

99B170

4.5 PSP Cover Sheet (Attach to the front of each proposal)

Proposal Title: Lower Ranch Wetland Restoration Project
 Applicant Names: Sonoma Land Trust
 Mailing Address: 1122 Sonoma Avenue, Santa Rosa, California 95405
 Telephone: (707) 526-6930
 Fax: (707) 526-3001
 Email: slt@sonic.net

Amount of funding requested: \$ 1,095,648 for 1.5 years

Indicate the Topic for which you are applying (check only one box)

- | | |
|---|---|
| <input type="checkbox"/> Fish Passage/Fish Screens | <input type="checkbox"/> Introduced Species |
| <input checked="" type="checkbox"/> Habitat Restoration | <input type="checkbox"/> Fish Management/Hatchery |
| <input type="checkbox"/> Local Watershed Stewardship | <input type="checkbox"/> Environmental Education |
| <input type="checkbox"/> Water Quality | |

Does the proposal address a specified Focused Action? _____ yes no

What county or counties is the project located in? _____

Indicate the geographic area of your proposal (check only one box):

- | | |
|--|---|
| <input type="checkbox"/> Sacramento River Mainstem | <input type="checkbox"/> East Side Trib: _____ |
| <input type="checkbox"/> Sacramento Trib: _____ | <input type="checkbox"/> Suisun Marsh and Bay |
| <input type="checkbox"/> San Joaquin River Mainstem | <input checked="" type="checkbox"/> North Bay/South Bay: |
| <input type="checkbox"/> San Joaquin River Trib: _____ | <input type="checkbox"/> Landscape (entire Bay-Delta watershed) |
| <input type="checkbox"/> Delta: _____ | <input type="checkbox"/> Other: _____ |

Indicate the primary species which the proposal addresses (check all that apply):

- | | |
|--|---|
| <input type="checkbox"/> San Joaquin and East-side Delta tributaries fall-run chinook salmon | <input type="checkbox"/> Spring-run chinook salmon |
| <input type="checkbox"/> Winter-run chinook salmon | <input checked="" type="checkbox"/> Fall-run chinook salmon |
| <input type="checkbox"/> Late-fall run chinook salmon | <input type="checkbox"/> Longfin smelt |
| <input type="checkbox"/> Delta smelt | <input checked="" type="checkbox"/> Steelhead trout |
| <input checked="" type="checkbox"/> Splittail | <input checked="" type="checkbox"/> Striped Bass |
| <input type="checkbox"/> Green sturgeon | <input type="checkbox"/> All chinook species |
| <input checked="" type="checkbox"/> Migratory birds | <input type="checkbox"/> All anadromous salmonids |
| <input type="checkbox"/> Other: _____ | |

Specify the ERP strategic objective and target(s) that the project addresses. Include page numbers from January 1999 version of ERP Volume I and II:

Ecological Processes: Natural Floodplains and Flood Processes (VI-p. 83; Target 1, Programmatic Action 1A, VII-p. 144); Delta Channel Hydraulics (VI-p. 91); Bay-Delta Aquatic Food-Web (VI-p. 95; Target 1, Programmatic Action 1A, VII-p. 144). Habitats: Tidal Perennial Aquatic Habitat (VI-p. 111; Target 1, Programmatic Action 1B, VII-p. 145); Saline Emergent Wetlands (VI-p. 130; Target 3, Programmatic Action 3A, VII-p. 146); Seasonal Wetland Habitat (VI-p. 141); Essential Fish

Habitats (VI-p. 150; Target 1, VII-p. 149). Species: Priority Group I: Splittail (VI-p. 207); Chinook Salmon (VI-p. 211); Steelhead Trout (VI-p. 225). Species: Priority Group II: California Clapper Rail (VI-p. 243); California Black Rail (VI-p. 247); Salt Marsh Harvest Mouse (VI-p. 259); San Pablo California Vole (VI-p. 266); Tidal Brackish Marsh Special-status Plant Species (VI-p. 271). Species: Priority Group IV: Native Resident Fish Species (VI-p. 345); Bay-Delta Aquatic Foodweb Organisms (VI-p. 349);); Waterfowl (VI-p. 358); Tidal Brackish Marsh Habitat Plant Community Group (VI-p. 373); Seasonal Wetland Habitat Plant Community (VI-p. 379). Harvested Species: Striped Bass (VI-p. 395); White Sturgeon (VI-p. 401); American Shad (VI-p. 404); Pacific Herring (VI-p. 411); Grass Shrimp (VI-p. 417). Stressors: Levees, Bridges, and Bank Protection (VI-p. 435); Dredging and Sediment Disposal (VI-p. 441); Invasive Salt Marsh Plants (VI-p. 470; Target 1, VII-p. 152).

Indicate the type of applicant (check only one box):

- | | |
|--|--|
| <input type="checkbox"/> State agency | <input type="checkbox"/> Federal agency |
| <input type="checkbox"/> Public/Non-profit joint venture | <input checked="" type="checkbox"/> Non-profit |
| <input type="checkbox"/> Local government/district | <input type="checkbox"/> Private party |
| <input type="checkbox"/> University | <input type="checkbox"/> Other: _____ |

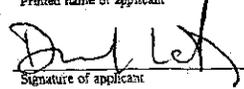
Indicate the type of project (check only one box):

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Planning | <input checked="" type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring | <input type="checkbox"/> Education |
| <input type="checkbox"/> Research | |

By signing below, the applicant declares the following:

- 1.) The truthfulness of all representation in their proposal.
- 2.) The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and
- 3.) The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (section 2.4) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

David Katz, Executive Director
Printed name of applicant


Signature of applicant

Project Name: Lower Ranch Parcel Wetland Restoration Project

Primary Contact:

Name David Katz, Executive Director
Address Sonoma Land Trust
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Participants and collaborators LFR Levine-Fricke

Type of Organization and Tax Status Non-Profit 501(c)(3)

Tax Identification Number and/or Contractor's License type and number 51-0197006

Executive Summary

(maximum 2 pages)

Project Size and Location. The Lower Ranch Wetland Restoration Project consists of a 526-acre diked historic tidal marsh, located east of the mouth of the Petaluma River, just north of Highway 37 in Sonoma County (see USGS map). The Sonoma Land Trust (SLT) proposes to acquire this land and restore it to tidal and seasonal wetlands. SLT proposes to breach the existing levee, and raise elevations and build channel networks where necessary to restore tidal action and achieve wetlands objectives.

SLT and the California Coastal Conservancy own the bayland properties along the eastern and the western boundaries of the site. Those properties have been or are being restored as wetlands. The proposed project will link the Lower Ranch to those adjacent properties, establishing a cohesive and integrated ecosystem consisting of 859 acres of tidal and seasonal wetlands. In conjunction with the nearby Sonoma Baylands (also managed by the SLT), this Project would establish more than 1,200 acres of wetland restoration projects in this part of the Estuary.

Primary Biological/Ecological Objectives include (1) restoring tidal wetlands in a region of the Bay-Delta where most of the historical tidal wetlands and associated ecological functions have been lost to diked baylands; (2) recovering critical habitat for a variety of special status species, including CALFED Priority I species Sacramento splittail, chinook salmon, and steelhead trout; and CALFED Priority II species California clapper rail, black rail, and salt marsh harvest mouse; (3) achieving the habitat restoration goals developed in the Baylands Ecosystem Habitat Goals Project report (March 1999) while being consistent with the USFWS recovery plan for tidal marsh ecosystems (see letter from Peter Baye, USFWS); and (4) successfully connecting the completed 45-acre Petaluma River Marsh (commonly referred to as "Carl's Marsh") with the 288-acre seasonal wetland planned for the North Parcel. Also, the Project will contribute to improved water quality and ecosystem function in the Bay waters by re-establishing historical marsh processes that remove contaminants, recycle nutrients, and enhance food-web productivity.

Cost With a projected cost of approximately \$10,000 per acre or less (see Table 1), the construction and completion of the Lower Ranch Project would be one of the most cost-effective tidal wetland restoration projects in the Bay-Delta. Several factors contribute to this cost: (1) SLT currently owns a conservation easement on the property, (2) large parcel size, (3) absence of existing habitat values, (4) absence of contamination issues, and (4) the local presence of materials needed to accomplish restoration (e.g., suitable existing soil for levee construction; the abundance of natural sediment in the Petaluma River). Use of clean dredged sediment to restore intertidal marsh elevations could accomplish restoration more quickly, and could allow significant non-Calfed federal cost-sharing, up to 75% of the restoration costs. Additionally, a "tipping fee" could be charged to the dredging sponsor to cover remaining costs.

SLT is pursuing several other non-CALFED funding sources. The Trust for Public Lands (TPL) administers the S.F. Bay Protection Fund (~ \$2.5 million) created with money from Unocal Corporation as a result of a court-ordered mitigation settlement. TPL is actively seeking to partner with other organizations to use these funds to buy land; TPL has indicated that SLT's proposed Lower Ranch Project offers a high potential for TPL participation and funding. The types of TPL funding include up to \$30,000 planning grants, up to \$250,000 acquisition & restoration grants, and in late 2000, the balance of the fund will be expended for acquisition and restoration projects. A substantial portion of the Project area would qualify for the Wetland Reserve Program (WRP) administered by the USDA Natural Resources Conservation Service. Preliminary indications from NRCS staff indicate that the Lower Ranch Project would score high on the WRP ranking process. The WRP provides funding for wetland acquisition and restoration by purchasing permanent wetland easements for up to \$2,000 per acre.

Executive Summary

(maximum 2 pages)

Adverse and third-party impacts The majority of impacts to third-parties would be beneficial; the only adverse impact of the Project would be the conversion of agriculture to wetlands. However, recent evaluations of the impacts of converting agricultural land to wetlands at the nearby 1,610-acre Bell Marin Keys site (Hamilton Restoration Plan Final EIR/S, December 1998) indicate that the loss of agricultural hay production for a parcel the size of Lower Ranch would not be a significant adverse impact. Creation of tidal wetlands at the Project site will extend the Petaluma River floodplain, relieving flooding to some extent on properties adjacent to the River. The potential use of clean dredged sediment at the Project would provide an alternative to in-bay and ocean disposal that degrade valuable fisheries habitats. The educational opportunities for a Project of this scale offer tremendous learning benefits to local schools as well as to major universities and to restoration science in general.

Applicant qualifications The SLT has protected nearly 11,000 acres in Sonoma County since its inception in 1976, and is actively involved in the restoration, monitoring, and management of seasonal and tidal wetlands in the immediate project vicinity. David Katz, SLT's Executive Director, is a 24 year veteran of natural resource and agricultural management and has a qualified staff of professionals with extensive experience in natural resource management and project management. LFR Levine Fricke (LFR) is an Emeryville-based environmental consulting company that has designed and completed some of the largest wetland restoration projects in the Estuary, including the Oro Loma Marsh (350 acres completed in 1996), Martin Luther King, Jr. Regional Wetlands Shoreline (71 acres completed in 1998), Pier 98 (19 acres completed in 1998), and the Montezuma Wetlands Projects (1,800 acres planned for 2000). Doug Lipton, Ph.D., and Roger Leventhal, P.E., of LFR have worked closely together for almost 10 years and have been respectively the Project Manager and lead design Engineer on all of these wetland restoration projects.

Monitoring & Data Evaluation The monitoring plan developed for this Project will expand on the plan developed by the SLT for the adjacent Carl's Marsh, which has been successfully implemented and evaluated from 1994-1998 (SLT 1998). That monitoring plan's author, Stuart Siegel, and the San Francisco Estuary Institute's wetlands scientist, Josh Collins, Ph.D., will be part of the SLT team of regional experts that will be contributing to this effort as well as the restoration design effort. We will coordinate our program with the Interagency Ecological Program (IEP) to allow regional Bay-Delta data comparison.

Local Support/Coordination /Compatibility with CALFED The SLT has already contacted and received positive feedback on the Project from the Sonoma County Board of Supervisors, the Sonoma County Agricultural Preservation and Open Space District, the California Department of Fish and Game, the California State Coastal Conservancy, and the U. S. Fish and Wildlife Service. SLT has also received the support of the Marin Audubon Society. SLT will also enlist the support of the North Bay Agricultural Alliance, a group representing 18 local landowners. As a landowner adjacent to the proposed acquisition and restoration site, SLT has an ongoing positive relationship with the other landowners adjacent to the site, including local farmers, Port Sonoma Marina, PG & E, and Caltrans. These landowners have supported previous restoration efforts in the Project area. The landowner of the acquisition site, Granitic Construction, Inc., has expressed willingness to sell the property. In addition to ongoing outreach efforts, the Trust will provide specific opportunities for outside involvement in the Project by re-notify in writing all adjacent landowners and tenants of our acquisition and restoration plans, and holding public meetings. The restoration of tidal wetlands at the Project site would satisfy numerous CALFED objectives and could serve as a model for local-state-federal cooperation in wetlands restoration and management.

Project Description

(3-page maximum)

Project Description The Lower Ranch Wetland Restoration Project consists of a 526-acre diked historic tidal marsh, located east of the mouth of the Petaluma River, just north of Highway 37 in Sonoma County in the Petaluma River Sonoma Baylands Watershed (see USGS Map). SLT proposes to acquire and restore this subsided land to tidal wetlands. SLT envisions a tidal inlet to allow unconstrained tidal exchange through the property's eastern edge (see Figure 2) through the 45-acre Carl's Marsh, which SLT and the California Coastal Conservancy (CCC) own. Carl's Marsh and the bayland along the western boundaries of the site (which SLT and the CCC also own) are being restored to seasonal wetlands in conjunction with hay production. The proposed project will link the Lower Ranch to those adjacent properties, establishing a cohesive and integrated ecosystem consisting of 859 acres of tidal and seasonal wetlands. In conjunction with the nearby Sonoma Baylands (also managed by the SLT), this Project would establish more than 1,200 acres of wetland restoration projects in this part of the Estuary. The project meets the habitat restoration goals for this area as described in the Baylands Ecosystem Habitat Goals Project report (March 1999).

Proposed Scope of Work for this funding request consists of two activities, land acquisition and preparation of a preliminary design report. Final design, permitting, construction, and monitoring will be conducted in subsequent phases.

Task 1: Land Acquisition SLT is negotiating purchase of Lower Ranch (see attached letter from property owner), and currently owns a Conservation Easement on the property with the California Coastal Conservancy. Approximately 130 acres are being used to dry clean sediments dredged from the Petaluma River nearby Port Sonoma Marina. This operation is temporary and will not affect acquisition and restoration of the property to tidal wetlands; in fact, the rehandled sediment could be used for restoration purposes (e.g., levees, raising the subsided elevations).

Task 2: Preparation of Preliminary Design Report In preparing this submittal, we envision that the Lower Ranch site will have a tidal inlet(s) as described above, and will also transition into the North Parcel, which is planned for restoration to seasonal wetlands with limited agricultural hay farming. We see the transition zone as broad, gently sloping terraces at the high marsh/upland edge, along new flood control levees, and along access levees that meet PG&E's requirement for vehicular access to on-site transmission towers. Because the site has subsided to elevations of approximately 3 feet below the low marsh plain (MHW), we must also establish intertidal elevations (potentially using alternatives similar to those considered for the nearby Hamilton Airfield Wetland Restoration Project). The levees can promote intertidal elevations through settlement of sediment from natural deposition or serve as some internal levees for the potential placement of clean dredged sediment. The levees will also guide development of tidal channels.

In preparing the Preliminary Design Report, we will address:

a) Field Studies, which shall include:

- Phase I environmental site assessment to identify any potential environmental problems at the site. We are aware that a small area used as an agricultural dump that contains items such as construction material, household appliances, cans and bottles is present on the site. SLT's preliminary investigation has revealed that the dump contains no contaminants. SLT will apply in-kind cost to this task in the amount of \$7,500, which were previously obtained from the Rose Foundation.
- Geotechnical activities to review available geotechnical borings and perform additional borings and analysis as needed to design the new flood control and PG&E access levees.
- Wetlands delineation and ecological assessment in conformance with USACE requirements. We will map sensitive habitats and species, if any, and incorporate them into the preliminary design.

Project Description

(3-page maximum)

- An aerial topographic survey across the Lower Ranch parcel to allow development of detailed cost estimates for restoration activities to meet project objectives.
- b) *Community/Agency Coordination, which shall include:*
 - Preparation of a constraints analysis to identify all physical constraints, such as utilities and power poles, that may constrain the design of the tidal wetlands.
 - Meetings with the regulatory agencies and other interested parties to build consensus for the restoration objectives. We will attempt to identify conflicting goals early on in the design process and work to resolve any issues before completion of the design report.
 - Preparation of a preliminary design plan that presents data and maps regarding existing habitat at the site, develops 1 to 3 alternative designs for habitat restoration along with a discussion of the benefits and limitations of each alternative, and preparation of a detailed cost estimate and construction plan for the recommended alternative.
 - Meetings with the public and agencies throughout the process to receive input and develop educational programs and public outreach programs.

Task 3 Project Management SLT will administer the contract and will provide supervision, monitoring, and coordination of budgets and schedules. In addition, project management will address coordination with regulatory agencies and interested parties.

Approach We will use natural hydrogeomorphic and ecological processes to create a marsh that will be naturally productive and that will minimize engineered structures (e.g. internal levees, culverts) and ongoing maintenance requirements. Whether we use the natural sedimentation approach or bring in dredged sediment to more quickly establish intertidal elevations, internal levees required to provide access to the PG& E towers will be used to guide the formation of tidal channels and the areas of sediment deposition. The target design elevation if dredged sediment is placed at the site will be no higher than 0.5 feet below MHW to ensure that the final marsh surface is created from the deposition of unconsolidated sediments coming in with the tides.

The Dredged Sediment Alternative is similar to the approach used at the Sonoma Baylands and proposed at the Hamilton Airfield and Montezuma wetlands restoration projects. The benefits of dredged sediment use include (1) quicker establishment of intertidal marsh elevations that will promote more rapid development of wetlands habitat and wildlife functions; (2) greater habitat diversity by establishing elevations that grade naturally from the low marsh plain into higher ecotones like high marsh pannes, upland transition zones, and seasonal ponds; (3) reuse of dredged sediment that might otherwise be dumped into the Bay and Ocean impacting fisheries; and (4) additional funding mechanisms, whereby 75% or more of the restoration costs could be covered by non-CALFED sources.

We estimate that approximately 3.4 million cubic yards of sediment could be placed at the site. The sediment could come from a variety of Corps maintenance dredging projects (average annual volume of 2.2 million cubic yards, Corps 1998)¹ as well as new work projects (e.g., Port of Oakland projects, Concord NWS, Southampton Shoal, etc.). We would accept only dredged sediment that meets the chemical and toxicological requirements of sediment suitable for unconfined aquatic disposal (USEPA 1998) and for use as the cover layer in wetland creation projects (RWQCB 1992)². We could hydraulically pumped sediment onto the site from 2 nearby

¹ USEPA and USACE 1998. *Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual. Inland Testing Manual.*

² San Francisco Regional Water Quality Control Board (RWQCB). 1992. *Interim Sediment Screening Criteria and Testing Requirements for Wetland Creation and Upland Beneficial Reuse.* J.D. Wolfenden and M.P. Carlin, December 1992.

Project Description

(3-page maximum)

locations: (1) Port Sonoma, where an ongoing annual sediment supply is available (~300,000?? cy were transported to the site in 1998); and (2) from the same sediment offloading area used by the Sonoma Baylands project.

Because of the current regulatory, public, and political climate that provides strong financial incentives for the beneficial use of dredged sediment for wetland restoration projects, the costs associated with this alternative could be funded up to 75% by the federal government through congressional authorization. The remaining 25% of the restoration costs would be covered by "local sponsors," which could include a variety of non-CALFED funding sources (See *Cost Sharing*). Additionally, some or all of the restoration costs could be recovered by charging dredging sponsors (e.g., Ports) a "tipping fee" for each cubic yard of dredged sediment placed at the site.

Deliverables The deliverable from Task 1 (land acquisition) will be a deed of trust that the restored land will be owned and maintained as a wetlands restoration area in perpetuity. The primary deliverable from Task 2 (preliminary design report) will be a comprehensive report describing the existing site resources and restoration alternatives and detailed cost estimate as previously described.

Phases and Separation of Tasks. The three tasks proposed in this funding request constitute one phase of the Project. Additional phases include environmental documentation and permitting, preparation of the final design report, and engineering plans and specifications for bidding and construction (Phase 2); construction of the project (Phase 3); and long term monitoring of the site (Phase 4). Tasks 1 and 2 can be funded separately; however, performance of Task 2 is dependent upon successful completion of Task 1. Task 3 is only required if Tasks 1 and 2 are funded.

Schedule Task 1 land acquisition will be completed within the first four months of the projects. Task 2 preparation of the preliminary design report can be completed within 14 months following authorization by CalFed. Task 3 project management will be ongoing throughout the project, including four months at the end of the project to complete coordination with regulatory agencies and interested parties. The Schedule provided in the *Cost* section illustrate the key milestones and sequencing of subtasks for this phase of work.

Ecological/Biological Benefits

(3-page maximum)

Ecological/Biological Benefits SLT has developed the Lower Ranch Project to (a) restore diked baylands to tidal action and floodflows, (b) recover critical tidal marsh habitat for a variety of special status fish, birds, and mammals, (c) implement cost-effective beneficial use of dredged sediment for habitat restoration, and (d) demonstrate to the general public how conflicting priorities can be addressed through innovative ecological management and design in a public/private partnership.

The Lower Ranch Project will provide critical habitat (i.e., nursery/rearing areas) for threatened fish species, including Sacramento splittail, steelhead trout, and chinook salmon. The restored wetlands will also benefit the endangered California clapper rail, the threatened black rail, provide habitat for the endangered salt marsh harvest mouse, and support avian populations of native waterfowl and shorebirds. Restoring tidal marsh to this site will expand the existing tidal marsh and allow for a natural transition into adjacent seasonal wetlands that would benefit fish, birds, and mammals and improve conditions for rare marsh and ecotonal plant species. The Lower Ranch Project will also contribute to improved water quality in the Bay waters by re-establishing historical marsh processes that remove contaminants.

Stressors. The Lower Ranch Project is designed to address the loss of critical floodplain and tidal marsh habitats within the Bay, improve water quality, control undesirable species interactions, and reverse land use trends that remove baylands from natural tidal cycles.

Species. The Lower Ranch Project provides critical habitat for CALFED Priority I species: juvenile Sacramento splittail (*Pogonichthys macrolepidotus*), chinook salmon juveniles (*Oncorhynchus tshawytscha*) and steelhead trout (*Oncorhynchus mykiss*) outmigrating from Adobe creek and the Petaluma river. Outmigrating salmonids (primarily fry and some smolts) can spend several months in shallow rearing habitat in tide water marshes, and steelhead juveniles have recently been documented in Carl's Marsh, adjacent to the Petaluma River³. Splittail have also been documented in Carl's Marsh, where spawning is likely to occur in the shallow emergent vegetation⁴. The Federal and state endangered California clapper rail (*Rallus longirostris oboletus*), the state threatened California black rail (*Laterallus jamaicensis corturniculus*), the Federal and state endangered salt marsh harvest mouse (*Reithrodontomys raviveris*), and the San Pablo California vole (*Microtus californicus*; state species of special concern) would also greatly benefit from this project by the addition of critical salt marsh habitat (each of these are CALFED Priority II species). Restoring tidal marsh to the Lower Ranch Project would also improve nursery habitat for starry flounder (*Platichthys stellatus*), Dungeness crab (*Cancer magister*), and other aquatic species. In particular, the following target species of the San Francisco Bay Area Wetlands Ecosystem Project (SFBAWEP) will be benefited: three-spined stickleback (*Gasterosteus aculeatus*), prickly sculpin (*Cottus asper*), rufe perch (*Hysterocarpus traski*), longjaw mudsucker (*Gillichthys mirabilis*), *Assiminea californica*, amphipods, and the mud crab (*Helegrapsus oregonensis*). Many of these species, being native resident fish, are also CALFED Priority Group IV species.

Ecosystem Benefits. The Lower Ranch Project will create almost 600 acres of critical habitat for the target species identified above. The site is also strategically located between Carl's Marsh, an existing tidal marsh, and a seasonal wetland on the North Parcel. Restoration of the Lower Ranch Project would recreate a natural 859-acre ecotone extending from Carl's Marsh (on the banks of the Petaluma River) to the seasonal wetlands on the eastern slope of the contiguous tract. Tidal

³ U.S. Fish & Wildlife Service (USFWS). 1997. *Abundance and Survival of Juvenile Chinook Salmon in the Sacramento-San Joaquin Estuary, 1994 Annual Progress Report*. April 1997.

⁴ L. Meng. Personal communication, June 1997 and Sonoma Land Trust. 1998. *Petaluma River Marsh Monitoring Report 1994-1998, Sonoma County, California*. May 1998. Prepared by Stuart Siegel Wetlands & Water Resources.

Ecological/Biological Benefits

(3-page maximum)

marsh was once the dominant habitat type in these baylands. Extensive salt marsh historically existed near the mouth of the Petaluma River, the location of the proposed project site. CALFED funding would restore the important ecological function of these historically tidal baylands.

Because of the critical need for tidal baylands the SFBAWEP has identified the proposed site as a "Unique Restoration Opportunity" and recommends that it be restored as a beneficial action for improving the health of the San Francisco Bay. Additional benefits include:

- **Floodplain and Tideland Changes.** Levee construction throughout the Bay has physically isolated Bay and tributary waters from their natural floodplain and tidelands. Lower Ranch Project will re-establish tidelands in an area currently diked to support agriculture, thereby addressing hydrologic and physical isolation of floodplains and tidelands, and increasing natural floodplain and flood storage capacity.
- **Channel Form Changes.** The Lower Ranch Project will re-establish channel hydrogeomorphology and restore natural physical processes, including natural inundation cycles. Using nearby natural analogs and reference sites to create the tidal perennial habitat, the Lower Ranch Project will increase emergent and submergent vegetation and create a transitional ecotone into seasonal wetlands in the adjacent North Parcel.
- **Water Quality.** Because tidal wetlands filter water⁵, the Lower Ranch Project wetlands should enhance reduction of contaminant concentrations in the Petaluma River drainage and contribute to the overall improvement of water quality in the Bay.
- **Undesirable Species Interactions.** To enhance native species survival, we will implement eradication or control options for exotic species during Phase 3 construction and Phase 4 monitoring.
- **Land Use.** The Lower Ranch Project will employ land acquisition into an environmental trust (i.e., Sonoma Land Trust) to change land use in perpetuity.

Expected secondary benefits include the creation of shallow water foraging habitat for shorebirds and waterfowl, and tidal/seasonal wetland foraging and rearing habitat for native waterfowl, amphibians, and mammals.

Third Party Benefits. The Lower Ranch Project will provide information on natural sedimentation and also evaluate the beneficial reuse of clean dredged sediment. This will contribute to ongoing efforts by California Department of Water Resources to determine cost-effective ways of reversing subsidence in Delta/Bay agricultural lands that need to be restored to tidal action and will contribute to the Long Term Management Strategy (LTMS) for dredge sediment beneficial reuse opportunities.

Benefits to Other Ecosystem Restoration Programs. This project directly contributes to the Baylands Ecosystem Habitat Goals for the Petaluma River Area prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project that was funded in part by U.S. EPA and the California Department of Fish & Game. The Project is also consistent with the US Fish & Wildlife Service recovery plan for tidal marsh ecosystems. In addition, the Lower Ranch Project will evaluate clean dredged sediment/natural sedimentation and accretion fill approaches that can be used effectively as methods to create wetland habitat throughout much of the Bay-Delta system. In addition, this project addresses one of the major objectives of the Anadromous Fish Restoration Program by providing juvenile anadromous fish rearing habitat.

⁵ W.J. Mitsch and J.G. Gosselink 1993. *Wetlands*. 2nd Edition. Van Nostrand Reinhold, New York City, New York.

Ecological/Biological Benefits

(3-page maximum)

Benefits to CALFED Non-Ecosystem Objectives. Existing Bay/Delta levees could fail during a large seismic event. Current methods for levee stabilization are expensive, and by working in aquatic areas, may be damaging to existing biota. This project will evaluate using fill placement (for wetland creation) in non-wetlands area to bolster levees, thus reducing hydrostatic pressure and wave-generated erosion.

ERPP Objectives. This proposal meets the following ERPP objectives (from Vol 1):

ECOSYSTEM PROCESSES:

- natural floodplains (p. 83)
- Bay-delta channel hydraulics (p. 91)
- Bay-Delta aquatic food-web (p. 95)

HABITATS:

- saline emergent wetland (p. 130)
- seasonal wetlands (p. 141)
- essential fish habitats (p. 160)

STRESSORS:

- levees (p. 435)
- dredging and sediment disposal (p. 441)
- invasive salt marsh plants (p. 470)

SPECIES:

- splittail (p.207)
- chinook salmon (p. 211)
- steelhead trout (p. 225)
- California clapper rail (p.243)
- California black rail (p. 247) tidal perennial aquatic habitat (p. 111)
- salt marsh harvest mouse (p. 259)
- San Pablo California vole (p. 266)
- tidal brackish special-status plant species (p. 271)
- six Priority Group VI categories (p. 344)
- four harvested species (p. 394)

Technical Feasibility and Timing

(1-page maximum)

Technical Feasibility and Timing The Sonoma Land Trust currently holds an agricultural easement on the Lower Ranch property; this easement was purchased with funds provided by the State Coastal Conservancy. Prior to proceeding with any wetland restoration on the property, this easement must be modified or extinguished by mutual agreement of the Sonoma Land Trust and the Coastal Conservancy. In addition an act of the Legislature may be required because the source of funds for acquiring the easement were derived from the Parklands Act of 1980. The Sonoma Land Trust does not anticipate any problems in modifying or extinguishing the easement as the Parkland Act does not prohibit expenditure of funds on wetlands project and because Coastal Conservancy staff have indicated their support for assisting the SLT with this process. In addition, SLT enjoys strong support from the State Assembly and Senate delegation whose districts encompass this project area as well as other areas of Sonoma County.

Although no specific permits or approvals are required for preparing a wetland restoration plan, they will be necessary during the implementation phase and the Sonoma Land Trust will coordinate closely with local, state and federal government agencies in order to assure that the restoration planning is consistent with their guidelines. Potential significant impacts to the environment, as required under the California Environmental Quality Act, will be identified early in the planning process so that measures to avoid and minimize impacts can be incorporated into the restoration plan. The Sonoma Land Trust will also analyze potential impacts to the environment under the National Environmental Policy Act if federal participation in the implementation phase appears likely. It should be noted that the Sonoma Land Trust does not anticipate any significant impacts to the environment as a result of this wetland restoration project.

In addition, the Sonoma Land Trust will consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the California Department of Fish and Game regarding any potential impacts to listed species and to seek technical assistance on approaches to optimally enhance and restore habitat for wetland dependent listed species.

The Sonoma Land Trust will also work closely with the San Francisco Bay Conservation and Development Commission, Sonoma County, the U.S. Army Corps of Engineers, and any other permitting authorities that are identified during the planning process.

Monitoring and Data Collection Methodology Monitoring is proposed during the construction and final phase of this project (phases 3 and 4) to determine the effectiveness of the habitat restoration actions and for adaptive management of the site as the tidal marsh/seasonal wetland communities develop. A monitoring plan similar to that developed by the SLT for the adjacent Carl's Marsh will be expanded to incorporate this Project⁶. That monitoring plan's author, Stuart Siegel, is part of the SLT team of scientists that will be contributing to this effort. Complete specification of the monitoring program will be determined during Phase 2 (Final Engineering & Ecological Design) of this project in coordination with resource agencies. That program will identify the monitoring data to be collected, the evaluation approach, data management protocols, and the frequency, content, and format of reports. All monitoring will be coordinated with ongoing monitoring programs in the area (e.g., at Carl's Marsh, seasonal wetlands of the North Parcel, and Sonoma Baylands). Data collection efforts and results concerning the ecological response of the site to habitat restoration will also be coordinated with the Interagency Ecological Program. This will enable regional comparisons for implementing adaptive management strategies at the project site. Monitoring data will be incorporated into a GIS database system that can be integrated into other ongoing (and future) monitoring efforts in the Bay-Delta. In addition, the Lower Ranch Project will provide valuable data for enhancing Bay-Delta efforts and approaches to restore giked subsided baylands to their historical tidal wetland conditions. The project database will be structured to allow efficient data recovery and analysis, quality assurance/quality control, plotting, graphing, tabulation, and calculation.

In consultation with CALFED, we will assemble a technical review panel of recognized experts, agency personnel, and local interested parties to evaluate project progress and conduct independent third-party review of project deliverables. As appropriate, the review panel will recommend modifications to the project to assist in fine tuning the management strategy, to maximize the potential for success in the long-term, both for the project, and similar projects in the future.

Biological/Ecological Objectives			
Hypothesis/Question to be Evaluated	Monitoring Parameter(s) and Data Collection Approach	Data Evaluation Approach	Comments/Data Priority
Are the biotic communities developing as expected.	Five year sampling. At least seasonal in frequency. Use methods for vegetation, benthos, fish, birds, and mammals	Data to be evaluated against reference/ target sites to ensure proper restoration of native communities.	Results to be used to guide adaptive management of the site.
Have the restoration activities positively affected site water quality.	See Table 2 for water quality analyses and methods.	Compare WQ data with pre-restoration baseline and reference site.	This will allow evaluation of organic soil formation, and nutrient processing. If dredged sediment is used, impacts to water quality will be evaluated.
Is sedimentation, levee stability, hydraulics, and channel morphology as expected	Monitor geotechnical /physical habitat properties.	Compare with baseline and reference sites.	Allows determination of habitat and structural stability.

⁶ Sonoma Land Trust. 1998. *Petaluma River Marsh Monitoring Report 1994-1998, Sonoma County, California*. May 1998. Prepared by Stuart Siegel Wetlands & Water Resources.

Local Involvement

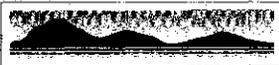
As an integral part of the Sonoma Land Trust / Lower Ranch Wetland Restoration Project, the SLT will draw on its extensive experience with forming positive cooperative relationships with government agencies, local and state organizations, neighboring landowners, and the general public. SLT has already contacted and received positive feedback on the Project from the:

- Sonoma County Board of Supervisors
- Sonoma County Agricultural Preservation and Open Space District
- California Department of Fish & Game
- California State Coastal Conservancy
- U. S. Fish and Wildlife Service

All of these agencies expressed their conceptual support for the Project and a willingness to work together with SLT to make the Project a reality. SLT's involvement in the Project, as one of Sonoma County's oldest and most active local conservation organizations, will help lend the support of our more than 1,500 members. SLT has also received the support of the Marin Audubon Society, a local environmental group with a long-standing interest in the conservation and enhancement of North Bay wetlands. SLT will also enlist the support of the North Bay Agricultural Alliance, a group representing 18 local landowners, including SLT. The North Bay Agricultural Alliance is neutral on wetland restoration issues and is currently working on a project funded by an EPA Region IX grant to study the beneficial uses of North Bay floodplain lands.

As a landowner adjacent to the proposed acquisition and restoration site, the SLT has an ongoing positive relationship with the other landowners adjacent to the site, including local farmers, Port Sonoma Marina, P. G. & E. and Caltrans. These landowners have supported previous restoration efforts in the Project area. The landowner of the acquisition site, Granite Construction, Inc., has expressed willingness to sell the property. SLT has yet to incorporate the general public in the acquisition of the Project Site, but we have successfully involved the public in previous restoration planning for the adjacent North Parcel and Baylands properties. We will continue to build on this public involvement as part of the Project. As evidence of the support stated above, appropriate letters of contact and support are attached to this submittal.

In addition to ongoing outreach efforts, the Trust will provide specific opportunities for outside involvement in the Sonoma Land Trust / Lower Ranch Wetland Restoration Project. When this proposal is approved and a contract is signed, SLT will re-notify in writing all adjacent landowners and tenants of our acquisition and restoration plans. At that time, SLT will also invite the landowners' participation in the planning process and inform them of the Project and outreach schedules. As part of the restoration planning process, SLT will host at least two public outreach meetings to be held at either the Trust office or an appropriate local meeting hall. The Trust will invite local landowners, representatives of interested local and state organizations, appropriate government agencies, and the general public. The first such meeting will be scheduled for a time after site acquisition and during the initial restoration planning phase. This meeting will provide for early incorporation of stakeholder input into the planning process and Project design. The second meeting will be scheduled once the draft restoration plan has been prepared. This meeting will provide an opportunity for the incorporation of outside review and comments into any completed restoration plan. Both of these meetings will provide a opportunity to discuss third-party impacts such as the conversion of farmland and changes to existing flood control systems. This input regarding third party impacts can then be incorporated by design into the Project. If greater opportunity for outside involvement is appropriate, SLT will schedule additional meetings and consultations as necessary.



S O N O M A L A N D T R U S T

1121 SONOMA AVE.
SANTA ROSA,
CA 95401
Tel: 707 526 6930
Fax: 707 526 3001
Email: slt@sonoma.net

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John Randall

Lew Reid

Krista Thomas

Pat Wiggins

David Katz

Executive Director

April 13, 1999

County of Sonoma
Board of Supervisors
575 Administration Drive
Santa Rosa, CA 95403

RE: Notification of submission of a Grant Application to CALFED for acquisition and restoration of Lower Ranch, on the northern shoreline of San Pablo Bay in southwestern Sonoma County.

Dear Mr. Chairman and Members of the Board,

The Sonoma Land Trust (SLT) is submitting an application to the CALFED Bay-Delta Program to fund the Land Trust's proposal to acquire fee title to the Lower Ranch parcel in Sonoma County and to support the design of a restoration plan that would restore previously existing wetlands on the site.

The Lower Ranch parcel is 526 acres of diked historic tidal marsh currently used to grow oat hay, east of the mouth of the Petaluma River, just north of and next to Highway 37. Adjacent properties are owned in fee by Sonoma Land Trust and California State Coastal Conservancy. Lower Ranch is a key parcel in establishing a cohesive ecosystem approach to SLT's successful Sonoma Baylands Wetlands Demonstration Project. Sonoma Land Trust currently holds a Conservation Easement on the Lower Ranch property.

The Lower Ranch property is categorized as "prior converted" wetlands under COE and EPA criteria, having been converted from historic wetland values to agriculture prior to the adoption of the Clean Water Act. The primary biological objective of the grant application is restore, enhance and protect wetlands through a long-term conversion process increasing the historic tidal and seasonal wetlands and wildlife habitat in the Sonoma Baylands/Petaluma River watershed.

Sincerely,

David Katz
Executive Director



April 12, 1999

Mr. David Katz
Sonoma Land Trust
1122 Sonoma Avenue
Santa Rosa, CA 95405

Dear David:

Desert Aggregates Inc. (Owner) consents to your inclusion of the Lower Ranch property in your CALFED grant proposal. Please be advised that the inclusion of the property creates no contractual obligations on the part of Desert Aggregates Inc. to sell the property now, or at any time in the future, to the Sonoma Land Trust, or any other party.

If you have any questions or comments, please be sure to give me a call.

Very truly yours,

DESERT AGGREGATES, INC.

Scott D. Wolcott
Scott D. Wolcott
Corporate Real Estate Manager

SDW:srs

Sacramento Branch
Box 15987
Sacramento, CA 95851
Phone 916/855 4400
FAX 916/369-0429

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I-016205

MEMORANDUM

To: David Katz, Sonoma Land Trust (1122 Sonoma Avenue, Sonoma, CA)

From: Peter Baye, U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, *PB*
Endangered Species Recovery Branch

Date: 14 April 1999

SUBJECT: Consistency of conceptual marsh restoration plan for Lower Ranch and North Parcel with administrative draft FWS tidal marsh ecosystem recovery plan objectives.

Dear David:

I reviewed the site map that Doug Lipton faxed to me, showing tidal marsh restoration proposed for Lower Ranch, and non-tidal (?) seasonal wetlands proposed for the North Parcel. As you know, my main job duty at FWS is to prepare and implement the Recovery Plan for Tidal Marsh Ecosystems of Central and Northern California. Broadly speaking, the preliminary conceptual plan is consistent with the overall objectives of the tidal marsh recovery plan for this segment of San Pablo Bay, and it appears consistent with the Goals Project as well (I worked on both). I don't expect an exact fit with the recovery map, and it isn't always really necessary that specific projects match the recovery maps to meet their objectives. In fact, the proposal is somewhat different from what is mapped in the draft revised recovery plan, but I don't think the differences represent an obstacle to FWS endorsement...but I have to leave that for FWS management.

The conceptual plan obviously does not yet have enough design detail to allow for elaboration of consistency. Design elements which would make the plan most consistent with the objectives of the recovery plan would include:

- (1) construction of broad, gently sloping terraces capped with terrestrial or alluvial (not bay mud) sediments at the high marsh/upland edge (along new flood control dikes);
- (2) unconstrained tidal flows through adequate, oversized tidal inlets and pilot channels;
- (3) minimization of artificial constraints or artificial patterning of tidal drainage systems;
- (4) avoidance of significant artificial upland inclusions in the tidal marsh to minimize artificial predator access and dens sites (topographic highs in the marsh should be high marsh, extreme upper intertidal marsh zone);
- (5) providing for limited influence of extreme high tides in portions of the seasonal wetland

complex (creating saline shallow inundated habitat during fall migration, diked pickleweed habitat, transition between saline, brackish, and freshwater seasonal wetlands). I would be interested in coordinating with you and Levine-Fricke during the development of the restoration plan to integrate recovery objectives into the project to the maximum extent possible.



Peter Baye



State of California - The Resources Agency

GRAY DAVIS, Governor

DEPARTMENT OF FISH AND GAME

<http://www.dfg.ca.gov>

POST OFFICE BOX 47

YOLINVILLE CALIFORNIA 94599

(707) 944-5500

April 15, 1999

Mr. David Katz
Sonoma Land Trust
1122 Sonoma Avenue
Santa Rosa, CA 95405

Dear Mr. Katz:

Department of Fish and Game personnel would like to express its support for the Trusts' efforts to acquire and restore the Granite Construction Company property along the Petaluma River north of Highway 37. The site offers good potential for tidal restoration as shown by the success of the recent Petaluma Marsh Restoration Project undertaken by the Trust in cooperation with the Department. The proposed project would make significant contributions to achieving the tidal wetland goals identified in the recently released Baylands Ecosystem Habitat Goals report. Restoration of the site would also provide significant fishery and endangered species benefit by restoring upwards of 600 acres of tidal marsh. Recent monitoring of the Sonoma Baylands has shown that such sites provide habitat for anadromous and native estuarine fishes.

We look forward to working with you in developing and implementing the proposed project. If you have further questions, please contact Mr. Carl Wilcox, Environmental Services Supervisor, at (707) 944-5525.

Sincerely,

Brian Hunter
Regional Manager
Central Coast Region

cc: Carl Wilcox

Conserving California's Wildlife Since 1870

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** TOTAL PAGE.02 **

I-016208



Marin Audubon Society Box 599 Mill Valley, California 94942-0599

April 15, 1999

CalFed Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

RE: PROPOSAL FROM THE SONOMA LAND TRUST

Dear Sirs:

This expresses the support of the Marin Audubon Society for the proposal by the Sonoma Land Trust for funding to acquire the 526-acre site called Lower Ranch near the mouth of the Petaluma River and to develop a restoration program for that site and the North Parcel.

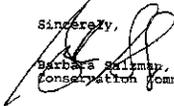
Marin Audubon has a long interest in these parcels plus Sonoma Baylands, all three of which were previously owned by George Leonard. We participated in planning meetings in the late 1980's to develop restoration options for these sites. We anticipate that some of the data from the two other planning documents prepared for these sites would be relevant and useful in the preparation of the plan for these parcels.

We fully support acquisition of fee title of the Lower Ranch parcel and protection and restoration of it, and the North Parcel, to more productive habitat. Restoration or enhancement of these two remaining Leonard Ranch parcels are vital components of a restoration program for the lower Petaluma River watershed. We have been anxiously awaiting enhancement of seasonal wetlands on this site since restoration of Sonoma Baylands to tidal action.

Marin Audubon is committed to restoration of the Petaluma River watershed as evidenced by our Petaluma Marsh Expansion project upstream adjacent to the Petaluma Marsh, a project that is partially funded by a CalFed grant. We are very interested in participating in the preparation and implementation of an integrated plan for the North Parcel and Lower Ranch parcels.

Thank you for favorably considering the Sonoma Land Trust's proposal.

Sincerely,



Barbara Selman, Chair
Conservation Committee



APR 16 '99 09:40

A Chapter of National Audubon Society

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I-016209

Cost & Schedule

(1-page maximum, excluding tables)

COST

This table provides SLT's cost estimate for this funding request. We have segregated direct costs from indirect costs in accordance with General Accounting Standards. We allocate the indirect cost pool between Overhead and General and Administrative expense pools. As a policy, we do not separate Fringe costs from the overhead or G & A cost pool. The overhead cost pool includes allocable fringe costs for technical and support staff, as well as B&P costs, indirect salaries, bonuses & profit sharing, etc. To the extent that there is a casual/beneficial relationship of the individual cost item, such cost is included in the overhead cost pool. General and Administrative costs that are administrative in nature and associated with general operations of the business are considered G & A costs and are therefore included in G & A cost pool.

Phase & Task Description	Direct Labor Hours	Direct Salary & Benefits		Overhead Labor (General Admin & fee)		Fully Burdened Rates	Service Contracts	Material & Acquisition Contracts	Miscellaneous & Other Direct Costs	Total
		Hrly Rate	Total \$\$\$	Hrly Rate	Total \$\$\$					
<i>Phase 1 - Table 1: Land Acquisition</i>										
1. Negotiation/Contracts	122	44.00	5,358	6.00	6,100	50.00				\$ 6,100
2. Legal/Appraisal							5,850			5,850
3. Title Insurance/Escrow/Tax Fees									22,860	22,860
4. Purchase of Fee Title to Real Estate								660,000	--	660,000
5. Signage, Security & Monitoring	110	36.00	3,960	8.00	4,620	42.00				4,620
										\$ 699,430
<i>Phase 2 - Table 2: Preliminary Technical Design</i>										
1. Ecological/Biological Evaluations	350	35.18	24,626	59.32	41,524	94.50				\$ 66,150
2. Field Studies (gouch, ESA)	220	35.18	10,554	59.32	17,796	94.50				20,850
a. drilling subcontractor							25,000			25,000
3. Preliminary Restoration Design	1,800	35.95	72,260	50.62	101,746	86.57				155,826
a. aerial topographic survey							50,000			50,000
4. Project Management (LFR)	360	57.28	17,460	77.33	31,860	134.70				48,492
5. Project Management (SLT)	650	40.00	17,600	6.00	20,240	46.00				29,900
										\$ 396,218

NOTES: Preliminary final design and permitting (Phase 3), and monitoring costs (Phase 4) are estimated at \$4.9 to \$5.3 million for restoration of 500 acres, for an approximate estimated cost per acre cost of \$10,600. These costs are detailed in Table 1.

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1-016210

Cost & Schedule

(1-page maximum, excluding tables)

Quarterly Budget This table provides an estimate of costs by quarter.

Task	1999	2000				2001	Total Budget
	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	
Task 1 Land Acquisition	39,430	660,000					\$699,430
Task 2 Preliminary Design Report	100,000	45,000	98,000	74,000	39,218	40,000	\$396,218

Schedule This table provides the estimated schedule with key milestones.

Task	1999			2000												2001		
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Task 1 Land Acquisition	●																	
Negotiation	■	■	■															
Land acquisition																		
Task 2 Preliminary Design Report	●																	
Wetlands delineation	■	■	■															
Environmental site assessment	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Geotechnical drilling and evaluation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Aerial topo map	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Preliminary design report																		
Meetings/presentations					M					M								
Project Management																		

Milestone 1 is the Land Acquisition, which requires lump-sum payment to the landowner

Milestone 2 is submittal of the preliminary design report to agencies and interested parties

M denotes formal meetings and presentations to agencies and interested parties regarding the restoration plan and preliminary design report

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Cost Sharing

(1-page maximum)

Cost Sharing. SLT is pursuing several other non-CALFED funding sources. The Trust for Public Lands (TPL) administers the S.F. Bay Protection Fund (~ \$2.5 million) created with money from Unocal Corporation as a result of a court-ordered mitigation settlement. TPL is actively seeking to partner with other organizations to use these funds to buy land; TPL has indicated that SLT's proposed Lower Ranch Project offers a high potential for TPL participation and funding. The types of TPL funding include up to \$30,000 planning grants, up to \$250,000 acquisition & restoration grants, and in late 2000, the balance of the fund will be expended for acquisition and restoration projects. A substantial portion of the Project area would qualify for the Wetland Reserve Program (WRP) administered by the USDA Natural Resources Conservation Service. Preliminary indications from NRCS staff indicate that the Lower Ranch Project would score high on the WRP ranking process. The WRP provides funding for wetland acquisition and restoration by purchasing permanent wetland easements for up to \$2,000 per acre.

The State of California Coastal Conservancy has been an active partner and contributing funder of previous and current SLT projects. The Conservancy is currently funding the restoration of seasonal wetlands on the adjacent North Parcel property and contributed \$600,000 for the existing conservation easement SLT holds on Lower Ranch. Therefore, it is likely that the Conservancy will be an active funding partner for portions of this Project. The Conservancy has large funding sources for restoration projects of this kind, through the State Governor's annual budget plus a variety of bonds and special use fees.

Applicant Qualifications

(2-page maximum)

Planned Organization Figure 3 provides an organization chart for the Lower Ranch Project. As shown, SLT is the lead organization, and will work with LFR Levine-Fricke and Dr. Jostn Collins, Ph. D. of the San Francisco Estuary Institute and Stuart Siegel of Wetlands and Water Resources to implement the tasks described herein. SLT will provide overall project management and complete land acquisition. LFR will complete ecological assessment, permitting, and engineering tasks. Dr. Collins and Mr. Siegel will provide technical review. SLT has elected to team with LFR because of LFR's extensive experience in the design and construction of wetlands projects in the Bay Area (e.g., Oro Loma Marsh Enhancement Project, Martin Luther King Jr. Regional Shoreline Wetlands Project, Pier 98 Open Space Enhancement Project, Montezuma Wetlands Project).

Sonoma Land Trust The SLT was formed in 1976 with the mission of providing permanent protection for open space, agricultural land, wetlands, woodlands, wildlife habitat, and other threatened open land, while simultaneously developing educational and restoration programs for such lands. SLT is a member-supported, 501(c)(3) non-profit organization with an annual budget of approximately \$350,000. SLT currently hold sixteen conservation easements and owns nine properties in fee. SLT has worked in partnership with various agencies including DFG, COE, EPA, USFWS, and the Sonoma County Agricultural Preservation and Open Space District. SLT is the originating partner in the nationally acclaimed Sonoma Baylands and Marsh Restoration Project. SLT is very actively involved in the protection, restoration, and management of seasonal and tidal wetlands in the immediate project area. Over the past year SLT has been engaged in active negotiations with current owners (Desert Aggregates, Inc., a wholly-owned subsidiary of Granite Construction Company) of the fee title of Lower Ranch and has been exploring various restoration strategies for the site and adjacent lands.

In February 1995 SLT entered into a grant contract with the California State Coastal Conservancy (CSCC) to enhance and manage seasonal wetland habitat values on its North Parcel property. In September 1996, the scope of the grant was expanded to include SLT's Leonard Ranch property which is immediately south across Highway 37 from the North Parcel property. With the expanded scope, the total area included in the grant contract site is approximately 532 acres. The goal of the grant contract is to develop an implementation and management plan that included the appropriate hydrologic, engineering, and biological studies and to propose design alternatives to enhance seasonal wetland habitat values on the site. The total grant was for \$190,000. SLT retained Philip Williams and Associates, Inc. (PWA) to complete the majority of the work under the grant. The remainder of the work was completed by SLT. A revised work plan was approved by CSCC in December 1997. The key output of this contract was the report entitled "Conceptual Multi-use Seasonal Wetlands Enhancement Plan for the North Parcel and Leonard Ranch, Sonoma Baylands" dated May 21, 1998. SLT is currently developing the next phase of this project, which involves implementing the plans developed in plan.

Project Manager David Katz (*B.S. Agriculture, UC Davis 1972, Masters Natural Resource Management, Yale Forestry School, 1983*) will have overall responsibility for the coordination of the CALFED proposal. He is Executive Director of Sonoma Land Trust. Mr. Katz has extensive experience in all aspects of conservation land acquisition and has very extensive experience in leading multi-disciplinary teams in complex projects. As President of the California Reclamation Board (1976-1982), Mr. Katz helped develop new policy governing the protection of riparian vegetation in flood control operations and he led many interactions between local, regional, state and federal agencies. Other management experience includes President and CEO of Ag Access Corporation (1984 - 1995), Executive Director of the Farallones Institute (1974-1981), Member of the Chancellor's Task Force on Critical Issues in Agriculture, University of California (1978), and owner/manager of a diversified farming operation (1972-1974). Mr. Katz has served on many board and commissions, is an accomplished public speaker and has numerous publications.

Deputy Project Manager Thomas Baginski (*B.A., Environmental Science, UC Berkeley, 1992; Masters in Resource Management, Yale School of Forestry and Environmental Studies, 1997*) has recent

Applicant Qualifications

(2-page maximum)

experience managing the Sonoma County Coastal Parcel Study, Seasonal Wetlands Enhancement Plan for the North Parcel of Sonoma Baylands (under contract between SLT & the State Coastal Conservancy) and the Sonoma Mountain Open Space Mapping Project. His expertise includes management of contracts, including preparation of budgets and progress summaries, expenditure tracking, report preparation, technical evaluation, and liaison with grant agencies. Mr. Baginski is an expert in the use of Geographical Information Systems and oversees all mapping activities at SLT. His studies focused on the ecological and economic justification for habitat conservation. Other work experience includes the U. S. Fish and Wildlife Service (1996), The Nature Conservancy (1997), The Bureau of Land Management (1994) and the Golden Gate Raptor Observatory (1993-94).

Land Acquisition Specialist Wendy Eliot (B.S., *University of Wisconsin, 1980; Masters of Landscape Architecture - Environmental Planning, UC Berkeley, 1984*) is a consultant involved with wetland acquisition, planning, project management, and mitigation issues. Recent projects for the State Coastal Conservancy include preparation of a report on the wetland restoration potential of Southern California wetlands and an analysis of California commercial port development impacts on wetlands and recommendations for wetland mitigation policies. Previously Ms Eliot worked for the Washington State Department of Ecology where she established a new wetland protection grant program for local governments (1990-1994). Ms Eliot served as a member of the Board of Directors of the Capitol Land Trust in Western Washington (1988-1992) where she administered a program to provide wetland preservation training and education for Washington land trusts. Ms Eliot worked for the California State Coastal Conservancy (1984-1988), managing 18 wetland acquisition, restoration, and enhancement projects throughout coastal California and guided activities for resource land protection throughout coastal California.

Technical Consultant Douglas S. Lipton (Ph.D. *Soil Chemistry, 1991; M.S. Soil Science, 1983; B.A. Environmental Biology, 1980; B.A. Molecular Biology, 1980*) has directed some of the largest ecological restoration projects in the Bay-Delta region, including the 2,000-acre Montezuma Wetlands Restoration Project and the recently completed Oro Loma Marsh Enhancement Project, which has been called a "model" restoration by the San Francisco Joint Bay Venture. His past project experience also includes directing the Port of Oakland's Martin Luther King Jr. Wetlands Restoration Project, managing the revegetation and closure of a Superfund site in California's Central Valley, and directing research at a facility dedicated to dredging and composting agricultural wastes.

Ecology Consultant Edward F. Cheslak (Ph.D. *Aquatic Ecology, 1982; M.S. Ecology, 1976; B.S. Zoology, 1971*), has more than 26 years of experience in conducting, directing, analyzing, and evaluating applied ecological studies, experiments and environmental assessments in streams, lakes, estuaries, riparian corridors, and wetland ecosystems. This includes analysis of the effects of nonpoint discharges, flow modifications, and habitat enhancement on stream water quality, fisheries, aquatic invertebrates, and riparian communities. He also has over 15 years of experience in managing multidisciplinary teams conducting environmental studies, ecological assessments, and habitat restoration.

Josh Collins, Ph.D., of the San Francisco Estuary Institute, and **Stuart Siegel** of Wetlands and Water Resources have agreed to provide Technical Review. Both Dr. Collins and Mr. Siegel have extensive experience working in the Petaluma River Sonoma Baylands Watershed.

Potential Conflicts of Interest. As of the date of this submittal, we know of no potential conflicts of interest for this project as proposed.

TABLE 1 Sonoma Land Trust - Lower Ranch Wetland Restoration Project
Estimated Construction Costs

Description	ALTERNATIVE 1				ALTERNATIVE 2			
	Natural Sedimentation				Use of Dredged Sediments			
	quantity	units	unit cost (\$)	total cost (\$)	quantity	units	unit cost (\$)	total cost (\$)
Direct Capital Costs:								
<i>Baseline Costs</i>								
clearing and grubbing	41	acres	\$2,000	\$82,000				
flood control levees (17,000 lf) (1)	340000	cy	\$8	\$2,720,000				
PG&E access levees (5,000 lf) (1)	100000	cy	\$8	\$800,000				
tidal breach	10000	cy	\$5	\$50,000				
site grading and preparation	16000	cy	\$3	\$48,000				
site revegetation and weed control	1	ls	\$50,000	\$50,000				
<i>Total Cost (baseline cost):</i>				\$3,750,000				
<i>Use of Dredged Sediments</i>								
place dredge sediment (2)	Same baseline costs as alt #1				3243000	yd3	\$1.85	\$5,999,550
pipeline					10000	lf	\$32	\$320,000
drainage structures					1	ls	\$50,000	\$50,000
					<i>sub-total:</i>			\$6,369,550
<i>baseline cost:</i>								\$3,750,000
<i>Total Cost (w/sediment placement):</i>								\$10,119,550
<i>federal cost share reduction (75%):</i>								-\$7,589,663
<i>local cost share:</i>								\$2,529,888
Indirect Capital Costs:								
preliminary design & surveying	1	ls	\$360,000	\$360,000				\$360,000
final engineering design	1	ls	\$300,000	\$300,000				\$360,000
prep of plans and specs	1	ls	\$180,000	\$180,000				\$250,000
environmental documentation & permitting	1	ls	\$400,000	\$400,000				\$750,000
long-term monitoring	10	yrs	\$40,000	\$400,000	10	yrs	\$75,000	\$750,000
<i>sub-total indirect costs:</i>								\$1,640,000
Estimated Total Cost (local cost share):								\$4,999,888 (3)

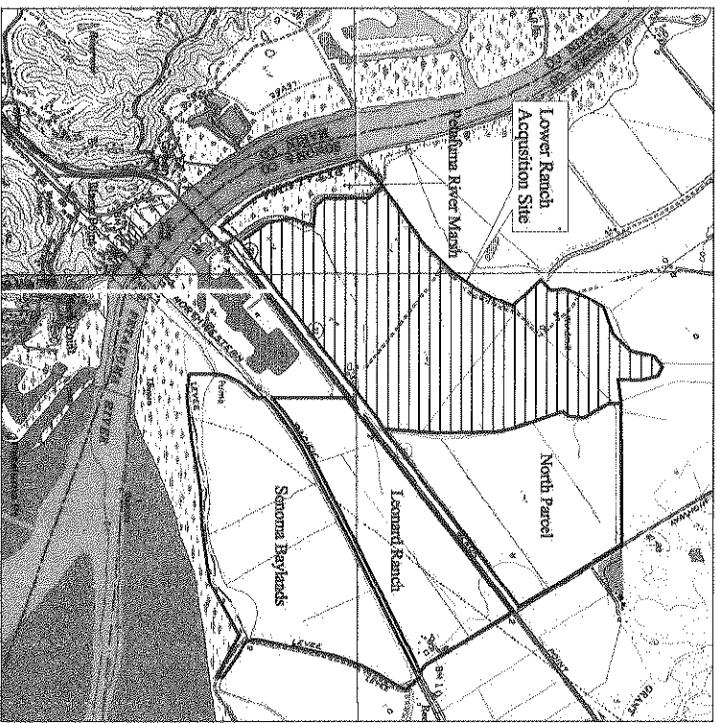
Notes:

- (1) assumes use of on-sites soils, levees constructed to elevation +12 NGVD, 10 feet wide, 3:1 side slopes
- (2) average incremental cost of using dredged sediment for wetland restoration project versus least-cost disposal disposal alternatives based on USACE Hamilton Project cost analysis (Coastal Conservancy & Army Corps 1998)
- (3) some or all of these costs may be recoverable from a sediment disposal tipping fee for dredge sediment alternative

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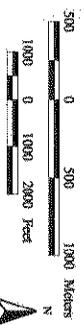
1-016215

TABLE 2: Laboratory Analysis Methods for Phase 1 Composting Studies and Phase 3 Long-Term Monitoring	
Analytes	Method
TTLIC CAM 17 Metals	EPA Method 6010/7000
Dissolved Oxygen	SM 4500G
Oxidation/Reduction	ASTM D1498-76
PH	EPA Method 9040
Organochlorine Pesticides	EPA Method 8080
Organophosphorous Pesticides	EPA Method 8140
Chlorinated Herbicides	EPA Method 8150
Biochemical Oxygen Demand	EPA Method 405.1
Chemical Oxygen Demand	EPA Method 410.4
Anions (Chloride, Sulfate, Nitrogen)	EPA Method 300
Alkalinity	EPA Method 310.1
TDS	EPA Method 160.1
Hardness	SM 23408
Conductivity	EPA Method 120.1
Dissolved Organic Carbon	EPA Method 360.2
Disinfectant Byproduct Precursors (analyzed during monitoring only)	Various Methods Specified During Monitoring
Methane (analyzed during monitoring only)	EPA Method 8015M

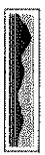


**Sonoma Land Trust / Lower Ranch
Wetland Restoration Project**

Six Locations
 4258107 N 284220 E 0714 16 NAD 83
 38.131 N 122.58 W UTM



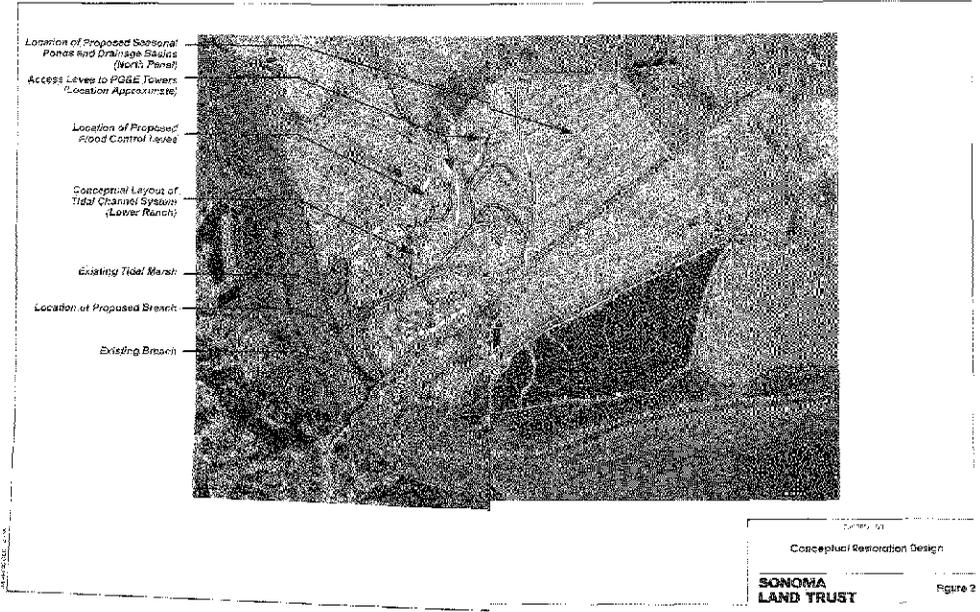
Prepared for 2009 CALTRP
 Ecosystem Restoration Program Grant
 For planning purposes only
 Map by 03A-499



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1-016218



1-016218

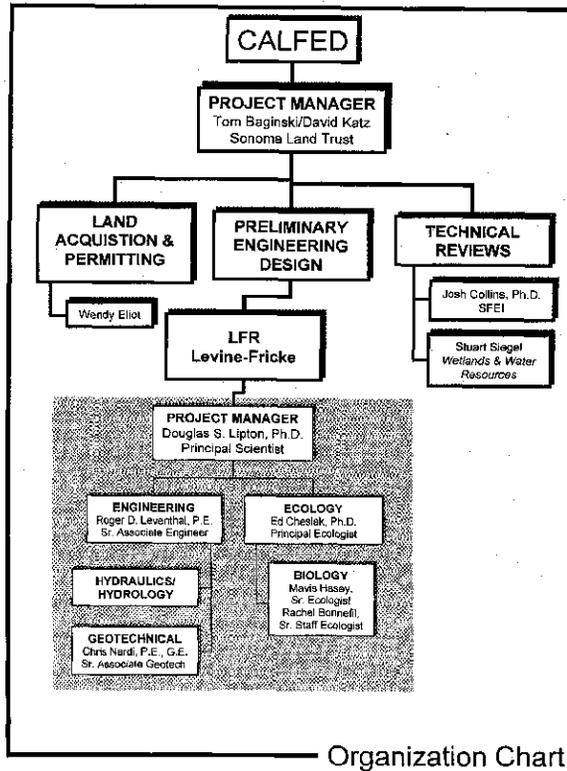


FIGURE 3

NONDISCRIMINATION COMPLIANCE STATEMENT

STD. 18 (REV. 3-95) FMC

COMPANY NAME

Sonoma Land Trust

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

David Katz

DATE EXECUTED

4/13/99

EXECUTED IN THE COUNTY OF

Sonoma

PROSPECTIVE CONTRACTOR'S SIGNATURE

PROSPECTIVE CONTRACTOR'S TITLE

Executive Director

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

Sonoma Land Trust

**STANDARD CLAUSES --
SMALL BUSINESS PREFERENCE AND CONTRACTOR IDENTIFICATION NUMBER**

NOTICE TO ALL BIDDERS:

Section 14835, et. seq. of the California Government Code requires that a five percent preference be given to bidders who qualify as a small business. The rules and regulations of this law, including the definition of a small business for the delivery of service, are contained in Title 2, California Code of Regulations, Section 1896, et. seq. A copy of the regulations is available upon request. Questions regarding the preference approval process should be directed to the Office of Small and Minority Business at (916) 322-5060. To claim the small business preference, you must submit a copy of your certification approval letter with your bid.

Are you claiming preference as a small business?

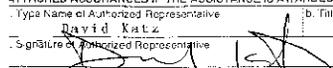
____ Yes* xx No

*Attach a copy of your certification approval letter.

**APPLICATION FOR
FEDERAL ASSISTANCE**

OMB Approval No. 0346-0048

1. TYPE OF SUBMISSION: <input type="checkbox"/> Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction <input type="checkbox"/> Non-Construction		2. DATE SUBMITTED April 14, 1999	Applicant Identifier
3. DATE RECEIVED BY STATE		State Application Identifier	
4. DATE RECEIVED BY FEDERAL AGENCY		Federal Identifier	

5. APPLICANT INFORMATION: Legal Name: Sonoma Land Trust Address (give city, county, State, and zip code): 1122 Sonoma Avenue Santa Rosa, CA 95405		Organizational Unit: Name and telephone number of person to be contacted on matters involving this application (give area code):
6. EMPLOYER IDENTIFICATION NUMBER (EIN): 51-0197006		7. TYPE OF APPLICANT: (enter appropriate letter in box) A. State B. County C. Municipal D. Township E. Interstate F. Intermunicipal G. Special District H. Independent School Dist. I. State Controlled Institution of Higher Learning J. Private University K. Indian Tribe L. Individual M. Profit Organization N. Other (Specify) N Not for profit
8. TYPE OF APPLICATION: <input checked="" type="checkbox"/> New <input type="checkbox"/> Construction <input type="checkbox"/> Revision Revision on (enter appropriate letter(s) in box(es)): A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other (Specify):		9. NAME OF FEDERAL AGENCY:
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: TITLE: 2. AREAS AFFECTED BY PROJECT (City, County, States, etc.): Petaluma, Sonoma County, California		11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Sonoma Land Trust/Lower Ranch Wetlands Restoration Project
3. PROPOSED PROJECT		14. CONGRESSIONAL DISTRICTS OF: Lynn Woolsey
Start Date: 10/1/99 Ending Date: 3. ESTIMATED FUNDING: a. Federal \$ b. Applicant \$ c. State \$ d. Local \$ e. Other \$ Program Income \$ f. TOTAL \$	a. Applicant: Lynn Woolsey Sonoma Land Trust b. Project: Lynn Woolsey	15. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS? a. YES THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW? DATE _____ b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW
8. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.		17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. <input checked="" type="checkbox"/> No
Type Name of Authorized Representative: David Katz Signature of Authorized Representative: 		b. Title: Executive Director c. Telephone Number: (707) 526-6930 e. Date Signed: 4/14/99

revisions Edition 10/98 authorized for Local Reproduction

Standard Form 424 (Rev. 7-97) Prescribed by OMB Circular A-102

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I-016222

PART C: Certification Regarding Drug-Free Workplace Requirements

CHECK IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL.

Alternate I. (Grantees Other Than Individuals)

A. The grantee certifies that it will or continue to provide a drug-free workplace by:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing an ongoing drug-free awareness program to inform employees about--
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will --
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- (e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted --
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a) (b), (c), (d), (e) and (f).

B. The grantee may insert in the space provided below the sites for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code):

Sonoma Land Trust
1122 Sonoma Avenue, Santa Rosa, CA 95405

Check if there are workplaces on file that are not identified here.

PART D: Certification Regarding Drug-Free Workplace Requirements

CHECK IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS AN INDIVIDUAL.

Alternate II. (Grantees Who Are Individuals)

- (a) The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant.
- (b) If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction, in writing, within 10 calendar days of the conviction, to the grant officer or other designee, unless the Federal agency designates a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

**PART E: Certification Regarding Lobbying
Certification for Contracts, Grants, Loans, and Cooperative Agreements**

*CHECK IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND
THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT;
SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.*

*CHECK IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL
LOAN EXCEEDING THE AMOUNT OF \$100,000, OR A SUBGRANT OR
SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.*

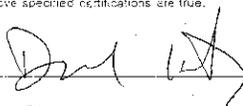
The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards or all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31 U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL



TYPED NAME AND TITLE David Katz, Executive Director

DATE April 13, 1999

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

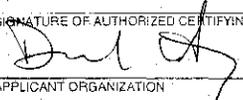
**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET.
SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award, and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4726-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973 as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 d3-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply or has already complied, with the requirements of Titles I and II of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1995 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 	TITLE Executive Director
APPLICANT ORGANIZATION Sonoma Land Trust	DATE SUBMITTED April 14, 1999

Standard Form 424B (Rev. 7-97) Back

ASSURANCES -- CONSTRUCTION PROGRAMS

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PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET, SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. Secs. 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. Secs. 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. Secs. 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. Secs. 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. Secs. 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) Secs. 525 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290-44-3 and 290-44-5), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. Secs. 3601 et seq.), as amended, relating to non-discrimination in the sale, rental or financing of housing; (i) any other non-discrimination provisions in the specific statute(s) under which application for Federal assistance is being made, and (j) the requirements of any other non-discrimination Statute(s) which may apply to the application.

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Standard Form 424D (Rev. 4/52)
Prescribed by OMB Circular A-102

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I-016227

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provides for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. Secs. 1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. Secs. 276a to 276a - 7), the Copeland Act (40 U.S.C. Secs. 276c and 18 U.S.C. Sec. 874), the Contract Work Hours and Safety Standards Act (40 U.S.C. Secs. 327-353), regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program, and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. Secs. 1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. Secs. 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. Secs. 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. Sec. 470), EO 11593 (identification and preservation of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a-1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.
19. Will comply with all applicable requirements of all other Federal laws, Executive Orders, regulations and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 	TITLE Executive Director
APPLICANT ORGANIZATION Sonoma Land Trust	DATE SUBMITTED 4/13/97

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