

**Reducing Fish Entrainment and Restoring Delta Tidal Perennial Aquatic Habitat at the
Cosumnes River Preserve**

EXECUTIVE SUMMARY

**Project Title: Reducing Fish Entrainment and Restoring Delta Tidal Perennial Aquatic Habitat at the
Cosumnes River Preserve**

Applicant: Ducks Unlimited Inc., Western Regional Office
3074 Gold Canal Dr., Rancho Cordova, CA 95670

Project Description: Four sloughs on the Cosumnes River Preserve (Preserve) receive daily freshwater tides and are important habitat for native Delta fish. Most of the agricultural irrigation water for the Preserve is diverted at 3 unscreened points including Wood Duck Slough which is dammed at its confluence to provide water to approximately one-half of the Preserve's farming program and two private farms. We are requesting \$880,000 from CALFED to: 1) conduct a fish screen feasibility study to better document if and when fish entrainment is a problem at the Preserve's main agriculture diversion, and design a fish screen for this diversion 2) screen the Preserve's agriculture diversion 3) restore 1/2 mile ~~tidal perennial aquatic and shaded riverine habitat~~ in Wood Duck slough by relocating the existing pumping station and removing the earthen dam, thus consolidating the diversions for the Preserve's farming program to a single screened location 4) provide funding for operation and maintenance of fish screens 5) monitor the biological and maintenance related results of the project.

Approach/ Tasks/Schedule: The project will be managed by Ducks Unlimited Inc. (DU), one of the land owning partners in the Preserve. The proposed fish screen feasibility study will sample fish entrainment at the Preserve's Tihuechemne Slough diversion point for one year, and design a fish screen for this diversion. Funding of this proposal will allow for construction of a new pump station at Tihuechemne Slough during the summer of 1998 to replace the one which will be removed from Wood Duck Slough. The Tihuechemne Slough delivery system will be improved including the removal of an additional diversion point (pump F7). After the results of the feasibility study are available in summer 1999 a screen will be designed and installed on the pumps at the agriculture diversion. Funding for screen operation, maintenance, and monitoring, will be spent in the first 3 years post construction. Data collected from monitoring will be available in a final report to CALFED.

Justification for Project and Funding by CALFED: The project will significantly improve conditions for the priority species chinook salmon, splittail, green sturgeon depending and secondary priorities striped bass and migratory birds. This project may be beneficial to delta smelt populations. The restoration of Wood Duck Slough will result in 1/2 mile of tidal slough and improve freshwater tidal perennial and instream aquatic habitats in the northeast Delta.

Budget Cost and third party impacts: The fish screen feasibility study and screening of the Preserve's agriculture diversion will cost \$ 509,000. The new pumping station on Tihuechemne Slough, removal of pump F7, improvements to the farm delivery system, and restoration of Wood Duck Slough will require \$253,000. Operation and maintenance cost along with monitoring and reporting will be \$130,000. Total project cost will be \$920,000, of that we are requesting \$880,000 from CALFED. This project will positively impact two private farms by improving water delivery, and supplying fish friendly water.

Applicant Qualification: DU is a nationally recognized authority on the restoration and enhancement of wetlands. Qualified biologists and engineers on staff are skilled in project design, management, contracting and construction.

Monitoring and data Evaluation: The feasibility study will be designed to provide statistically valid confidence intervals around predicted means. The results will be used to design a fish screen for the Preserve's agriculture diversion. Fish impact and screen maintenance costs will be monitored for 3 years post-construction. Results will be made available to CALFED in a final report.

Local Support/Coordination with other Programs: The proposal is supported by the The Nature Conservancy (TNC), Bureau of Land Management (BLM), Calif. Depart. of Fish and Game (CDFG), County of Sacramento, Wildlife Conservation Board (WCB), Calif. Depart. of Water Resources (DWR), Living Farms and local farmers. The project will provide an example to other farms as to the need and the details of how to implement a fish screening program. The fish screen feasibility study will build on past studies by Dr. Peter Moyle (University of California, Davis) and ongoing work by Dr. David Vanicek (California State University, Sacramento) and students.

CALFED PROPOSAL - JULY 28, 1997

Title of Project:

Reducing Fish Entrapment and Restoring Delta Tidal Perennial Aquatic Habitat at the
Cosumnes River Preserve

Name of applicant:

Ducks Unlimited, Inc.
Western Regional Office
3094 South Canal Drive
Dunsmuir, California 95670-6116
Tel (916) 852-2000 Fax (916) 852-2200 email: wroducts@gte.net

Type of Organization and Tax Status: Non Profit (501-C3)

Tax Number: 13-5643799

Principal: Steven F. Burton, Regional Biologist

Participants: The project will be coordinated with TNC, BLM and CDFG

RFP Project type: Services and Construction

Project Description

Project Description and Approach: We are requesting CALFED funding in the amount of \$880,000 to:

- is a problem at the Preserve's agriculture diversion and design a fish screen for that diversion
- screen the Preserve's agriculture diversion
- restore tidal perennial aquatic habitat in Wood Duck slough by removing the existing pumping station and earthen dam, improving the Preserve's existing water delivery system (engineering, pipes, pump, and dredging) at Tichuechemne Slough to cover the capacity lost by removing the Wood Duck Slough pump, and consolidating the Preserve's farm diversions to a single point
- provide funding for operation and maintenance of the proposed fish screens
- monitor the biological and maintenance related results of the project.

The project will be implemented in three main steps 1) Conduct a fish screen feasibility study at the Preserve's agriculture diversion, and screen this diversion 2) consolidate two pumping stations and enhance existing water delivery system so that water for the entire Preserve farming program and two privately owned farms adjacent to the Preserve will be supplied primarily from one diversion point and restore Wood Duck Slough to its natural tidal state, and 3) monitor results of completed project and report findings to CALFED.

Ducks Unlimited Inc. (DU) will serve as the grant recipient and construction manager by awarding contracts for completion of the specific tasks associated with this project to competent contractors. Implementation of the physical aspects of the project will be completed over the next two years, followed by monitoring, evaluation and reporting for three years.

Location and Geographic boundaries of the Project: The project is located at the Cosumnes River Preserve and is entirely within the jurisdictional Delta. The studied diversion point is located on Tihuechemne Slough. See attached map.

Expected Benefits: The project will significantly improve conditions for at least two CALFED priority habitats, 3 priority species and both secondary priorities (striped bass and migratory birds). The restoration of Wood Duck Slough will result in approximately 1/2 mile of tidal slough and improve freshwater tidal perennial and instream aquatic habitats in the northeast Delta. The removal of diversion points at Wood Duck Slough and pump F7 will eliminate entrainment and improve the habitat of priority species such as ~~striped bass, green sturgeon and secondary species like striped bass~~. The project will also benefit ~~migratory birds~~ through habitat enhancement. Restoration of Wood Duck Slough to a tidal slough, will provide mudflat habitat through normal tidal action for migratory shorebirds.

This project will benefit north Delta agriculture by: 1) providing fish friendly water to over 1,500 acres of north Delta agriculture, 2) improving the reliability of water delivery to local farms 3) providing an example and an accounting of the costs required to screen a typical north Delta diversion. It will be especially helpful in establishing fisheries targets for restoration of other east-side sloughs.

The project would immediately provide significant benefits to native fish. Additionally, wildlife using the Wood Duck Slough and the adjacent Valley Oak riparian forest will not be exposed to concentrated contaminants associated with agricultural runoff. The slough will no longer have to be dredged thus reducing disturbance to the forest edge and lowering the invasion of exotic weeds and will provide a protected, undisturbed area for loafing waterfowl. Erosion would be lowered since the earthen dam will not need to be reconstructed each year. Most important, the restoration of Wood Duck Slough returns a natural process to the landscape (tidal action).

Studying native fish in a typical north Delta slough will be especially helpful in establishing fisheries targets for restoration. For example, Grizzly and Bear Sloughs both have barriers at their mouths. A future restoration project could be envisioned which restored tidal flow to the DWR's Grizzly Slough mitigation site.

Background and Biological/Technical Justification: Historically the Sacramento/San Joaquin Delta was composed of hundreds of miles of backwater sloughs. The sloughs formed as rivers meandered, shifted and formed oxbows as they entered the tidal zone of the Delta. These dead end tidal waterways were intermingled with shallow perennial marshes and gallery riparian forests. Some of the best remaining examples of tidal sloughs are now protected on the Preserve in south Sacramento County, California. The Preserve encompasses 4 tidal sloughs as well as reaches of the Cosumnes and Mokelumne Rivers.

Tidal sloughs are one of the most biologically productive habitats in California. The fresh water habitats support spawning, rearing and adult feeding areas for many native fish of the Delta. A recent survey on the Cosumnes River found 9 species of native fish using the sloughs including rearing salmon and spawning splittail. The high productivity of Delta sloughs is due in part to tidal action which inundates the area with warm, nutrient rich, fresh water. The productivity of sloughs enhances the productivity of associated riparian forests and marshes with many birds feeding on the aquatic fauna. These riparian forests provide habitat for over 200 species of birds, many of which are sensitive riparian obligates.

Not only are tidal sloughs extremely productive biologically, but they are also favored diversion points for agricultural irrigation water in the Delta. Sloughs offer stable locations for pumps away from river currents and reliable water due to daily tidal action. However, this is the same habitat that small fish seek during early stages of their life cycles.

Wood Duck Slough is one of the major diversion points for the Preserve. The slough is located entirely on the Preserve about 1 ½ miles upstream from the confluence of the Cosumnes and Mokelumne Rivers. Over ¾ of a mile of the slough is bordered by pristine Valley Oak riparian forest, critical habitat for migratory neotropical songbirds. It is also located near other restoration projects such as TNC's Wetland Reserve Program Project just downstream of Twin Cities Road. The completion of TNC's project resulted in a breach in the "training" levee along the Cosumnes River providing the River access to it's historical floodplain, and allowing the River to naturally restore it's riparian habitat. Wood Duck Slough lies close to the Preserve's "wildlife friendly" farming operation. Each winter the fields are flooded both for agronomic reasons and migratory waterbirds. The restoration of Wood Duck Slough to tidal perennial aquatic habitat, which is in close proximity to existing seasonal wetlands, would provide a mosaic of habitat types that will be beneficial to many species of wildlife.

Wood Duck Slough is currently degraded by its use as an agricultural water delivery system. Each spring an earthen dam is constructed at the mouth of the slough, and water is pumped over the dam providing irrigation water to the Preserve's Desmond Ranch and two other private farms. Because the delivery system is also used as drainage for the farms, water quality in the slough becomes poor as the irrigation season progresses causing high mortality in fish trapped behind the dam.

The project falls within the following CALFED stressor categories and subcategories; Alteration of Flows and Other Effects of Water Management - subcategories Hydrograph Alteration, Entrainment, Migration Barriers and Straying, Floodplain and Marshplain Changes - subcategory Elimination of Fine Sediment Replenishment, Channel Form Changes - subcategory Loss of Existing Riparian Zone or Lack of Regeneration Potential, Water Quality - subcategory Increased Contaminants and Undesirable Species Interactions - subcategory Introduction of New Exotic Species. Our project closely follows CALFED guidelines. The example project provided by CALFED in "Summary of Technical Team Reports - Stressor and Example Restoration Actions" June 5, 1997, lists this requested project for eastside tributaries; "Establish a cooperative effort to study and implement screening of diversions, including consolidation of diversions where appropriate". Our proposal is to do just that.

Proposed Scope of work:

1. Feasibility Study and Diversion Screening

The study will examine fish entrainment and screening feasibility of the Preserve's agriculture diversion. It will begin in fall of 1997 and will be conducted over an entire year so seasonal occurrence of fish at the diversion point will be documented. At the end of the study, a report will be generated that documents the impact of the diversions on the local fishery, and discuss operations adjustments that might be made to the farming diversion schedule.

Based on the results of this study a fish screen will be designed and installed at the Preserve's agriculture diversion point. The fish screen will be designed in accordance to the size and species of fish and within the guidelines of all state and federal regulations.

2. Restoration of Wood Duck Slough and Consolidation of the Farm Preserve Diversions

The relocation of the Wood Duck Slough diversion will require the design and installation of an additional pump at the Tihuechemne Slough diversion point as well as the improvement of that delivery system. The design will be contracted to an appropriate engineer. Improvements will involve dredging the existing irrigation delivery ditches and the installation of a new delivery pipe. The improved system will allow the Preserve to remove an additional diversion, pump F7. The result will be an irrigation system that is capable of servicing the Preserve's entire farming program from a single consolidated diversion point that in addition to serving the Preserve will supply water to both privately owned farms that were originally supplied by Wood Duck Slough.

An application to relocate the point of diversion from Wood Duck Slough to Tihuechemne Slough will be made. The owners of the farms have indicated their willingness to support the restoration project if their water rights are protected and the new water system supplies their farms with water at a quality and cost similar to the existing Wood Duck Slough system.

After the improved Tihuechemne delivery system has been tested during the summer of 1999, the pump station and earthen dam will be removed on Wood Duck Slough allowing the Slough access to tidal water. Over 1 mile of power poles and wire also be removed.

3. Operation, Maintenance

With the installation of a fish screen at the Preserve's agriculture diversion, there will be a substantial increase in the cost of operation and maintenance at the Preserve. The technology and maintenance techniques will require additional Preserve staff time. We request funding to operate and maintain the screens for a 3 year period after they are installed.

4. Monitoring the projects results

Learning from monitoring is an important part of this project. Costs for design, construction, operation and maintenance will be carefully documented to help guide others who will be screening pumps in the future. Fish use of Wood Duck Slough will be documented before and after the slough is re-opened to tidal flow. This information, in addition to giving the Preserve site specific management information, will also add to understanding the role of tidal sloughs in the Delta's ecology and should help CALFED in setting restoration goals for tidal sloughs. This work will build on past studies by Dr. Peter Moyle (University of California, Davis) and ongoing work by Dr. David Vanicek (California State University, Sacramento) and students. Dr. Moyle has expressed interest in conducting this study. All data collected will be made available to CALFED in a final report to be compiled after completion of this project

Monitoring and Data Evaluation: Monitoring and data evaluation will be split into two main categories; a pre-screening fisheries study and post construction monitoring. Data gathered by the feasibility study will be evaluated to adequately screen the Preserve's agriculture diversion in accordance with all state and federal regulations. After construction of the entire project is complete in the summer of 1999 the post construction monitoring program will be implemented. This program will monitor all screened diversions and provide information on the effectiveness of the newly installed fish screens. Additionally, the program will monitor the fish use in Wood Duck Slough, and compare it to fish use prior to restoration. The fish screen feasibility study will build on past studies by Dr. Peter Moyle (University of California, Davis) and ongoing work by Dr. David Vanicek (California State University, Sacramento) and students.

Implementability: The application for change of point of diversion for Wood Duck Slough can be immediately implemented as can the feasibility study. A third aspect of the project that will commence is the engineering and design work associated with the construction of the new pump station at Tihuechemne Slough and enhancement of the existing water delivery system. Construction of the new pumping station and enhancement of the water delivery system will begin as soon as the design has been approved by the Preserve partners and weather conditions allow construction. The ability to restore tidal action to Wood Duck Slough depends on the successful relocation of the irrigation pump to Tihuechemne Slough and the demonstration to the neighboring farms that the new system will provide them with an adequate amount of water at a price comparable to that of the Wood Duck Slough diversion. Once the performance of the new pump and irrigation system is approved by the Preserve and affected third parties, restoration of Wood Duck Slough will proceed. The two neighboring farms have both indicated their willingness to work with us to relocate the pump and restore Wood Duck Slough.

Costs and Schedules to Implement Proposed Project

Budget costs

1. Fish screen feasibility study and screening

Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, admin and fee)	Service Contracts	Material and Acquisition Contracts	Miscellaneous and other Direct Costs	Total Cost
1a) Fish Entrainment Study			\$9,000	\$37,000	\$25,000	\$20,000	\$91,000
1b) Design Screens			\$8,000	\$80,000			\$88,000
1c) Screen Diversions			\$30,000	\$300,000			\$330,000

2. Restoration of Wood Duck Slough and Consolidation of Diversion Points

Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, admin and fee)	Service Contracts	Material and Acquisition Contracts	Miscellaneous and other Direct Costs	Total Cost
2a) Engineering for Consolidation of Diversions	\$15,000		\$1,500				\$16,500
2b) Consolidation of Diversions and Improvements to Delivery System			\$20,000	\$200,000			\$220,000
2c) Removal of Wood Duck Pump Station			\$1,500	\$15,000			\$16,500

3. Maintenance and operation of fish screens

Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, admin and fee)	Service Contracts	Material and Acquisition Contracts	Miscellaneous and other Direct Costs	Total Cost
3a) 3 years operations of screens	\$80,000						\$80,000

4. Monitoring and Evaluation

4a) Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, admin and fee)	Service Contracts	Material and Acquisition Contracts	Miscellaneous and other Direct Costs	Total Cost
4b) Monitoring and reporting	\$70,000		\$7,000				\$55,000

Budget Summary

1. Fish Entrainment Study and Diversion Screens	\$510,000	<i>-\$91,000 Entrainment study</i>
2. Restoration of Wood Duck Slough and Improvements	\$253,000	
3. Operation and Maintenance Costs	\$80,000	<i>-\$80,000 OPM</i>
4. Monitoring, analysis and reports	\$77,000	<i>eliminate \$171,000</i>
Total	\$920,000	

In-kind contributions by project participants (DU, BLM, TNC) → \$ 40,000

Grant request \$880,000

Total project cost \$920,000

Schedule milestones:

- March 1998 - Entrainment study begins
- July 1998 - Design completed for consolidation of water system
- September 1998 - New pump installed - system dredging completed
- March 1999- Entrainment study finished - Report to CALFED
- June 1999 - following testing of new combined water system - old system is removed
- July 1999 - design of fish screens completed - Report to CALFED
- September 1999 - screens installed
- September 2002 - Final report on screen performance and maintenance requirements

Third Party Impacts: The third parties affected by this project are the two privately owned farms that currently receive water from the Wood Duck Slough diversion point. Both parties have agreed to allow their point of diversion be relocated to Tihuechemne Slough. Both parties have also indicated their support of the overall project and their willingness to work with the Preserve to facilitate project completion. The completion of this project will provide both of these privately owned farms with a more efficient irrigation system and "fish friendly" water.

Handwritten calculations:
 920
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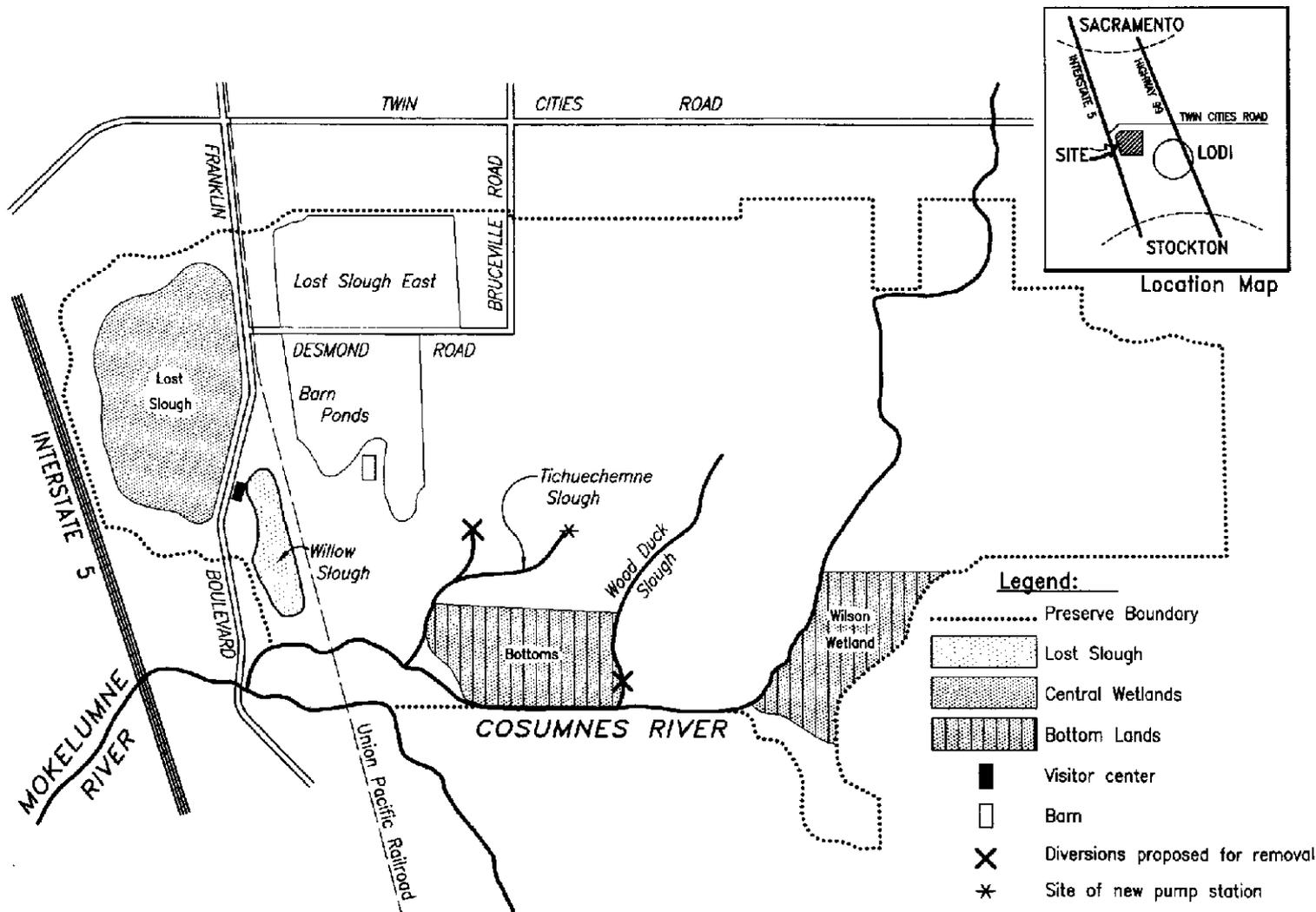
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Applicant Qualifications: DU is the nationally recognized authority on the restoration and enhancement of wetlands. Since its inception in 1937, DU has raised over \$1 billion for restoration and enhancement of over 1 million acres of wetlands in North America. Qualified biologists and engineers on staff at the Western Regional Office, Rancho Cordova, California are skilled in 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 design the project, provide bid packages to potential contractors and insure the project is completed to specifications. DU has recently completed the M&T, Category III, CVPIA project in the north Sacramento Valley.

Compliance with standard terms and conditions: DU has administered multiple government contracts with applicable compliance standards (see attachments).

1-007054



1-007054

Cosumnes River Preserve

13501 Franklin Boulevard
Galt, California 95632
(916) 684-2816 Fax: (916) 683-1702 crp@ns.net

Cooperators

Bureau of Land
Management

Ducks Unlimited, Inc.

California Department
of Fish and Game

California Department
of Water Resources

California Wildlife
Conservation Board

Sacramento County
Department of Parks
and Recreation

The Nature Conservancy

July 23, 1997

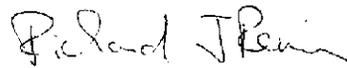
Steve Burton
Ducks Unlimited
Western Regional Office
3074 Gold Canal Drive
Rancho Cordova, California 95670-6116

Steve,

The Nature Conservancy would like to voice our support for your proposal to the Category III program. The proposal titled Reducing Fish Entrainment and restoring Tidal Perennial Aquatic Habitat at the Cosumnes River Preserve was developed in cooperation with the Preserve staff and supports the goals of the Preserve partnership. The investigation of fish entrainment at the major farm diversion, consolidation of the farm diversion points, and screening for fish will significantly increase our understanding regarding the impact of farming on CALFED target fish species as well as demonstrate solutions. In addition, the restoration of Wood Duck slough is a unique and unprecedented opportunity to create new freshwater tidal habitat.

Please seriously consider this proposal.

Sincerely,



Richard J. Reiner, Ph.D.
Area Ecologist
The Nature Conservancy

"Preserve and protect California valley oak forests and central valley wetlands."



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
FOLSOM RESOURCE AREA
63 NATOMA STREET
FOLSOM, CALIFORNIA 95630



CRP6700
CA018.01

July 24, 1997

Steve Burton
Ducks Unlimited
Western Regional Office
3074 Gold Canal Drive
Rancho Cordova, California 95670-6116

Steve,

The Bureau of Land Management is a land owning Partner in the Cosumnes River Preserve. We would like to voice our support for your proposal to the Category III program. The proposal titled Reducing Fish Entrainment and restoring Tidal Perennial Aquatic Habitat at the Cosumnes River Preserve will fulfill CALFED objectives of reducing loss by entrainment of native Delta fishes. The project will also significantly enhance habitat in the northeast Delta for CALFED target species while furthering the goals of the Preserve. The project has support among the Preserve partner agencies as well as local support.

The restoration of wood Duck Slough will increase habitat for native fish as well as riparian songbirds, shorebirds and waterfowl. The investigation of fish entrainment at the major farm diversion, consolidation of the farm diversion points, and screening for fish will be a positive example to the farming community and will increase our understanding of how to implement effective screening of diversions from sloughs.

Please seriously consider this proposal.

Sincerely,

Rick Cooper
Preserve Manager
Cosumnes River Preserve

Item 11

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

(name)

, being first duly sworn, deposes and

says that he or she is Director, State and Federal Coordination of

(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: 7/25/97

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/L. JANE DOE, NOTARY PUBLIC)

personally appeared Holly Hopkins Andrews
(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))



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
 In 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~~)
 for 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, after 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 payment for labor 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.

* A Payment Bond with the Department to guarantee payment for Labor and Materials in the amount of 50% of the contract

DUCKS UNLIMITED, INC. (Seal)

BY: *Yvelly Andree* (Seal)

Director, State and Federal Coordination (Seal)

Principal (Seal)

UNITED PACIFIC INSURANCE COMPANY (Seal)

BY: *Alan J. Wormer* (Seal)

Alan J. Wormer, 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.

NONDISCRIMINATION 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 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

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. Wormer, 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 VII - 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 Assistant 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 Company, 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 execute affidavits 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 statement of the Company and to comply of 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 Board of Directors of Reliance Insurance Company, United Pacific Insurance Company and Reliance National Indemnity Company by Unanimous Consent dated as of February 28, 1994 and by the Executive and Finance Committee of the Board of Directors of Reliance Surety Company by Unanimous Consent dated as of March 21, 1994.

Resolved 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 as 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.

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 itself as its duly authorized officer.

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

NOTARIAL SEAL
TAMMY SUE KAYATI, Notary Public
City of Philadelphia, Phila. County
My Commission Expires July 20, 1998



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

I, Anita Zipperl, 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 day of July 19 97.

Anita Zipperl
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)

ERNEST O. PALAND (SEAL)
WINSTON E. HOBBS (SEAL)
JOSEPH V. McBRIDE (SEAL)

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

CHRISTABEL E. HILL
Notary Public

DISTRICT OF COLUMBIA
My Commission Expires July 15, 1940

NONDISCRIMINATION COMPLIANCE STATEMENT

FD-19 (REV. 3-95) 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.

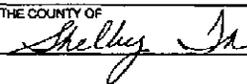
OFFICIAL'S NAME

James L. Ware

DATE EXECUTED

 12/18/95

EXECUTED IN THE COUNTY OF



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.**