

COASTAL CONSERVANCY

Staff Recommendation

April 27, 2006

**INVASIVE *SPARTINA* PROJECT (ISP)
PHASE II-CONTROL PROGRAM
2006 TREATMENT, MAPPING AND MONITORING**

File No. 99-054

Project Manager: Maxene Spellman

RECOMMENDED ACTION: Authorization 1) to accept \$1,234,396 from California Bay-Delta Authority Ecosystem Restoration Program (ERP) to implement monitoring for the San Francisco Estuary Invasive *Spartina* Project Control Program; 2) to disburse up to \$1,234,396 of the ERP funds for monitoring activities; and 3) to disburse up to \$715,299 of funds awarded to the Conservancy by the Wildlife Conservation Board for treatment and eradication projects.

LOCATION: The baylands and lower creek channels of the nine counties that bound the San Francisco Bay.

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

Exhibit 1: September 25, 2003 Staff Recommendation

Exhibit 2: June 16, 2005 Staff Recommendation

Exhibit 3: Map of 2006 Treatment Sites

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Chapter 4.5 of Division 21 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the following: 1) acceptance of a grant of one million two hundred thirty-four thousand three hundred ninety-six dollars (\$1,234,396) from the California Bay-Delta Authority Ecosystem Restoration Program (ERP) to implement monitoring for the San Francisco Estuary Invasive *Spartina* Project (ISP) Control Program; 2) disbursement of up to one million two hundred thirty-four thousand three hundred ninety-six dollars (\$1,234,396) of the ERP funds for ISP Control Program monitoring, including ongoing and expanded *Spartina* mapping, monitoring and genetic analysis and monitoring of endangered species, and 3) disbursement of up to

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\$715,299 (seven hundred fifteen thousand two hundred ninety-nine dollars) of funds awarded to the Conservancy by the Wildlife Conservation Board (WCB) for invasive *Spartina* treatment and eradication projects under the ISP Control Program. The WCB funds may be used to supplement existing treatment and eradication grants to the Alameda County Flood Control District, the California Wildlife Foundation, Friends of Corte Madera Creek Watershed, California Department of Parks and Recreation, the East Bay Regional Park District, City of Alameda, City of San Leandro, City of Palo Alto, the San Mateo County Mosquito Abatement District, and USFWS Don Edwards San Francisco Bay National Wildlife Refuge. Any grant of additional funds for treatment and eradication shall be subject to the following conditions:

1. Prior to implementing any treatment and eradication project and prior to disbursement of any funds to the grantee, the grantee shall submit for review and approval of the Executive Officer an updated site-specific plan, based on the outcome and extent of the 2005 treatment, and including mitigation measures, and a work program for 2006 treatment, including a schedule and budget, and shall provide evidence that the grantee has obtained all necessary permits and approvals for the project.
2. In carrying out any treatment and eradication project, the grantee shall comply with all applicable mitigation and monitoring measures that are set forth in the approved site-specific plan, that are required by any permit or approval for the project, or that are identified in the "Final Programmatic Environmental Impact Statement/Environmental Impact Report, San Francisco Estuary Invasive *Spartina* Project: *Spartina* Control Program" (FEIS/R), adopted by the Conservancy on September 25, 2003."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. Disbursement of additional funds to continue and expand the ISP Control Program mapping and monitoring is consistent with the Conservancy authorization and findings adopted September 25, 2003, as shown in the staff recommendation attached as Exhibit 1 to this staff recommendation.
2. Disbursement of additional funds for the ISP Control Program treatment and eradication projects is consistent with Public Resources Code Sections 31160-31164 and with the resolutions, finding and discussion accompanying the Conservancy authorizations of September 25, 2003 and June 16, 2005 as shown in the staff recommendations attached as Exhibits 1 and 2 to this staff recommendation.
3. On June 16, 2005 the Conservancy authorized initial funding for the 2005 and 2006 ISP Control Program treatment and eradication projects and made appropriate findings under the California Environmental Quality Act (CEQA). This authorization provides for additional funding for those same projects. The nature, duration and extent of those projects, including environmental effects and

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- proposed mitigation measures, was fully described and considered by the Conservancy in connection with the initial funding authorizations and have not changed. Disbursement of additional funds for these same treatment and eradication projects is, thus, consistent with the previous CEQA finding: that the environmental effects associated with the treatment and eradication under this authorization and the mitigation measures to reduce or avoid those effects were fully identified and considered in the FEIS/R adopted by the Conservancy September 25, 2003. (See Exhibits 1 and 2).
4. The proposed authorization is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on January 24, 2001.
 5. The California Wildlife Foundation and Friends of Corte Madera Creek Watershed are private nonprofit organizations existing under Section 501(c)(3) of the United States Internal Revenue Code, whose purposes are consistent with Division 21 of the California Public Resources Code.”

PROJECT DESCRIPTION:

Introduction

As explained in detail in previous staff recommendations (Exhibits 1 and 2), treatment and control of invasive *Spartina* and its hybrids within the San Francisco Bay Estuary is critical to the long-term health of the Estuary and to the species which inhabit and rely upon the salt marshes and tidal flats along its perimeter. Invasive *Spartina* spreads at a greater than exponential rate, and every marsh restoration project implemented within the south and central San Francisco Bay Estuary in the past 15 years has been invaded by non-native invasive *Spartina*. Since 1999, the Conservancy has managed the regionally coordinated effort to address the problem. Since 2003 the Conservancy advanced the project through the following authorizations:

- In September 2003 and June 2004, the Conservancy 1) certified the “Final Programmatic Environmental Impact Statement/Environmental Impact Report, San Francisco Estuary Invasive *Spartina* Project: *Spartina* Control Program” (FEIS/R); 2) authorized disbursement of Conservancy funds as contracts for environmental consulting services needed to operate and manage the Control Program, and as a grant to the Association of Bay Area Governments (ABAG) to initiate a signage program; and 3) authorized disbursement of funds available from two CALFED grants, as separate grants to ten organizations for implementation of Phase I of the Control Program involving treatment and removal of invasive *Spartina* on 12 demonstration sites.
- In March and June 2005, the Conservancy authorized implementation of Phase II of the Control Program through 2006 including 1) ongoing and expanded environmental consulting services to prepare 23 site-specific plans covering 132 sub-sites, and environmental documentation, mapping and monitoring; 2) augmentation of existing grants and awards of new grants to organizations to implement treatment in 2005 and 2006 for all known infested sites throughout the

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Estuary; and 3) augmentation of a grant to ABAG to coordinate with partners to install signage at all treatment sites. These activities were funded using the remaining funds in the two CALFED grants and new funds provided through a Wildlife Conservation Board (WCB) grant to the Conservancy for the San Francisco Bay (a portion of a \$40 million grant approved in November 2004).

2004/2005 Project Accomplishments

Three significant events occurred in 2004 to inform adaptive management of the ISP Control Program strategy for 2005. In 2004 ISP 1) successfully coordinated the treatment of demonstration sites consisting of 435 acres of invasive *Spartina*; 2) sponsored the Third International Invasive *Spartina* Conference at which international and regional scientists and managers recommended an aggressive full-scale treatment in the San Francisco Estuary; and 3) completed the ISP Monitoring Report, which found that the non-native *Spartina*'s average rate of increase in area covered by all non-native species was 244% with hybrids spreading at 317%. These lessons learned in 2004 informed the decision to apply an aggressive treatment strategy for 2005 through 2006 as the only way to keep ahead of the spread and ultimately succeed in full eradication.

In June 2005 the Conservancy considered an Addendum to the FEIS/R. It analyzed the possible impacts of the addition of the herbicide imazapyr to the Control Program. The Conservancy found its use would not give rise to new significant environmental effects not considered in the FEIS/R, nor to a substantial increase in the severity of the significant effects previously identified in the FEIS/R. (See Exhibit 2) The Addendum described the lower toxicity of imazapyr and the surfactants to be used with it, the rapid degradation of imazapyr, and its need for fewer applications, supporting the conclusion that it will reduce the environmental effects of treatment compared to the herbicide glyphosate that was previously used to treat invasive *Spartina*.

The aggressive strategy for the 2005/2006 Control Program is possible in part because ISP partners are able to utilize the new herbicide imazapyr, registered for use in California only days before treatment began last fall. Substantially more acreage can be treated in the short time frame available. Imazapyr can be applied by helicopters and requires fewer applications due to its greater efficacy than the glyphosate. During the 2005 treatment season the use of imazapyr resulted in a decrease in time in the marsh during application by an estimated 1/3 compared to time in the marsh for application of glyphosate.

For the 2005 treatment season, ISP coordinated preparation of 23 site-specific plans covering 134 smaller sites around the Bay. In the fall ISP worked hand in hand with grantees to implement the first year of full-scale treatment. Consistent with the Section 7 consultation with United States Fish and Wildlife Service and with the FEIS/R, the short treatment season did not begin until after the California clapper rail nesting and breeding season. On a few sites it was also necessary to phase treatment over two to three years to protect the rail. From September 7 through October 19 grantees treated 67% of the infestation, or 1,010 acres of the total 1,500 acres of invasive *Spartina*.

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The efficacy of treatment applied in fall 2005 will not be known until late spring when ISP monitoring will identify the percentage of plants killed out of those treated. It cannot be known presently because all plants, while they appear dead, are senescing (sleeping) as they do during the winter and spring. ISP and partners are cautiously optimistic that results will prove successful because of the use of imazapyr: Imazapyr is known to have up to 90% efficacy in the State of Washington where managers have been fighting a much larger infestation of invasive *Spartina* in Wallapa Bay.

Project Description for Requested Authorization

1. 2006 Control Program

The Conservancy authorized disbursement of funds for treatment through 2006 in its June 2005 authorization. The proposed authorization would allow an expenditure of an additional \$715,299 of the WCB Proposition 50 funding already reserved for the ISP (See “Project Financing”) to supplement existing treatment grants. While the nature, extent and scope of the proposed treatment and eradication projects have not changed from what was described in connection with the 2005 authorizations, additional funding is needed to cover unanticipated costs of operations through 2006. These unexpected increases include 1) a significantly higher cost of the herbicide imazapyr, and 2) greater than expected costs for subcontracts to specialized applicator companies that conduct treatment operations.

Building upon partnerships and the successful regional coordination in 2005, ISP will continue the same aggressive strategy for 2006. This will involve re-treating the same sites where partial infestation may have returned, and adding a majority of the remaining phased sites for initial treatment. These activities are already incorporated into the existing Site-Specific Plans, covering 2005 and 2006, but work for 2006 will include some treatment work that was originally planned to take place in 2005. ISP consultants are working with all grantees to update the Site-Specific Plans for the 2006 treatment season, evaluating experiences from 2005 in order to improve what is planned for 2006, making presentations to regional stakeholders, obtaining necessary permits, and seeking landowner permission to work on sites where work has not previously been done.

2. Monitoring Program

The Conservancy was awarded a grant from the California Bay-Delta Authority Ecosystem Restoration Program (ERP) to continue and expand monitoring associated with the ISP Control Program through 2009. This includes 1) annual surveys for non-native *Spartina* in the San Francisco Estuary and the outer coast marshes lying in proximity to the mouth of the Estuary; 2) monitoring marsh areas treated to control invasive *Spartina* to determine if treatment was effective, including genetic analysis of *Spartina* samples, and 3) surveys of endangered species, with special emphasis on the California clapper rail (collectively, the “Monitoring Program”). The Conservancy will disburse ERP funds as an augmentation to existing ISP management contract(s) for monitoring and mapping. The Monitoring Program will also involve a new interagency agreement to the University of California at Davis or to an environmental services contractor, for the genetic analysis of *Spartina* samples.

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PROJECT FINANCING:

A. Financing for this Authorization:

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|--------------------------------------|--------------------|
| ERP grant to the Coastal Conservancy | \$1,234,396 |
| WCB grant to the Coastal Conservancy | \$715,299* |
| <hr/> | |
| Total Authorized Expenditure | \$1,949,695 |

*This amount is all but \$34,145 of what remains from the \$3,000,000 awarded to the Conservancy from WCB for the ISP.

Conservancy funding of the ISP Monitoring Program is expected to come from a new grant from the California Bay-Delta Authority Ecosystem Restoration Program (ERP). The ERP objectives include the halting of nonnative invasive aquatic plants into the Bay-Delta estuary and limiting the spread, and when possible and appropriate, eradicating populations of nonnative invasive species through focused management efforts. In addition, any proposed project must, under the ERP request for proposals, include programs and projects to monitor and evaluate ecosystem restoration actions previously funded by the CALFED (the former name of what is now known as the California Bay-Delta Authority) ERP.

The proposed project clearly fulfills the ERP objectives and criteria for funding. It is directly related to eradication of a nonnative species from the San Francisco Bay Estuary and it directly implements the monitoring for the *Spartina* eradication efforts that have been previously funded by CALFED.

The ERP funding is, in turn, derived from Proposition 50, pursuant to Water Code Section 79550(e). Under that section, the funds may be used, as proposed here, for the general purpose of implementation of the California Bay-Delta Authority ERP.

Conservancy funding for the treatment and eradication projects is expected to come from an existing grant to the Conservancy from the WCB. Under the grant agreement with WCB, the Conservancy may use these funds for wetland habitat restoration projects within the nine-county San Francisco Bay Area that implement the restoration goals of the San Francisco Bay Joint Venture (“SFBJV”) and the *San Francisco Baylands Ecosystem Habitat Goals Report* (“Goals Report”) and that meet the priorities of the Conservancy as described in Section 31162 of the Public Resources Code. In addition, any proposed project must, under the WCB grant agreement, be a “high priority” project as identified in the grant agreement or otherwise authorized as a priority project by WCB in the “Memorandum of Understanding” between WCB and the Conservancy that is required before any project may move forward.

The WCB grant funding, in turn, is derived from an appropriation from the Water Security, Clean Drinking Water, Coastal Beach Protection Fund of 2002 (Proposition 50). The Proposition 50 funds were appropriated under the specific authorization found in

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Section 79572(c) of the Water Code and may be used for the general purpose of acquisition, protection and restoration of coastal wetlands.

The project meets the criteria of the WCB grant agreement and the related requirements of Proposition 50 in all respects. As required by the WCB grant agreement and Proposition 50, the proposed project serves to protect and preserve fish and wildlife habitat of the San Francisco Bay through restoration of wetlands, and is specifically identified in the WCB grant agreement as a high priority project that specifically benefits the San Francisco Estuary. Further, the project is one that implements the goals of the SFBJV and Goals Report and squarely meets the priorities and objectives of the Conservancy found in Section 31162 of the Public Resources Code, since it furthers the San Francisco Bay Area Conservancy Program’s goal to protect, restore, and enhance natural habitats as detailed under the heading “Consistency with Conservancy’s Enabling Legislation”, below.

B. Breakdown by Grantee of Expected Financing for 2006 Treatment Projects:

Depending on the respective efficacy of the 2005 treatment found at the various project sites, the funding each grantee will receive may be adjusted among grantees, but with no increase to the total amount authorized. While each grantee previously contributed matching funds and in-kind services meant to cover the 2005/2006 treatment seasons, they will also contribute new matches for the additional funding from the Conservancy as follows:

| <u>Grantee</u> | <u>New SCC Funding</u> | <u>New Grantee Match</u> |
|--|------------------------|--------------------------|
| Alameda Flood Control District | \$125,642 | \$13,205 |
| San Mateo Co. Mosquito Abatement District | \$68,890 | \$20,623 |
| California Dept. of Parks and Recreation | \$12,015 | \$1,442 |
| California Wildlife Foundation | \$187,503 | \$18,924 |
| East Bay Regional Park District | \$88,759 | \$26,714 |
| City of Palo Alto | \$4,500 | \$450 |
| City of Alameda | \$39,080 | \$5,470 |
| City of San Leandro | \$24,961 | \$3,919 |
| USFWS Don Edwards San Francisco Bay National Wildlife Refuge | \$148,949 | \$23,243 |

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|--|-------------------------|------------------------|
| Friends of Corte Madera Creek Watershed | \$15,000 | \$9,375 |
| <u>TOTAL</u> | <u>\$715,299</u> | <u>\$98,912</u> |

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

As described in previous staff recommendations (Exhibits 1 and 2) and associated Conservancy resolutions, the ISP and implementation of the Control Program serve to carry out the objectives for the San Francisco Bay Conservancy Program mandated by Chapter 4.5 of the Conservancy's enabling legislation (Public Resources Code Section 31162(a)), since both the ISP and its Control Program will serve to protect and restore tidal marshes, which are natural habitats of regional importance. Operation and monitoring and mapping activities for the ISP engage CEQA/NEPA compliance and permitting required for implementation of the Control Program.

**CONSISTENCY WITH CONSERVANCY'S
STRATEGIC PLAN GOAL(S) & OBJECTIVE(S)**

As described in previous staff recommendations (Exhibits 1 and 2) and associated Conservancy resolutions, the ISP and implementation of the Control Program are consistent with the **San Francisco Bay Program Goal Matrix under Regional Projects** that identifies the *Spartina* Control project as a program of regional significance under the Strategic Plan.

Consistent with **Goal 5, Objective C** of the Conservancy's Strategic Plan, the proposed project will continue implementation of approximately 23 projects to eradicate between 1,000 to 1,400 acres of non-native invasive species that threaten native coastal habitats. If left uncontrolled non-native invasive *Spartina* will potentially spread up and down the coast to other California estuaries.

Consistent with **Goal 10, Objective A**, the proposed project will continue to implement the Invasive *Spartina* Project: *Spartina* Control Program to prevent up to 30,000 acres of marsh and mudflats from being invaded and potentially covered by invasive *Spartina* and hybrids and to preserve and restore natural habitats in the San Francisco baylands.

**CONSISTENCY WITH CONSERVANCY'S
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

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Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** The 2006 Treatment and 2006-2009 Mapping and Monitoring of Phase II of the ISP Control Program are strongly supported by findings of the Third International Invasive *Spartina* Conference (November, 2004). Renowned scientists from the San Francisco Bay Area, other coastal states, and around the world agree that the Conservancy should continue its aggressive actions to eradicate invasive *Spartina* from the Estuary. The objective of eradication of invasive *Spartina* is also specifically supported in the Goals Report and by the SFBJV. Furthermore, in the published Comprehensive Conservation Management Plan for the San Francisco Estuary, San Francisco Estuary Project stakeholders have identified control of invasive species as the top priority for the restoration and protection of the Estuary.
4. **Location** This project is located in the nine San Francisco Bay Area Counties to benefit the restoration of the San Francisco baylands.
5. **Need:** Augmentation of funding for ISP's existing grants for treatment and eradication of invasive *Spartina*, and additional ERP funding for environmental service consultants and UC Davis for monitoring and mapping, are needed because of the aggressive eradication strategy planned for 2005/2006 combined with the surprisingly high costs of the herbicide imazapyr and of applicator specialists.
6. **Greater-than-local interest:** Introduced *Spartina* threatens to move up the delta, and down the coast to southern California. In the San Francisco Bay, introduced *Spartina* threatens to displace state and federally listed species, such as the endangered California clapper rail, California black rail, and the salt marsh harvest mouse.

Additional Criteria

5. **Urgency:** As confirmed at the Third International Invasive *Spartina* Conference, experts from the region and around the world believe that if the spread of introduced *Spartina* is not controlled within the next few years, the greater than exponential spread of the plants and extensive hybridization with the native *Spartina foliosa* will preclude any chance for successful control in the future. If the Conservancy and its partners can address the problem with the appropriately stepped up level of treatment and monitoring in the short-term, long-term maintenance expenses can be avoided.
6. **Readiness:** In 2005 ISP and partners treated 1,010 acres of invasive *Spartina*. Environmental service consultants and grantees are already fully engaged in the pre-treatment season planning, including updating the existing Site-Specific Plans, and are on board to continue treatment in 2006. Negotiations are underway with UC Davis to continue genetic analysis. ISP consultants are ready to continue monitoring activities that have the sanction of regulatory agencies and which have undergone scientific peer review through the ERP application process.

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7. **Cooperation:** Existing grantees (landowners and land managers) are happily collaborating in the updating and implementation of the Site-Specific Plans and for permitting that is being coordinated by the ISP consultants. In addition, coordination with the regulatory agencies is ongoing with regard both to treatment and monitoring activities.

CONSISTENCY WITH SAN FRANCISCO BAY PLAN:

The Invasive *Spartina* Project's Control Program is consistent with the San Francisco Bay Plan, Section entitled "Marshes and Mudflats", Policy 3 (c) (page 9) that states, "the quality of existing marshes should be improved by appropriate measures whenever possible." The main purpose of this project is to remove invasive *Spartina* to improve the long-term quality of existing marsh habitat in the baylands of the San Francisco Estuary.

COMPLIANCE WITH CEQA:

Activities under this proposed authorization that are associated with monitoring and mapping of invasive *Spartina* and monitoring the presence and absence of endangered species are an integral part of the ISP Control Program and provide mitigation required by the Final Programmatic Environmental Impact Statement/Environmental Impact Report, San Francisco Estuary Invasive *Spartina* Project: *Spartina* Control Program" (FEIS/R), adopted by the Conservancy on September 25, 2003 (Exhibit 1). Such activities were specifically identified by and fully considered in the adopted FEIS/R. No further or subsequent environmental documentation is required under the California Environmental Quality Act (CEQA).

As part of the June 16, 2005 ISP staff recommendation (Exhibit 2), the Conservancy authorized initial funding for each of the 23 treatment and eradication projects that are proposed for additional funding under this authorization. As described in the June 16, 2005 staff recommendation, each of these site-specific projects encompassed treatment and eradication over a two-year period - in 2005 and again in 2006. The Conservancy's June 16, 2005 authorization included consideration and review of the potential environmental effects and required mitigation measures for each of the 23 projects, based on which the Conservancy made the finding under CEQA that the programmatic FEIS/R had fully considered the environmental effects associated with these site-specific projects and that there were no new mitigation measures required by these projects. The 23 projects for which additional funding is proposed under this authorization have not changed in nature, extent, duration or scope. All that has changed is that additional funds are required to carry out the already approved projects, due to unanticipated economic factors. Since the projects, including potential environmental effects and mitigation measures, remain unchanged, the proposed authorization remains consistent with the CEQA finding adopted by the Conservancy in connection with the June 16, 2005 authorization. No further environmental documentation is required.