ducks Unlimited, Inc. maintains a strict policy against sexual harassment. **Simply put, sexual harassment will not be tolerated on the part of any employee.** All employees are responsible for assuring that the workplace is free from sexual harassment. Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature, where:

- Submission to the advances is made either explicitly or implicitly a term or condition of employment.
- Submission to or rejection of the advances is used as the basis for making employment decisions.
- Such conduct interferes with an individual's work performance or creates an intimidating, hostile or offensive working environment.

All employees should avoid any action or conduct that might be viewed as sexual harassment. Approval of, participation in, or acquiescence in conduct constituting sexual harassment will be considered a violation of this policy. If any employee believes that he or she has been subject to sexual harassment at work by anyone, including supervisors, co-workers or visitors, he or she should report this immediately to his or her immediate supervisor or Human Resources. Sexual harassment complaints will be handled with as much confidentiality as possible. There will be no retaliation against any employee who reports a claim of sexual harassment or against any employee who is a witness to the harassment. An immediate investigation will be conducted in an attempt to determine all the facts concerning the alleged harassment. In making this investigation, every effort will be made to be fair to all parties involved. If it is determined that sexual harassment has occurred, corrective action will be taken, up to and including reprimand, discharge, or other appropriate action.

If it is determined that no sexual harassment has occurred, or there is not sufficient evidence to conclude that harassment has occurred, this determination will be communicated to the employee who filed the complaint.

DRUG FREE WORKPLACE PROGRAM

Statement of Policy

Because substance abuse poses a serious threat to our employees, their families and to the entire organization, Ducks Unlimited has established this policy in an effort to promote and maintain a drug-free work environment.

The ultimate goal of this policy, however, is to balance respect for individual privacy with the organization's need to maintain a safe, productive, drug-free work environment for all employees; maintain safety and security at DU's community-based events, as well as at the facilities and properties in the communities where we are located; and, provide a quality of service to the organization's members, as well as non-members and visitors, in a fashion consistent with the high standards set by the Board of Directors of Ducks Unlimited, Inc.

Standard of Conduct

As a Standard of Conduct for employees of Ducks Unlimited, employees will not be permitted to possess, consume, or distribute drugs, controlled substances or abuse alcohol in the workplace or report to work or perform their duties under the influence of alcohol or with drugs present in their system. To allow otherwise jeopardizes the safety of our fellow employees, our members, our facilities, and the communities which we rely upon for support. Any employee determined to be in violation of this policy or standard will be subject to disciplinary action, which may include termination, even for the first offense.

Drug and Alcohol Abuse Screening/Testing

Ducks Unlimited recognizes that carefully selected tests and testing procedures have a proper role in any comprehensive substance abuse program, as do properly conducted searches of the effects, vehicles and persons of employees, contractors or visitors.

• Job Applicants

As a condition of regular employment all applicants must complete a drug screen test. If test results are confirmed positive, the employment offer will be withdrawn.

• Current Employees

The Company utilizes screening practices to identify employees who use illegal drugs or abuse alcohol. It is a condition of continued employment for all employees to submit to a drug screen test when:

- a. there is sufficient cause to believe an employee is under the influence of alcohol or has drugs present in their system; or,
- b. there is any mishap or accident involving an employee during business hours or while on Company business in which injury to individuals or damage to property occurs as a result of the impaired employee's involvement.

Failure to submit to required medical or physical examinations/tests is considered misconduct, and as such, grounds for disciplinary action, including termination.

General Procedures

Any employee reporting for work visibly impaired is unable to properly perform required duties and will not be allowed to work. If, in the opinion of the employee's supervisor the employee is considered impaired, the employee will be transported by taxi or an alternative safe transportation mode to his/her home or a medical facility. **An impaired employee will not be allowed to operate or drive any vehicle during business hours or while on official Company business, or any vehicle rented, leased, owned or otherwise intended for Company use or business.**



CONTRACTORS STATE LICENSE BOARD
9815 GOETHE ROAD, SACRAMENTO, CALIFORNIA
MAILING ADDRESS: P.O. BOX 24000
SACRAMENTO, CALIFORNIA 95824
1/916/255-3900
1/800/321-CSLS
Automated Phone System



License Number: 734909

Entity: JV

PACIFIC ENGINEERING
CONTRACTORS AND RAY TONEY
& ASSOCIATES
4620 NORTHGATE BLVD SUITE 120
SACRAMENTO, CA 95834



35892
35892



State of California
CONTRACTORS STATE LICENSE BOARD
ACTIVE LICENSE



License Number 734909 See JV
Entity Name PACIFIC ENGINEERING
CONTRACTORS AND RAY TONEY
& ASSOCIATES
Classification A B
Expiration Date 04/30/1999

