

COASTAL CONSERVANCY

Staff Recommendation

March 8, 2007

**INVASIVE *SPARTINA* PROJECT (ISP)  
PHASE II-CONTROL PROGRAM  
2007 IMPLEMENTATION OF CONTROL PROGRAM**

File No. 99-054

Project Manager: Maxene Spellman

**RECOMMENDED ACTION:** Authorization to: 1) accept \$1,250,868 as a grant from the Wildlife Conservation Board (WCB) to implement the Invasive *Spartina* Control Program for 2007 and disburse the full amount for treatment and eradication projects within the San Francisco Estuary; and 2) disburse up to \$949,907 of Conservancy funds for environmental consulting services needed to operate and manage the *Spartina* Control Program on an ongoing accelerated schedule through spring of 2008.

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

**PROGRAM CATEGORY:** San Francisco Bay Area Conservancy

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**EXHIBITS**

Exhibit 1: September 25, 2003 Staff Recommendation

Exhibit 2: June 16, 2005 Staff Recommendation

Exhibit 3: Map of 2007 Treatment Sites

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**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 \$1,250,868 (one million two hundred fifty thousand eight hundred sixty-eight dollars) as a grant from the Wildlife Conservation Board (WCB) and disbursement of this full amount for invasive *Spartina* treatment and eradication projects under the Invasive *Spartina* Project (ISP) Control Program. Funds for treatment and eradication projects may be used to supplement existing grants to the Alameda County Flood Control District, the California Wildlife Foundation, Friends of Corte Madera Creek Watershed, the East Bay Regional Park District, City of

INVASIVE SPARTINA PROJECT (ISP)

Alameda, City of San Leandro, City of Palo Alto, the San Mateo County Mosquito Abatement District, and United States Fish and Wildlife Service Don Edwards San Francisco Bay National Wildlife Refuge. Any grant of additional funds for treatment and eradication shall be subject to the following conditions:

- a. Prior to disbursement of funds for treatment and eradication activities, there shall be in place a fully executed Memorandum of Understanding between the Conservancy and WCB authorizing the 2007 ISP Control Program activities as an approved project.
  - b. 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 a plan detailing the site-specific work for 2007, based on the outcome and extent of the 2006 treatment and including a list of identified mitigation measures, a work program for 2007 treatment, including a schedule and budget, and evidence that the grantee has obtained all necessary permits and approvals for the project.
  - c. 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, and 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.
2. Disbursement of up to \$949,907 (nine hundred forty-nine thousand nine hundred seven dollars) of Conservancy funding for ongoing environmental consulting services needed to operate and manage the *Spartina* Control Program on an ongoing accelerated schedule through spring of 2008."

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 for the ISP Control Program treatment and eradication projects, and ongoing management, is consistent with Public Resources Code Sections 31160-31165 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.
2. 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 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

## INVASIVE SPARTINA PROJECT (ISP)

previous CEQA finding: that the environmental effects associated with the proposed treatment and eradication and the mitigation measures needed 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).

3. The proposed authorization is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on January 24, 2001.
4. 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 are 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 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 funds provided through a

## INVASIVE SPARTINA PROJECT (ISP)

previous Wildlife Conservation Board (WCB) grant to the Conservancy for the San Francisco Bay (a portion of a \$40 million grant approved in November 2004).

- In April 2006, the Conservancy authorized disbursement of new funds accepted from the California Bay-Delta Authority Ecosystem Restoration Program (ERP) to implement monitoring for the Control Program through 2008, and augmentation of grants to organizations needed to complete treatment and eradication projects for the 2006 treatment season. The treatment activities were funded using all remaining funds of one of the earlier CALFED grants and all remaining funds provided through the previous WCB grant to the Conservancy for this project.

Since 2000 the Conservancy has expended \$7,772,507 for the Invasive *Spartina* Project. Out of this total, \$6,554,957 came to the Conservancy from three CALFED grants (one federal and two state funded), a National Wildlife Foundation grant, a United States Fish and Wildlife Service grant, and a Wildlife Conservation Board grant. The remainder of \$1,239,950 was funded by the Coastal Conservancy.

### **2005/2006 Project Accomplishments**

The control work in 2005 represented a 232% increase in treated acres from the 2004 season. As a result, more non-native *Spartina* was killed as a result of 2005 treatments than at any other time in the history of the effort in the San Francisco Estuary. This was made possible in part because ISP partners are able to utilize the new, significantly more effective, herbicide imazapyr, that has substantially reduced environmental effects and that was registered for use in California only days before treatment began in the fall of 2005.

In the fall of 2005 ISP coordinated with grantees to implement 23 site-specific plans for 134 sites for the first year of full-scale treatment. The short treatment season did not begin until after the California clapper rail nesting and breeding season. From September 7 through October 19, 2005, ISP and partners were able to efficiently and effectively apply aerial applications to address large *Spartina* meadows for the first time:

- 1,010 acres of the total 1,500 acres of invasive *Spartina* were treated, representing 67% of the infestation
- 752 acres, or 70% of the total treated, were treated using helicopters with boom sprayers
- Efficacy for 2005 treatment of *Spartina alterniflora* hybrids showed a very wide range from minimal results at some sites to 100% control at others.

In 2006 treatment occurred between June 19 and October 13, a much longer treatment window. Sites treated in 2005 were re-treated, plus new areas were added. Following the implementation of the 2006 Control Program by ISP and partners, the heart of the infestation in the Estuary is now under control:

- 107 *Spartina* sites were treated, representing 94% of the estimated *Spartina* acreage in the Estuary
- 1,750 acres were treated Estuary-wide

## INVASIVE SPARTINA PROJECT (ISP)

- Of the total 1,750 acres treated, 1,350 acres, or 77%, were treated aerially.

The ISP was able to utilize aerial applications to efficiently treat large stands of *Spartina* much earlier than in previous years. The scientific literature has shown that earlier treatment is much more effective, and allows for a longer treatment window when tides, weather and plant life history are more appropriate for herbicide applications. The initial observations from the early season treatment in 2006 is very promising; if these early observable impacts to the invasive *Spartina* are indicative of mortality (that cannot be accurately measured until late spring of 2007), the ISP should achieve 70-90% efficacy across large areas of marsh.

In 2006, ISP made considerable progress toward unifying the efforts of the various partners and grantees around the Estuary. This involved workshops and training sessions, as well as numerous on-site meetings and discussions with ISP partners throughout the year. Adding to this network of informed and empowered land managers are the many citizens who have been educated about the *Spartina* control effort through media publications, public meetings, Estuary-wide signage, and other outreach efforts.

### **Project Description for 2007 Control Program**

By treating 94% of the *Spartina* infestation in 2006 (halting seed production on the vast majority), the ISP's efforts should reverse the expansion of non-native *Spartina* and gain control over the entire infestation. Therefore, future treatment seasons will focus on advancing beyond control to eradication by re-treating sites previously treated where necessary to maintain progress, and addressing all remaining untreated stands. Although the overall *Spartina* acreage in the Estuary is likely to significantly shrink as a result of the 2005/2006 control work, annual costs associated with continued control in 2007 will increase. Herbicide has represented roughly 60% of the costs for 2005 and 2006 treatment efforts, with labor and administration making up the remaining 40%. In subsequent treatment seasons, scattered, difficult-to-access populations of non-native *Spartina* will be the norm, necessitating increased labor costs associated with the extra time involved in treating these areas.

The proposed authorization would allow an expenditure of up to \$1,250,868 of the WCB grant (See "Project Financing") to supplement minimal amounts remaining in existing treatment grants. Other than funding from the ERP grant for monitoring, funding for management is also nearly expended. The proposed authorization would allow an expenditure of up to \$949,907 of Conservancy Proposition 50 funding for continued management. While the nature, extent and scope of the region-wide coordination, and treatment and eradication projects, have not changed from what was described in connection with the 2005 and 2006 authorizations, it has always been anticipated that additional funding would be needed each year to cover the costs of management and operations through 2011.

Building upon partnerships and the successful regional coordination in 2004 through 2006, ISP will continue the same aggressive strategy for 2007. This will involve coordination for re-treating the same sites where partial infestation may have returned, and adding a majority of the remaining phased sites for initial treatment. ISP consultants

INVASIVE SPARTINA PROJECT (ISP)

are working with all grantees to update the work programs under the Site-Specific Plans for the 2007 treatment season, evaluating experiences from 2005 and 2006, in order to improve what is planned for 2007, making presentations to regional stakeholders, obtaining necessary permits, completing ISP's Water Quality Monitoring Plan, continuing the inventory monitoring and California clapper rail monitoring, coordinating restoration work at the sensitive Elsie Roemer marsh in the City of Alameda, and continuing to seek landowner permissions to work on sites where work has not previously been done. Funded entirely by the existing ERP grant, the University of California at Davis will continue to conduct genetic analysis of *Spartina* samples.

An additional expense for environmental consulting services will include a study of the movement of the California clapper rail in the *Spartina* invaded marshes. The Conservancy's proposed contribution is \$48,825. This will enable ISP to refine control strategies at sites with large clapper rail populations. Another new study will evaluate the potential use of satellite imagery by developing a prototype for long-term monitoring for early detection of re-emerging *Spartina* infestations. The Conservancy's proposed contribution is \$95,000. The United States Fish and Wildlife Service (USFWS) and the United States Geographical Survey (USGS) will provide matching funding to complete the clapper rail movement study. The National Park Service (NPS) and the lead researcher for the satellite imagery will match funding to complete the prototype for the long-term monitoring study. The scientific community agrees these studies are important for successfully mitigating the impacts of treatment activities on the endangered California clapper rail, and for controlling new *Spartina* infestations over the long term. The results of the California clapper rail study will also inform implementation of other wetland restoration projects to minimize impacts to the rail; and the technology developed through the satellite imagery study will be potentially transferable to identifying other invasive plant species.

**PROJECT FINANCING:**

**A. Financing for this Authorization:**

WCB grant to the Coastal Conservancy	\$1,250,868
Coastal Conservancy	\$ 949,907
Treatment Grantees' Contributions	\$ 151,000
USFWS for clapper rail movement study	\$ 50,000
USGS for clapper rail movement study	\$ 20,000
NPS for satellite imagery monitoring study	\$ 75,000
Lead researcher's contribution to monitoring study	\$ 30,000
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<b>Total</b>	<b>\$2,526,775</b>

Conservancy funding for the proposed disbursement of \$1,250,868 for invasive *Spartina* treatment and eradication projects is expected to be provided under an existing grant agreement by which WCB may provide funds to the Conservancy for San Francisco Bay projects. 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

INVASIVE SPARTINA PROJECT (ISP)

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 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 objectives of the SFBJV and Goals Report. It also squarely meets the priorities and objectives of the Conservancy found in Section 31162 of the Public Resources Code, since it carries out 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.

Conservancy funding for the ongoing management of ISP is expected to come from the fiscal year 2005/06 appropriation to the Conservancy from the Water Security, Clean Drinking Water, Coastal Beach Protection Fund of 2002 (Proposition 50). Proposition 50 authorizes the use of these funds for the purpose of protecting coastal watersheds through projects to restore land and water resources. Funds may be used for planning and permitting associated with restoration, as well as the restoration activities. (Water Code Section 79570). The use of Proposition 50 funds for the ongoing environmental consulting services needed to operate and manage the *Spartina* Control Program will accomplish these purposes. The consulting services are needed specifically to plan, coordinate and obtain environmental permits and approvals for the ISP Control Program, which will allow for the restoration of the coastal watershed and associated wetlands affected by invasive *Spartina*. In addition, as required by Proposition 50, the proposed project is consistent with local and regional plans (Water Code Section 79507). The Goals Report is a multi-jurisdictional local planning document providing guidance for watershed protection activities for the San Francisco Bay. Proposition 50 recognizes the Goals Report as appropriate to guide the selection of restoration projects within the Bay region (Water Code Section 79572). As discussed in the paragraph above, the ISP Control Program carries out the objectives of the Goals Report.

INVASIVE SPARTINA PROJECT (ISP)

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

Depending on the respective efficacy of the 2006 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, most will also contribute new matches for the additional funding from the Conservancy for the 2007 as follows:

<u>Grantee</u>	<u>New SCC Funding</u>	<u>New Grantee Match</u>
Alameda Co. Flood Control District	\$198,491	\$35,000
San Mateo Co. Mosquito Abatement District	\$173,700	\$25,000
California Wildlife Foundation	\$194,892	\$0
East Bay Regional Park District	\$254,968	\$25,000
City of Palo Alto	\$8,324	\$1,000
City of Alameda	\$68,500	\$5,000
City of San Leandro	\$100,000	\$5,000
USFWS Don Edwards San Francisco Bay National Wildlife Refuge	\$215,000	\$40,000
Friends of Corte Madera Creek Watershed	\$36,994	\$15,000
<b><u>TOTAL</u></b>	<b><u>\$1,250,868</u></b>	<b><u>\$151,000</u></b>

**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 Area 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

## INVASIVE SPARTINA PROJECT (ISP)

monitoring and mapping activities for the ISP incorporate 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 1,800 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 ISP Control Program to prevent up to 69,402 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:**

As discussed in previous staff recommendations (Exhibits 1 and 2), the proposed project remains consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

#### **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 2007 ISP Control Program is 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 San Francisco Bay Joint Venture. Furthermore, in the published Comprehensive Conservation Management Plan for the San Francisco Estuary, San Francisco Estuary Project

## INVASIVE SPARTINA PROJECT (ISP)

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*, 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 stream in the San Francisco Bay-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 in the short-term, long-term maintenance expenses can be avoided.
6. **Readiness:** In 2006, ISP and partners treated 1,750 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 2007.
7. **Cooperation:** Existing grantees (landowners and land managers) are enthusiastically 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 ISP Control Program is consistent with the San Francisco Bay Plan, Policy 3(c), found in the section entitled "Marshes and Mudflats" (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:**

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. (The June 16, 2005 staff

INVASIVE SPARTINA PROJECT (ISP)

recommendation refers to 22 treatment sites. However, after the June authorization, one of the 22 sites was split into 2 sites for ease of treatment management, thus resulting in 23 sites currently.)

The Conservancy's June 16, 2005 authorization included consideration and review of the site specific plans for each of these treatment sites for activities through 2007. The site specific plans identified potential environmental effects and the required mitigation measures for each of the 23 projects. Based on this information, staff recommended and the Conservancy found that the environmental effects associated with each of these treatment projects and the required mitigation to reduce those effect to less than significant level had been fully considered under the programmatic FEIS/R for the ISP Control Program and that no new mitigation measures were required. The 23 projects for which additional funding is proposed under this authorization have not changed in nature, extent, duration or scope. 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 for treatment activities is required.

Activities associated with operation and management of the Invasive *Spartina* Control Program are designed to produce environmental permits, approval and documentation for and coordinate implementation of the Invasive *Spartina* treatment activities. Therefore, there are no environmental effects associated with operation and management activities, beyond those considered and evaluated as part of the individual treatment projects.