San Francisco Estuary Invasive Spartina Project 2008-2010 Site-Specific Control Plans
ATTACHMENT 2: Impact and Mitigation Checklists

TSN: ISP-2004-1

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Alameda Flood Control Channel, Alameda County

			Applicable N (by Treatment Me	thod used at Site)	1		
	Applica- ble to		Herbicide A	· ·	1		Additional
Impact*	Site	Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicop- ter)	Comments/Analysis of Residual Im- pact at Site	Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE					NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	А		GEO-2			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE					NA/NE – Proposed activities will not take place within an estuarine beach.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal	NA/NE					NA/NE – No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass	A	None	None	None	None	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and tur- bulence of tidewaters impounded in salt marsh pans	NA/NE					NA/NE – Proposed activities will not take place within salt marsh pans.	None
WQ-1: Degradation of water quality due to herbicide application	A	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	А	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not applicable / No Effect

Key:

LTS/NLTAE - Less Than Significant Impact / Not Likely to Adversely Effect

SU – Significant but Unmitigable impact

USFWS BO – US Fish & Wildlife Service Biological Opinion

	Applica-		Herbicide A	Application			Additional
Impact*	ble to Site	Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicop- ter)	Comments/Analysis of Residual Im- pact at Site	Mitigation Required
WQ-3: Degradation of water quality due to fuel or petroleum spills	А	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE					NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE					NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE					NA/NE – Field surveys found no salt-meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	A	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE					NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE					NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE					NA/NE – Field surveys found no special-status plant species at site.	None
BIO-3: Effects on shorebirds and waterfowl.	A	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	BIO-4.1	BIO-4.1	BIO-4.1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

NA/NE - Not applicable / No Effect

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	Applicable Mitigations* (by Treatment Method used at Site) Applica- Herbicide Application						
	Applica- ble to		1		T		Additional Mitigation
Impact*	Site	Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicop- ter)	Comments/Analysis of Residual Im- pact at Site	Required
BIO-4.2: Effects on resident har- bor seal colonies of San Francisco Bay.	NA/NE					NA/NE – No harbor seal colonies at or near site.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE					NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	A	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE at site – Potential project impacts mitigated at site. SU cumulative impacts addressed in EIS/R and CEQA findings.	None			
BIO-5.2: Effects on the California black rail.	Α	BIO-5.2	BIO-5.2	BIO-5.2	BIO-5.2	NA/NE – Outside of known range of black rails.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	A	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	A	BIO-5.4 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None			
BIO-5.5: Effects on raptors (birds of prey).	A				BIO-5.5	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	A	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE					NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE					NA/NE – Outside of known range of tidewater goby.	None

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		Applicable Mitigations* (by Treatment Method used at Site)					
	Applica-		Herbicide A				Additional
Impact*	ble to Site	Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicop- ter)	Comments/Analysis of Residual Im- pact at Site	Mitigation Required
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: No mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any potential adverse affects on estuarine fish.
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE					NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE					NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE					NA/NE – No potential tiger beetle habitat will be affected.	None
AQ-1: Dust emissions.	А			AQ-1		NA/NE – Access levees are paved.	None
AQ-2: Smoke emissions.	NA/NE					NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on Air Quality.	A				AQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-4: Ozone precursor emissions.	NA/NE					LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE					LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	A	N1	N1	N1	N1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None

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			Applicable I (by Treatment Me	thod used at Site)			Additional	
Impact*	Applica- ble to Site	Backpack Sprayer	Herbicide A Amphibious Vehicle	Application Conventional Spray Truck	Aerial (Helicop- ter)	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required	
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass Treatment.	NA/NE					NA/NE – No manual or mechanical control methods proposed.	None	
HS-2: Worker Health Effects from Herbicide Application.	А	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None	
HS-3: Health Effects to the Public from Herbicide Application.	A	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None	
HS-4: Health effects to workers or the public from accidents associated with treatment.	Α	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None	
VIS-1: Alteration of Views from Removal of Non-Native Cordgrass Infestations.	Α	VIS-1	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None	
VIS-2: Change in Views from native Marsh, Mudflat, and Open Water to Non-Native Cordgrass Meadows and Monocultures.	NA/NE					NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None	
LU-1: Land Use Conflicts Between Herbicide Use and Sensitive Re- ceptors	А					LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None	
LU-2: Land Use Conflicts from Mechanical and Burning Treat- ment Methods	NA/NE					NA/NE – Methods not proposed for site	None	
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	A	CUL-1	CUL-1	CUL-1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None	

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			Applicable I (by Treatment Me	Mitigations* thod used at Site)			
	Applica-		Herbicide A	Application			Additional
Impact*	ble to Site	Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicop- ter)	Comments/Analysis of Residual Im- pact at Site	Mitigation Required
CUL-2: Loss of cultural resources from erosion.	NA/NE					NA/NE – No erosion-producing activities proposed	None
CUM-1: Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE					NA/NE – No restoration projects proposed on this site	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE					NA/NE – No Mosquito Abatement districts working on this site	None

NA/NE - Not applicable / No Effect

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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Alameda Flood Control Channel, Alameda County

	Applicable Mitigation 9		Herbicide Applic	cation Techniqu	е		Verification Signatures	
Impact*	Applicable Mitigation & Conservation Measures (source**)	Backpack Sprayer	Tracked Amphibious Vehicle	Conven- tional Spray Truck	Aerial (Heli- copter)	Implementa- tion Timing	Implement- ing Entity	ISP Field Supervisor
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	Minimize vehicle use in marsh (GEO-2;CM-1)		Х			During treatment		
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1;CM-3 & 4)	Х	Х	Х	Х	During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2;CM-3)	Х	Х	Х	Х	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2;CM-17)	Х	Х	Х	Х	During treatment		
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP (WQ-3;CM-17).	Х	Х	Х	Х	During treatment		
BIO-1.2: Effects on tidal marsh plant communities affected by At-	Minimize entry and re-entry into marsh (BIO-1.2;CM-1)	Х	Х	Х	Х	During treatment		
lantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	Х	Х	Х	Х	During treatment		
	Place mats or other protectors be- neath heavy equipment operating in sensitive high marsh vegetation, especially gumplant (BIO-1.2)	Х	Х	Х	Х	During treatment		
	Avoid herbicide application to non- target vegetation adjacent to treat- ment area. (BIO-1.2;CM-3,4)	Х	Х	Х	Х	During treatment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers. (BIO-3)	Х	Х	Х	Х	During treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

TSN: ISP-2004-1

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Annicola Mitantina O	1	Herbicide Applic	cation Techniqu	e		Verification	Signatures
Impact*	Applicable Mitigation & Conservation Measures (source**)	Backpack Sprayer	Tracked Amphibious Vehicle	Conven- tional Spray Truck	Aerial (Heli- copter)	Implementa- tion Timing	Implement- ing Entity	ISP Field Supervisor
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	Х	X	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	Х	Х	Х	Х	During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1;CM-15)	Х	Х	Х		During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	X	Х	X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	X	X	Х		During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	Х	Х	X		Pre- and during treatment		
BIO-5.1: Effects on California clapper rail.	Perform work during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1;CM-18)	Х	Х	Х		During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring ac- cording to FWS protocols (CM-18)				Х	Pre- treatment		
	Provide CLRA Field biologist supervision. (BIO-5.1)	X	X	X	X	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection. (BIO-5.1)	Х	X	Х	Х	Pre- treatment and during treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Militarian C		Herbicide Applic	cation Techniqu	е		Verification	Signatures
Impact*	Applicable Mitigation & Conservation Measures (source**)	Backpack Sprayer	Tracked Amphibious Vehicle	Conven- tional Spray Truck	Aerial (Heli- copter)	Implementa- tion Timing	Implement- ing Entity	ISP Field Supervisor
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	Х	X	X	X	During and post-treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the	Implement CLRA timing restriction (most restrictive). (BIO-5.2)	X	X	Х		During treatment		
salt marsh common yellowthroat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	Х	Х	Х	Х	During and post-treatment		
	Avoid spraying or removing Grindelia plants in the marsh	X	X	X	X	During treatment		
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	Х	Х	X	X	During treatment		
BIO-5.4: Effects on California least terns and western snowy plovers.	Survey access levees for nesting CALT and WSPL prior to entry (BIO-5.4;CM-20)	Х	Х	Х	Х	Pre- treatment		
	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.4)	Х	Х	Х	Х	During and post-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)				Х	During treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	Target herbicide applications to minimize herbicide use near channel. (BIO-6.1)	X	Х	Х	Х	During treatment		
	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	Х	Х	Х	Х	During treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

California Department of Fish and Game recommendations (e.g., DFG).

Page 3 of 5 **Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and

	Applicable Mitingtion 9	ı	Herbicide Applic	cation Techniqu	e		Verification	Signatures
Impact*	Applicable Mitigation & Conservation Measures (source**)	Backpack Sprayer	Tracked Amphibious Vehicle	Conven- tional Spray Truck	Aerial (Heli- copter)	Implementa- tion Timing	Implement- ing Entity	ISP Field Supervisor
BIO-6.4: Effects on estuarine fish populations of shallow submerged	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	Х	X	Х	Х	During treatment		
intertidal mudflats and channels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish. (BIO-6.4)	Х	Х	Х	Х	During treatment		
AQ-3: Herbicide effects on air quality	Implement ISP Drift Management plan for aerial applications of herbicide (AQ-3;CM-3,4)				Х	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with local noise ordinances (N-1)	Х	Х	Х	Х	During treatment		
	Avoid use of helicopters within 1,500 feet of hospitals, schools, or houses during times of occupancy (N-1)	Х	Х	Х	Х	During treatment		
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	Assure proper safety training of personnel based on site safety protocols (HS-1)	Х	Х	Х	Х	Pre- and during treat- ment		
	Implement site safety plan or ISP-approved equivalent (HS-1)	Х	Х	Х	Х	During treatment		
HS-2: Worker health effects from herbicide application.	Follow handling and application procedures as identified on product label. (HS-2;CM-3)	X	Х	X	X	During treat- ment		
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan or equivalent (HS-3;CM-3,4)	Х	Х	Х	Х	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3;CM-3)	Х	Х	Х	Х	Pre- treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Mitigation 9	ı	Herbicide Applic	cation Techniqu	е		Verification	Signatures
Impact*	Applicable Mitigation & Conservation Measures (source**)	Backpack Sprayer	Tracked Amphibious Vehicle	Conven- tional Spray Truck	Aerial (Heli- copter)	Implementa- tion Timing	Verification Implement- ing Entity	ISP Field Supervisor
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment. (HS-3;CM-3)	X	X	X	X	Pre- treatment and during treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equiva- lent Site Safety and Spill Preven- tion plan on site. (HS-4)	Х	X	X	X	During treatment		
VIS-1: Alteration of views from removal of non-native cordgrass Infestations.	Post appropriate signage according to ISP signage protocols. (VIS-1)	X	X	X	X	Pre- treatment, during treatment, post- treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place. (CUL-1)	X	X	Х	X	Pre- treatment and during treatment		
CM-7: Invasive species	Monitor cleared patches for re- cruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	Х	Х	Х	Х	Post- treatment		

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Page 5 of 5 **Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Bair/Greco Island, San Mateo County

TSN: ISP-2004-2

Impact*	Applicable to Site	Sub-Area Included		(by Treatme		ations* used at Site ment method Argo	•	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE							NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	А	All sub- areas				GEO-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE							NA/NE – No excavation within estuarine beaches planned. Any cordgrass treated within this Complex on estuarine beaches will be treated with herbicide leaving intact root masses. Root masses will naturally degrade on site.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE							NA/NE – No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	All sub- areas	None	None	None	None	None	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	А	All sub- areas	None	None	None	None	None	NA/NE – No mitigation required for work near or in salt marsh pans.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 1 of 7

NA/NE - Not Applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

		Sub-Area		Applio by Treatme) arious herb)		used at Site	•		Additional
Impact*	Applicable to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
WQ-1: Degradation of water quality due to herbicide application	A	All sub- areas	WQ-1	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	A	All sub- areas	WQ-2	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	А	All sub- areas	WQ-3	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE							NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE							NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE							NA/NE – Field surveys found no salt- meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All sub- areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE							NA/NE – Field surveys found no Chilean cordgrass at site.	None

NA/NE - Not Applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

		Sub-Area		Applio (by Treatmo arious herb		used at Site	•		Additional
Impact*	Applicable to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE							NA/NE – Field surveys found no eel- grass or other submerged aquatic plants at site.	None
BIO-2: Effects on special- status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE							NA/NE – Field surveys found no special-status plant species at site.	None
BIO-3: Effects on shorebirds and waterfowl.	А	All sub- areas	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	All sub- areas	BIO-4.1	BIO-4.1	BIO-4.1	BIO-4.1	BIO-4.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	А	2a, 2b, 2c, 2f, 2h, 2i		BIO-4.2	BIO-4.2	BIO-4.2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE							NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	A	All sub- areas	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on the California black rail.	NA/NE							NA/NE – Outside of known range black rails.	None

NA/NE - Not Applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

Impact*	Applicable to Site	Sub-Area Included	V	(by Treatme arious herb	Applicable Mitigations* Treatment Method used at Site) ous herbicide Treatment methods Back- Aerial Boat Argo pack Comments/Analysis of Residual Impact at Site				Additional Mitigation Required
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	A	All sub- areas	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	A	2i, 2j	BIO-5.4 as modified by UFSWS BO		BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.5: Effects on raptors (birds of prey).	А	All sub- areas		BIO-5.5				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	All sub- areas	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE							NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE							NA/NE – Outside of known range of tidewater goby.	None

NA/NE - Not Applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

	Applicable to	Sub-Area		Appli (by Treatme 'arious herb		used at Site	ds	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Included	Truck	Aerial	Boat	Argo	Back- pack	at Site	Required
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	All sub- areas	BIO-6.4 minimize spraying	BIO-6.4 minimize spraying	BIO-6.4 minimize spraying	BIO-6.4 minimize spraying	BIO-6.4 minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: No mowing proposed because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used ad- jacent to channel to minimize any poten- tial ad- verse af- fects on estuarine fish.
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE							NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE	All sub- areas				BIO-8		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-9: Effects on tiger beetle species.	NA/NE							NA/NE – No potential tiger beetle habitat will be affected.	None
AQ-1: Dust emissions.	А	All sub- areas	AQ-1					LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-2: Smoke emissions.	NA/NE							NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	А	All sub- areas		AQ-3				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

NA/NE - Not Applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

		Sub-Area		Appli (by Treatm /arious herb		used at Sit	•		Additional
Impact*	Applicable to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
AQ-4: Ozone precursor emissions.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE							LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	А	All sub- areas	N-1	N-1	N-1	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE							NA/NE – Methods not proposed for this site	None
HS-2: Worker health effects from herbicide application.	А	All sub- areas	HS-2	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	All sub- areas	HS-3	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All sub- areas	HS-4	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	All sub- areas	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None

NA/NE - Not Applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

		Sub-Area		Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods Comments/Analysis of Residual Im-				Additional	
Impact*	Applicable to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE							NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts be- tween herbicide use and sensi- tive receptors	А	All sub- areas	LU-1	LU-1	LU-1	LU-1	LU-1	LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from mechanical and burning treatment methods	NA/NE							NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	А	All sub- areas	CUL-1		CUL-1	CUL-1	CUL-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE							NA/NE – No erosion-producing activities proposed	None
CUM-1- Effects of wetland restoration projects on spread of non-native cordgrass	NA/NE							NA/NE – No restoration projects with the potential to spread Spartina pro- posed within this Complex during the proposed treatment schedule	None
CUM-2- Cumulative damage to marsh plain vegetation	A	All sub- areas	CUM-2	CUM-2	CUM-2	CUM-2	CUM-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

NA/NE - Not Applicable/No Effect

Key:

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SU – Significant but unmitigable impact

TSN: ISP-2004-2

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Bair & Greco Island Complex, San Mateo County

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact	Conservation Measures	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
GEO-2: Erosion or to- pographic change of marsh and mudflat by vehicles used in eradi- cation	Minimize vehicle travel in the marsh and mudflats (GEO-2;CM-1)	All-sub- areas				X		During treatment		
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3 & 4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2;CM-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2;CM-17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP (WQ-3;CM-17)	All sub- areas	Х	Х	Х	Х		During treatment		
BIO-1.2: Effects on tidal marsh plant communi-	Minimize entry and re-entry into marsh (BIO-1.2;CM-1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
ties affected by Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2;CM-3,4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact	Conservation Measures	Included	Truck	Aerial	Boat	Argo	pack-	tion Timing	Implementing Entity	ISP Field Supervisor
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers. (BIO-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		·
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	All sub- areas	Х	X	Х	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Helicopters will not be operated within 1000 feet of active major foraging or roosting sites (BIO-3)	All sub- areas		Х				During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1;CM-15)	All sub- areas				Х		During treatment		
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1;CM-15)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All sub- areas	X	Х	Х	X	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub- areas	Х	Х	Х	Х	Х	Pre- and during treatment		
BIO-4.2: Effects on resident harbor seal colonies of San Fran- cisco Bay.	Minimize vehicle and foot access to marsh within 1000 feet of haul out sites (BIO-4.2)	2a, 2b, 2c, 2f, 2h, 2i		Х	Х			During treatment		

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	Applicable Mitigation &	Sub Area					Back-	Implementa-		Signatures
Impact	Conservation Measures	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	Avoid approaching haul out sites within 2000 feet (or any distance that elicits vigilance behavior) when pups are present. (BIO-4.2)	2a, 2b, 2c, 2f, 2h, 2i		Х	Х			During treatment		
	Follow ISP spill prevention plan or equivalent BIO-4.2;CM-3,4)	2a, 2b, 2c, 2f, 2h, 2i		Х	Χ			During treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1;CM-18)	All sub- areas	Х		X	Х	Х	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	All sub- areas	Х		Х	Х	х	During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub- areas	Х		Х	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	All sub- areas	Х		Х	Х	х	During treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All sub- areas	Х		Х	Х	Х	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report	All sub- areas	Х		Х	Х	Х	During and post-treatment		
	Avoid spraying or removing Grindelia plants in the marsh	All sub- areas	Х	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact	Conservation Measures	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	All sub- areas	Х	X	X	Х	Х	During treatment		
BIO-5.4: Effects on California least terns and western snowy plovers.	Survey access levees for nesting CALT and WESP prior to entry (BIO-5.4;CM- 20)	2i, 2j	Х		Х	X	X	During treatment		
	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.4)	2i, 2j	X		Х	X	X	During treatment		
BIO-5.5: Effects on raptors (birds of prey).	Consult qualified biologist to determine possible raptor nesting presence (BIO-5.5)	All sub- areas		Х				Pre- treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	All sub- areas		Х				Pre- treatment and during treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	All sub- areas	Х	Х	Х	Х	Х	During treatment		
run Chinook salmon, steelhead).	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub- areas	Х	Х	X	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact	Conservation Measures	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
intertidal mudflats and channels.	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub- areas	Х	X	X	Х	X	During treatment		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	Monitor access route for the formation of un-drained depressions in tire ruts or foot trails (BIO-8)	All sub- areas	Х			X	X	During treatment		
	Backfill or cut drainage into shallow depressions left in the marsh by control work to minimize standing water where appropriate (BIO-8)	All sub- areas	X			X	X	Post- treatment		
AQ-1: Dust Emissions	Maintain 15 mph speed limit when traveling on unpaved levees or access roads (AQ- 1)	All sub- areas	Х					During treatment		
AQ-3: Herbicide effects on air quality.	Implement ISP approved drift management plan (AQ-3;CM-3,4)	All sub- areas		Х				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
HS-2: Worker Health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2;CM-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan or equivalent (HS-3;CM-3,4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact	Conservation Measures	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	Post appropriate signage (see attached signage re- quirements) a minimum of 24 hours pre-treatment (HS- 3)	All sub- areas	X	Х	Х	X	Х	Pre- treatment		
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	All sub- areas	X	X	X	X	X	Pre- treatment and during treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	All sub- areas	Х	Х	Х	Х	Х	Pre- treatment, during treatment, post- treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	All sub- areas	Х		X	X	X	Pre- treatment and during treatment		
CUM-2: Cumulative damage to marsh plain vegetation	Coordinate treatment schedule with the Mosquito abatement district in order to minimize cumulative impacts (CUM-2)	All sub- areas	Х	Х	Х	Х	Х	Pre- treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

Impact	Applicable Mitigation & Conservation Measures	Sub Area Included	Truck	Aerial	Boat	Argo	Back- pack	Implementa- tion Timing	Verification Implementing Entity	Signatures ISP Field Supervisor
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	Х	Х	Х	Х	х	Post- treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Blackie's Pasture, Tiberon, Marin County

TSN: ISP-2004-3

lana a tit	Appli- cable to	(by Treatr	Applicable Mitigations* eatment Method used at Site)		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Covering	Digging	at Site	Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE				NA/NE – Mechanical removal activities are not proposed. Digging of <i>Spartina</i> on site will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE				NA/NE – Activities not proposed for site	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE				NA/NE – Proposed activities will not take place within an estuarine beach.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE				NA/NE – No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	None	None	None	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	No mitigation required
GEO-6: Increased depth and tur- bulence of tidewaters impounded in salt marsh pans.	NA/NE				NA/NE – Proposed activities will not take place within salt marsh pans.	None
WQ-1: Degradation of water quality due to herbicide application	А	WQ-1			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	А	WQ-2			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to		licable Mitigation ment Method use		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Covering	Digging	at Site	Required
WQ-3: Degradation of water quality due to fuel or petroleum spills	Α	WQ-3			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE				NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE				NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE				NA/NE – Field surveys found no salt- meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	A	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	А	BIO-1.3	BIO-1.3	BIO-1.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE				NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE				NA/NE – Field surveys found no special- status plant species at site.	None
BIO-3: Effects on shorebirds and waterfowl.	А	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to		olicable Mitigation ment Method use		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Covering	Digging	at Site	Required
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	NA/NE				NA/NE – Site not known to support salt marsh harvest mouse and/or tidal marsh shrew species.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE				NA/NE – No harbor seal colonies at or near site.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE				NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	NA/NE				NA/NE – Not a known site for California Clapper Rail	None
BIO-5.2: Effects on the California black rail.	NA/NE				NA/NE – Outside of known range of black rails.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	Bio-5.3 as modified by UFSWS BO	Bio-5.3 as modified by UFSWS BO	Bio-5.3 as modified by UFSWS BO	LTS/NLTAE – Potential project impacts mitigated at site.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE				NA/NE – Outside of known range of California least terns and western snowy plovers	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE				NA/NE – No aerial applications proposed	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	BIO-6.1			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE				NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE				NA/NE – Outside of known range of tidewater goby.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to		licable Mitigation ment Method use		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Covering	Digging	at Site	Required
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	BIO-6.4 – minimize spraying			LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: no mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any potential adverse af- fects on estuarine fish.
BIO-7: Effects on the California red-legged frog and San Francisco garter snake.	NA/NE				NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE				NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE				NA/NE – No potential tiger beetle habitat will be affected.	None
AQ-1: Dust emissions.	NA/NE				NA/NE – Access levees are paved.	None
AQ-2: Smoke emissions.	NA/NE				NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	NA/NE				NA/NE – No aerial application of herbicide proposed	None
AQ-4: Ozone precursor Emissions.	NA/NE				LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE				LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	А	N1	N1	N1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	А	HS-1	HS-1	HS-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
Key: * Impact and mitigation	on number	ing from ISP Co	ntrol Program	Programmat	ic EIS/R, August 2003	4 of 6

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

	Appli- cable to		olicable Mitigation ment Method use		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Covering	Digging	at Site	Required
HS-2: Worker health effects from herbicide application.	А	HS-2			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	HS-3			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE				NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	LU-1			LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from me- chanical and burning treatment methods	NA/NE				NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	А	CUL-1b only	CUL-1b only	CUL-1b only	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE				NA/NE – No erosion-producing activities proposed	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable/No Effect

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Impact*	Appli- cable to Site		licable Mitigation nent Method use Covering		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
CUM-1: Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE	Tiotidiale	Governing	Digging	NA/NE – No restoration projects proposed on this site	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE				NA/NE – No Mosquito Abatement Districts working on this site	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable/No Effect

Key:

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MITIGATION CHECKLIST

Blackie's Pasture TSN: ISP-2004-3

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Blackie's Pasture, Tiburon, Marin County

TSN: ISP-2004-3

	Applicable Mitigation &				Implementation Tim-		Signatures
Impact	Conservation Measures	Herbicide	Covering	Digging	ing	Implementing Entity	ISP Field Supervisor
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1;CM-3,4)	X			During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2;CM-3)	Х			During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2:CM-3,17)	Х			During treatment		
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP (WQ-3;CM-17)	Х			During treatment		
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	Minimize entry and re-entry into marsh, define access points (BIO-1.2;CM-1)	Х	Х	Х	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	Х	Х	Х	During treatment		
	Avoid herbicide application to non- target vegetation adjacent to treat- ment area (BIO-1.2;CM-3,4)	Х			During treatment		
	Non-viable and viable excavated cordgrass shall be removed from marsh (BIO-1.2;CM-9)			Х	During treatment		
	Geotextile mats shall be stabilized with stakes and weights (BIO-1.2;CM-11)		Х		During treatment		
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	Follow protocols for mitigation BIO- 1.2 above	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

MITIGATION CHECKLIST

Blackie's Pasture TSN: ISP-2004-3

	Applicable Mitigation &				Implementation Tim-	Verification	Signatures
Impact	Conservation Measures	Herbicide	Covering	Digging	ing	Implementing Entity	ISP Field Supervisor
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers (BIO-3)	Х	X	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	Х	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	Х	Х	Х	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	Х	Х	Х	During and post treatment		
	Avoid spraying or removing Grindelia plants in the marsh	X	Х	Х	During treatment		
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	Х	Х	Х	During treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon,	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	Х			During treatment		
steelhead).	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	Х			During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged	Minimize spraying near channels (BIO-6.4)	Х			During treatment		
intertidal mudflats and channels.	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish	X			During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

MITIGATION CHECKLIST

Blackie's Pasture TSN: ISP-2004-3

	Applicable Mitigation &				Implementation Tim-	Verification	
Impact	Conservation Measures	Herbicide	Covering	Digging	ing	Implementing Entity	ISP Field Supervisor
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	Х	Х	Х	During treatment		
HS-1: Worker Injury from accidents associated with manual and mechanical cordgrass treatment.	Comply with ISP site safety protocols or equivalent (HS-1)		х	Х	During treatment		
HS-2: Worker health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2;CM-3)	Х			During treatment		
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan (HS-3;CM-3,4)	Х			During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	Х			Pre-treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equiva- lent Site Safety and Spill Preven- tion plan on site (HS-4;CM-3,17)	Х	Х	Х	During treatment		
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	Х	Х	Х	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	Х	X	Х	Pre-treatment and during treatment		
CM-7: Invasive species	Monitor cleared patches for re- cruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	Х	Х	Х	Post treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

Key:

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Corte Madera Creek Complex, Marin County

TSN: ISP-2004-4

	Applicable to	Sub Area		Applicable Mitigations* reatment Method used at Site)		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Included	Herbicide	Digging		at Site	Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE					LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE					NA/NE – Vehicles will not be used in marshes for Spartina treatment within this site.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE					NA/NE – Proposed activities will not take place within an estuarine beach.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE					NA/NE – No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	NA/NE					No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and tur- bulence of tidewaters impounded in salt marsh pans.	NA/NE					NA/NE – Without Mitigation.	None
WQ-1: Degradation of Water Quality due to Herbicide Application	А	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	WQ-1			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of Water Quality due to Herbicide Spills	А	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	WQ-2			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

A – Applicable to site NA/NE – Not Applicable/No Effect

SU – Significant but unmitigable impact LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect

USFWS BO - US Fish & Wildlife Service Biological Opinion

Key:

	Applicable to	Sub Area		licable Mitigations* ment Method used at	Site) Comments/Analysis of Residual Impact Additional Mitigation
Impact*	Site	Included	Herbicide	Digging	at Site Required
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	А	All Sub- Areas	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.
WQ-4: Degradation of Water Quality due to Contaminant Remobilization	NA/NE				NA/NE – No dredging or other sediment- mobilizing activities proposed.
WQ-5: Water Quality Effects Resulting from Sediment Accretion	NA/NE				NA/NE – This impact only applies to EIS/R Alternative 3.
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	A	Sub-Area 4g	BIO-1.1	BIO-1.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	Sub-Area 4a	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	А	All Sub- Areas	BIO-1.3	BIO-1.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE				NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE				NA/NE – Field surveys found no special-status plant species at site.
BIO-3: Effects on shorebirds and waterfowl.	А	All Sub- Areas	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.

NA/NE - Not Applicable/No Effect

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

A – Applicable to site SU – Significant but unmitigable impact

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Applicable to	Sub Area		olicable Mitigations* ment Method used at Site)		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Included	Herbicide	Digging		at Site	Required
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	All Sub- Areas except 4f	BIO-4.1 as modi- fied by the USFWS BO	BIO-4.1 as modi- fied by the USFW S BO		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE					NA/NE – No harbor seal colonies at or near site.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE					NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on California clapper rail.	А	All Sub- Areas except 4e and 4f	BIO-5.1 as modi- fied by UFSWS BO	BIO-5.1 as modi- fied by UFSW S BO		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on California black rail.	NA/NE	All Sub- Areas	BIO-5.2	BIO-5.2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	A	All Sub- Areas	BIO-5.3 as modi- fied by UFSWS BO	BIO-5.3 as modi- fied by UFSW S BO		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE					NA/NE – Areas of treatment unsuitable for California least terns and/or western snowy plovers	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE					NA/NE – No aerial applications proposed for this Complex	None

NA/NE - Not Applicable/No Effect

SU – Significant but unmitigable impact

A - Applicable to site

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Applicable to	Sub Area	Applicable Mitigations* (by Treatment Method used at Site)		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Included	Herbicide	Digging	at Site	Required
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	BIO-6.1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE				NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE				NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	BIO-6.4 – mini- mize spraying		LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: No mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to mini- mize any potential adverse affects on estuarine fish.
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE				NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE				NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE				NA/NE – No potential tiger beetle habitat will be affected.	None
AQ-1: Dust emissions.	NA/NE				NA/NE – Access levees and roads are paved.	None
AQ-2: Smoke emissions.	NA/NE				NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	NA/NE				NA/NE – No aerial applications proposed	None
AQ-4: Ozone precursor emissions.	NA/NE				LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE				LTS/NLTAE without mitigation.	None

NA/NE - Not Applicable/No Effect

SU – Significant but unmitigable impact

A – Applicable to site

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Applicable to	Sub Area		licable Mitigat nent Method ι	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Included	Herbicide	Digging	at Site	Required
N-1: Disturbance of sensitive receptors	А	All Sub- Areas	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	А	All Sub- Areas except 4a, 4e and 4j		HS-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-2: Worker health effects from herbicide application.	А	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	HS-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	HS-3		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All Sub- Areas	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	All Sub- Areas	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE				NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	LU-1		LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from me- chanical and burning treatment methods	NA/NE				NA/NE – Methods not proposed for site	None

NA/NE - Not Applicable/No Effect

SU – Significant but unmitigable impact

A – Applicable to site

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

USFWS BO - US Fish & Wildlife Service Biological Opinion

Key:

Impact*	Applicable to Site	Sub Area Applicable Mitigations* (by Treatment Method used at Site		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required	
Шрасі	Site	Included	Herbiciae	Digging	at Site	Nequired
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	А	All Sub- Areas	CUL-	CUL-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE				NA/NE – No erosion-producing activities proposed	None
CUM-1- Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE				NA/NE – No restoration projects with the potential to spread <i>Spartina</i> proposed within this Complex during the proposed treatment schedule	None
CUM-2- Cumulative damage to marsh plain vegetation	NA/NE				NA/NE – Without mitigation.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

A – Applicable to site NA/NE – Not Applicable/No Effect

SU – Significant but unmitigable impact LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect

USFWS BO - US Fish & Wildlife Service Biological Opinion

TSN: ISP-2004-4

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Corte Madera Creek Complex, Marin County

	Applicable Mitigation &	Sub-Area			Implementation	Verification Si	ignatures
Impact	Conservation Measures	Included	Herbicide	Digging	Timing	Implementing Entity	ISP Field Supervisor
WQ-1: Degradation of Water Quality due to Herbicide Application	Apply herbicide directly to plant at low tide and according to label (WQ-1;CM-3,4)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	Х		During treatment		
WQ-2: Degradation of Water Quality due to Herbicide Spills	Apply under supervision of trained applicator (WQ-2;CM-3)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	Х		During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-3,17)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	Х		During treatment		
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	Implement spill and containment plan provided or approved by ISP. (WQ-3;CM-17)	All Sub- Areas	Х		During treatment		
BIO-1.1: Effects on tidal marsh plant	Minimize entry and re-entry into marsh (BIO-1.1;CM-1)	Sub-Area 4g	Χ	Х			
communities affected by salt-meadow cordgrass and Eng- lish cordgrass.	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.1;CM-3,4)	Sub-Area 4g	Х				
BIO-1.2: Effects on tidal marsh plant	Minimize entry and re-entry into marsh (BIO-1.2;CM-1)	Sub-Area 4a	Х	Х	During treatment		
communities affected by Atlantic smooth cordgrass and its hybrids.	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2;CM-3,4)	Sub-Area 4a	Х		During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	Applicable Mitigation &	Sub-Area			Implementation	Verification S	ignatures
Impact	Conservation Measures	Included	Herbicide	Digging	Timing	Implementing Entity	ISP Field Supervisor
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass and its hybrids.	Minimize entry and re-entry into marsh (BIO-1.3;CM-1)	All Sub- Areas	X	X			
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.3;CM-3,4)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	Х				
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers (BIO-3)	All Sub- Areas	Х	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All Sub- Areas	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All Sub- Areas	Х	Х	During treatment		
BIO-4.1: Effects on the Salt Marsh Har- vest Mouse and Tidal shrew species	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1;CM-15)	All Sub- areas except 4f	Х	Х	During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	All Sub- areas except 4f	Х	Х	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All Sub- areas except 4f	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All Sub- areas except 4f	Х	Х	Pre- and during treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	Applicable Mitigation &	Sub-Area			Implementation	Verification S	ignatures
Impact	Impact Conservation Measures Include		Herbicide	Digging	Timing	Implementing Entity	ISP Field Supervisor
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1;CM- 18)	All Sub- Areas ex- cept 4e and 4f	Х	X	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	All Sub- Areas ex- cept 4e and 4f	Х	X	Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All Sub- Areas ex- cept 4e and 4f	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	All Sub- Areas ex- cept 4e and 4f	X	X	During treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All Sub- Areas ex- cept 4e and 4f	Х	X	During treatment		
BIO-5.3: Effects on tidal marsh song spar- row subspecies and the salt marsh com-	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	All Sub- Areas	Х	X	During and post- treatment		
mon yellowthroat.	Avoid spraying or removing Grindelia plants in the marsh	All Sub- Areas	X	Χ	During treatment		
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	All Sub- Areas	Х	Х	During treatment		

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Applicable Mitigation &		Sub-Area			Implementation	Verification S	ignatures
Impact	Conservation Measures	Included	Herbicide	Digging	Implementation Timing	Implementing Entity	ISP Field Supervisor
BIO-6.1: Effects on anadromous sal- monids (winter-run and spring-run Chi- nook salmon, steel- head).	Minimize spraying within marsh. Spray drift near channels shall be minimized and conform to ISP herbicide drift management plan or equivalent (BIO-6.1)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	X		During treatment		
BIO-6.4: Effects on estuarine fish popula- tions of shallow sub- merged intertidal mudflats and chan- nels.	Spray drift near channels shall be minimized and conform to ISP herbicide drift manage- ment plan or equivalent (BIO- 6.4)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	X		During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All Sub- Areas	Х	Х	During treatment		
HS-1: Worker Injury from accidents Asso- ciated with manual and mechanical Cordgrass treatment	Follow ISP approved site safety protocols or equivalent (HS-1;CM-3)	All Sub- Areas		Х	During treatment		
HS-2: Worker Health Effects from Herbi- cide Application.	Follow handling and application procedures as identified on product label (HS-2;CM-3)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	Х		During treatment		
HS-3: Health Effects to the Public from Herbicide Application.	Minimize drift according to ISP drift management plan or equivalent (HS-3;CM-3,4)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	Х		During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	Х		Pre-treatment		

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	Applicable Mitigation &	Sub-Area			Implementation	Verification S	ignatures
Impact	Conservation Measures	Included	Herbicide	Digging	Timing	Implementing Entity	ISP Field Supervisor
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	X		Pre-treatment and during treatment		
HS-4: Health effects to workers or the pub- lic from accidents associated with treat- ment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,17)	All Sub- Areas	Х	X	During treatment		
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infesta- tions.	Post appropriate signage according to ISP signage protocols (VIS-1)	All Sub- Areas	Х	Х	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or Destruction of Cul- tural Resources from Access and Treat- ment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	All Sub- Areas	Х	Х	Pre-treatment and during treat- ment		
CM-7: Invasive Species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	Х	Х	Post-treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

TSN: ISP-2004-5

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Coyote Creek & Mowry Slough Area, Alameda County

	Appli-	Sub-Area Included			olicable Mitiga ment Method			Comments/Analysis of Re-	Additional Miti-
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	Aerial	sidual Impact at Site	gation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE							NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE							NA/NE – No equipment will be working on marsh or mudflat surfaces	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE							NA/NE – Proposed activities will not take place within an estuarine beach.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE							NA/NE – No dredg- ing/sediment disposal pro- posed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	All Sub- Areas	GEO-5	GEO-5	GEO-5	GEO-5	GEO-5	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE							NA/NE – Proposed activities will not take place within salt marsh pans.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

A - Applicable

NA/NE - Not Applicable/No Effect

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SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli-	Sub-Area Included			olicable Mitiga ment Method			Comments/Analysis of Re-	Additional Miti-
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	Aerial	sidual Impact at Site	gation Required
WQ-1: Degradation of Water Quality due to herbicide application	А	All Sub- Areas	WQ-1	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of Water Quality due to herbicide spills	А	All Sub- Areas	WQ-2	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of Water Quality due to fuel or petroleum spills	А	All Sub- Areas	WQ-3	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of Water Quality due to Contaminant Remobilization	NA/NE							NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water Quality Effects Resulting from Sediment Accretion	NA/NE							NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE							NA/NE – Field surveys found no salt-meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All Sub- Areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli-	Sub-Area Included			olicable Mitiga ment Method			Comments/Analysis of Re-	Additional Miti-
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	Aerial	sidual Impact at Site	gation Required
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE							NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE							NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE							NA/NE – Field surveys found no special-status plant species at site.	None
BIO-3: Effects on shorebirds and waterfowl.	А	All Sub- Areas	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	All Sub- Areas	BIO-4.1	BIO-4.1	BIO-4.1	BIO-4.1	BIO-4.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident har- bor seal colonies of San Francisco Bay.	А	Sub-Areas 5a and 5c	BIO-4.2	BIO-4.2	BIO-4.2	BIO-4.2	BIO-4.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE							NA/NE – Outside of known range of southern sea otters.	None

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	Appli-	Sub-Area Included			olicable Mitiga ment Method			Comments/Analysis of Re-	Additional Miti-
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	Aerial	sidual Impact at Site	gation Required
BIO-5.1: Effects on the California clapper rail.	A	All Sub- Areas	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on the California black rail.	NA/NE							NA/NE – Outside of known range black rails.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	A	All Sub- Areas	BIO-5.3 as modified by UFSWS BO	BIO-5.3 as modified by UFSWS BO	BIO-5.3 as modified by UFSWS BO	BIO-5.3 as modified by UFSWS BO	BIO-5.3 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	A	Sub-Areas 5c and 5d	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.5: Effects on raptors (birds of prey).	A	Sub-Areas 5a, 5b, 5c, 5d, 5f					BIO-5.5	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	All Sub- Areas	BIO-6.1 as modified by UFSWS BO	BIO-6.1 as modified by UFSWS BO	BIO-6.1 as modified by UFSWS BO	BIO-6.1 as modified by UFSWS BO	BIO-6.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli-	Sub-Area Included			olicable Mitiga ment Method			Comments/Analysis of Re-	Additional Miti-
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	Aerial	sidual Impact at Site	gation Required
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE							NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE							NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	All Sub- Areas	BIO-6.4 – minimize spraying	BIO-6.4 – mini- mize spraying	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: no mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R- 11 will not be used adjacent to channel to minimize any potential ad- verse affects on estuarine fish.
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE							NA/NE – Outside of known range of California red- legged frog and San Fran- cisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE							NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE							NA/NE – no potential tiger beetle habitat will be affected.	None
AQ-1: Dust Emissions.	А	All Sub- Areas	AQ-1	AQ-1	AQ-1	AQ-1	AQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli-	Sub-Area Included			olicable Mitiga ment Method	ations* used at Site)		Comments/Analysis of Re-	Additional Miti-
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	Aerial	sidual Impact at Site	gation Required
AQ-2: Smoke Emissions.	NA/NE							NA/NE – no burning proposed.	None
AQ-3: Herbicide Effects on Air Quality.	А	Sub-Areas 5a, 5b, 5c, 5d, 5f					AQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-4: Ozone Precursor Emissions.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-5: Carbon monoxide (CO) Emissions.	NA/NE							LTS/NLTAE without mitigation.	None
N-1: Disturbance of Sensitive Receptors	А	Sub-Areas 5a, 5b, 5c, 5d, 5e, 5g	N-1	N-1	N-1	N-1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker Injury from Accidents Associated with Manual and Mechanical Cordgrass Treatment.	NA/NE							NA/NE – Methods not pro- posed for site.	None
HS-2: Worker Health Effects from Herbicide Application.	А	All Sub- Areas	HS-2	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli-	Sub-Area Included			olicable Mitig ment Method	ations* I used at Site)		Comments/Analysis of Re-	- Additional Miti- gation
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	Aerial	sidual Impact at Site	gation Required
HS-3: Health Effects to the Public from Herbicide Application.	А	All Sub- Areas	HS-3	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All Sub- Areas	HS-4	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	А	All Sub- Areas	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	SU – impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in Views from Native Marsh, Mudflat, and Open Water to Non-native Cordgrass Meadows and Monocultures.	NA/NE							NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land Use Conflicts Between Herbicide Use and Sensitive Re- ceptors	А	All Sub Areas						LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land Use Conflicts from Mechanical and Burning Treat- ment Methods	NA/NE							NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	А	All Sub- Areas				CUI-1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli-	Sub-Area Included			olicable Mitiga ment Method			Comments/Analysis of Re-	Additional Miti-
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	Aerial	sidual Impact at Site	gation Required
CUL-2: Loss of Cultural Resources from Erosion.	NA/NE							NA/NE – No erosion- producing activities pro- posed	None
CUM-1: Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE							NA/NE – No restoration projects proposed on this site	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE							NA/NE – Without mitigation	None

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TSN: ISP-2004-5

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Coyote Creek & Mowry Slough Area, Alameda County

Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibi- ous Ve- hicle	Aerial	Implementation Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3, 4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2; CM-3)	All sub- Areas	Х	Х	Х	Х	Х	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-3, 17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
BIO-1.2: Effects on tidal marsh plant communi- ties affected by Atlantic smooth cordgrass and	Minimize entry and re- entry into marsh, define access points (BIO-1.2; CM-1)	All Sub- areas	Х	Х	Х	Х		During treatment		
its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibi- ous Ve- hicle	Aerial	Implementation Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
BIO-3: Effects on shore- birds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pa- cific Flyway stopovers (BIO-3)	All sub- areas	Х	Х	X	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All sub- areas	X	X	X	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All sub- areas	X	X	Х	X	Х	During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	All sub- areas	Х	Х	Х	Х		During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1; CM-15)	All sub- areas	X	X	X	X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub- areas	Х	Х	Х	Х	Х	Pre- and during treatment		
BIO-4.2: Effects on resident Harbor Seal colonies of San Francisco Bay	Minimize vehicle and foot access to marsh within 1000 feet of haul out sites (BIO-4.2)	Sub-Areas 5a and 5c	Х	Х	Х	Х		During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibi- ous Ve- hicle	Aerial	Implementation Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
	Avoid approaching haul out sites within 2000 feet (or any distance that elicits vigilance behavior) when pups are present (BIO-4.2)	All sub- areas	Х	Х	Х	Х	Х	During treatment	•	
	Follow ISP spill prevention plan or equivalent (BIO- 4.2; CM-17)	All sub- areas	Х	Х	Х	X	X	During treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1; CM-18)	All sub- areas	Х	Х	Х	Х		During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	All sub- areas					Х	Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	All sub- areas	X	X	X	X	X	Pre-treatment and during treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All sub- areas	Х	Х	Х	Х	Х	During and post- treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment re- port (BIO-5.3)	All sub- areas	Х	Х	Х	Х	Х	During and post- treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibi- ous Ve- hicle	Aerial	Implementation Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Watch for Song Sparrow presence in the work area during early season treat- ment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	All sub- areas	Х	X	X	Х	Х	During treatment		
BIO-5.4: Effects on California least terns and western snowy plovers.	Survey access levees for nesting CALT and WSPL prior to entry (BIO-5.4; CM-20)	Sub-Areas 5c and 5d	Х	Х	Х	Х	Х	Pre-treatment		
	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment re- port (BIO-5.4)	Sub-Areas 5c and 5d	Х	Х	Х	Х	Х	During and post- treatment		
BIO-5.5 Effects on raptors (birds of prey)	Consult qualified biologist to determine possible raptor nesting presence (BIO-5.5)	Sub-Areas 5a, 5b, 5c, 5d, 5f					Х	Pre-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	Sub-Areas 5a, 5b, 5c, 5d, 5f					Х	During treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring- run Chinook salmon, steelhead).	Minimize herbicide applications (BIO-6.1)	All sub- areas	Х	X	X	Х	X	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibi- ous Ve- hicle	Aerial	Implementation Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.1)	All sub- areas	X	Х	Х	Х	Х	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near channels (BIO-6.4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ- 1)	All Sub- areas	Х	Х	Х	Х	Х	During treatment		
AQ-3: Herbicide effects on air quality.	Implement ISP approved drift management plan (AQ-3; CM-3, 4)	Sub-Areas 5a, 5b, 5c, 5d, 5f					Х	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Sub-Areas 5a, 5b, 5c, 5d, 5e, 5g	Х	Х	Х	Х		During treatment		
HS-2: Worker Health Effects from Herbicide Application.	Follow handling and application procedures as identified on product label (HS-2; CM-3, 4)	All sub- areas	X	Х	Х	Х	Х	During treatment		
HS-3: Health Effects to the Public from Herbicide Application.	Minimize drift according to ISP drift management plan (HS-3; CM-3, 4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		

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	Applicable Mitigation &	Applicable				Amphibi-		Implementation		Signatures
Impact*	Conservation Measures*	Sub-area	Backpack	Boat	Truck	ous Ve- hicle	Aerial	Timing	Implement- ing Entity	ISP Field Supervisor
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub- areas	Х	Х	Х	Х	Х	Pre-treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3, 4,17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	All sub- areas	Х	Х	Х	Х	Х	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	Report all discovered pre- historic or historic re- sources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological miti- gation has taken place (CUL-1)	All sub- areas				Х		Pre-treatment and during treatment		
CM-7: Invasive Species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	Х					Post-treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Emeryville Crescent, Alameda County

TSN: ISP-2004-6

			plicable Mitigati tment Method u			
Impact*	Applicable Sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE				NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	All sub- areas	GEO-2			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE				NA/NE – Proposed activities will not remove existing native <i>Spartina</i> matrix.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE				NA/NE – No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	All sub- areas	None	None	None	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE				NA/NE – Proposed activities will not take place within salt marsh pans.	None
WQ-1: Degradation of Water Quality due to Herbicide Application	All sub- areas	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

IMPACT CHECKLIST Emervville Crescent TSN: ISP-2004-6

			pplicable Mitigati tment Method u			
Impact*	Applicable Sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
WQ-2: Degradation of Water Quality due to Herbicide Spills	All sub- areas	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	All sub- areas	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of Water Quality due to Contaminant Remobilization	NA/NE				NA/NE – No dredging or other sediment- mobilizing activities proposed.	None
WQ-5: Water Quality Effects Resulting from Sediment Accretion	NA/NE				NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE				NA/NE – Field surveys found no salt- meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	All sub- areas	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE				NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE				NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None

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IMPACT CHECKLIST Emeryville Crescent TSN: ISP-2004-6

			oplicable Mitigati tment Method u			
Impact*	Applicable Sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE				NA/NE – Field surveys found no special- status plant species at site.	None
BIO-3: Effects on shorebirds and waterfowl.	All sub- areas	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	All sub- areas	BIO-4.1 as modified by UFSWS BO	BIO-4.1 as modified by UFSWS BO	BIO-4.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE				NA/NE – Harbor seal colonies at or near site.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE				NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	All sub- areas	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE at site – Potential project impacts mitigated at site. SU cumulative impacts addressed in EIS/R and CEQA findings.	None
BIO-5.2: Effects on the California black rail.	All sub- areas	BIO-5.2	BIO-5.2	BIO-5.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	All sub- areas	BIO-5.3 as modified by UFSWS BO	BIO-5.3 as modified by UFSWS BO	BIO-5.3 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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IMPACT CHECKLIST Emeryville Crescent TSN: ISP-2004-6

	Applicable	(by Treat	plicable Mitigati tment Method u	sed at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	at Site	Required
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE				NA/NE – No suitable habitat for least terns or western snowy plovers at this site.	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE				NA/NE – No helicopters to be used in treatment at this site.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	All sub- areas				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE				NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE				NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	All sub- areas	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: no mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any potential adverse af- fects on estuarine fish.
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE				NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE				NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE				NA/NE – No potential tiger beetle habitat will be affected.	None

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			plicable Mitigati ment Method u			
Impact*	Applicable Sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
AQ-1: Dust Emissions.	NA/NE				NA/NE – Access roads are paved.	None
AQ-2: Smoke Emissions.	NA/NE				NA/NE – No burning proposed.	None
AQ-3: Herbicide Effects on Air Quality.	NA/NE				NA/NE – No aerial applications proposed	None
AQ-4: Ozone Precursor Emissions.	NA/NE				LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) Emissions.	NA/NE				LTS/NLTAE without mitigation.	None
N-1: Disturbance of Sensitive Receptors	All sub- areas	N-1	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker Injury from Accidents Associated with Manual and Mechanical Cordgrass Treatment.	NA/NE				NA/NE – No manual or mechanical cordgrass treatment proposed	None
HS-2: Worker Health Effects from Herbicide Application.	All sub- areas	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health Effects to the Public from Herbicide Application.	All sub- areas	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	All sub- areas	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

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USFWS BO – US Fish & Wildlife Service Biological Opinion

			plicable Mitigati ment Method u			
Impact*	Applicable Sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	All sub- areas	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in Views from Native Marsh, Mudflat, and Open Water to Non-native Cordgrass Meadows and Monocultures.	NA/NE				NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land Use Conflicts Between Herbicide Use and Sensitive Re- ceptors	All sub- areas				LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land Use Conflicts from Mechanical and Burning Treat- ment Methods	NA/NE				NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	All sub- areas	CUL-1	CUL-1	CUL-1	NA/NE – Treatment activities will not take place in cultural resources areas	None
CUL-2: Loss of Cultural Resources from Erosion.	NA/NE				NA/NE – No erosion-producing activities proposed	None
CUM-1: Effects of wetland restoration projects on spread of nonnative cordgrass	NA/NE				NA/NE – No restoration projects proposed on this site	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE				NA/NE – No Mosquito Abatement Districts working on this site	None

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Emeryville Crescent, Alameda County

TSN: ISP-2004-6

	Applicable Mitigation &			5 , ,	Conven-		Verification .	Signatures
Impact	Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	tional Spray Truck	Implementation Timing	Implementing Entity	ISP Field Supervisor
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	Minimize vehicle travel in areas subject to erosion (GEO-2;CM-1).	6b, 6b	Х			During treatment		
WQ-1: Degradation of Water Quality due to Herbicide Application	Apply herbicide directly to plant at low tide and according to l6a, 6bel (WQ-1;CM-3,4)	6a, 6b	Х	Х	Х	During treatment		
WQ-2: Degradation of Water Quality due to Herbicide Spills	Apply under supervision of trained applicator (WQ-2;CM-3)	6a, 6b	Х	Х	Х	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-3,17)	6a, 6b	Х	Х	Х	During treatment		
WQ-3: Degradation of Water Quality due to Fuel or Petro- leum Spills	Implement spill and contain- ment plan provided or ap- proved by ISP (WQ-3;CM-17)	6a, 6b	Х	Х	Х	During treatment		
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth	Minimize entry and re-entry into marsh (BIO-1.2;CM-1)	6a, 6b	Х	Х	Х	During treatment		
cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	6a, 6b	Х	X	Х	During treatment		
	Place mats or other protectors beneath heavy equipment op- erating in sensitive high-marsh vegetation, especially gum- plant. (BIO-1.2;CM-1)	6a, 6b	Х	Х	Х	During treatment		

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	Applicable Mitigation &			5 , ,	Conven-		Verification	Signatures
Impact	Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	tional Spray Truck	Implementation Timing	Implementing Entity	ISP Field Supervisor
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2;CM-3,4)	6a, 6b	Х	Х	Х	During treatment		
BIO-3: Effects on shore- birds, waterfowl & marsh- land birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers (BIO-3)	6a, 6b	Х	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	6a, 6b	Х	X	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	6a, 6b	Х	X	Х	During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed h6a, 6bitat. Flag areas of repeated access (BIO-4.1;CM-15)	6a, 6b	Х	Х	Х	During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	6a, 6b	Х	Х	Х	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	6a, 6b	Х	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	6a, 6b	Х	Х	Х	During treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1;CM- 18)	6a, 6b	Х	Х	Х	During treatment		

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	Applicable Mitigation &	A " 11	A 177		Conven-		Verification	
Impact	Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	tional Spray Truck	Implementation Timing	Implementing Entity	ISP Field Supervisor
BIO-5.1: Effects on California clapper rail.	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	6a, 6b	X	Х	X	Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	6a, 6b	X	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	6a, 6b	Х	Х	Х	Pre-treatment and during treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	6a, 6b	X	Х	Х	During and post- treatment		
BIO-5.2: Effects on California Black Rail	Perform work only during Sept 1 thru Feb 1 to avoid CABR breeding season (BIO-5.2)	6a, 6b	Х	X	Х	During treatment		
	For work within the CABR breeding season, call counts will be performed in the early spring according to FWS protocols (BIO-5.2)	6a, 6b	X	Х	X	Pre-treatment		
	Provide CABR Field Biologist Supervision (BIO-5.2)	6a, 6b	X	Х	Х	Pre-treatment and during trea- tment		
	Assure that field personnel are trained in general CABR biology and identification as well as call detection (BIO-5.2)	6a, 6b	Х	Х	X	Pre-treatment and during treatment		
	Report any CABR activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.2)	6a, 6b	Х	Х	Х	During treatment and Post- treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

MITIGATION CHECKLIST

	Applicable Mitigation &	A !' !!	A 177	5 / /	Conven-		Verification	- 3
Impact	Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	tional Spray Truck	Implementation Timing	Implementing Entity	ISP Field Supervisor
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Implement CLRA timing restriction (most restrictive) (BIO-5.3)	6a, 6b	Х	Х	Х	During treatment		
	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	6a, 6b	Х	Х	Х	During and post- treatment		
	Avoid spraying or removing Grindelia plants in the marsh	6a,6b	Х	Х	Х	During treatment		
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	6a,6b	Х	Х	Х	During treatment		
BIO-6.1: Effects on anadro- mous salmonids (winter-run and spring-run Chinook	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	6a,6b	Х	Х	Х	During treatment		
salmon, steelhead).	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	6a,6b	Х	Х	Х	During treatment		
BIO-6.4: Effects on estua- rine fish populations of shal-	Bio-6.4 – Minimize spraying near channels (BIO-6.4)	6a, 6b	Х	Х	Х	During treatment		
low submerged intertidal mudflats and channels.	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	6a, 6b	Х	Х	Х	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	6a, 6b	X	Х	X	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	Applicable Mitigation &				Conven-		Verification .	Signatures
Impact	Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	tional Spray Truck	Implementation Timing	Implementing Entity	ISP Field Supervisor
HS-2: Worker Health Effects from Herbicide Application.	Follow handling and application procedures as identified on product l6a, 6bel (HS-2;CM-3,4,17)	6a, 6b	X	X	Х	During treatment		
HS-3: Health Effects to the Public from Herbicide Appli-	Minimize drift according to ISP drift management plan (HS-3)	6a, 6b	Х	Х	Х	During treatment		
cation.	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	6a, 6b	Х	Х	Х	Pre-treatment		
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	6a, 6b	Х	Х	Х	Pre-treatment and during treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,4,17)	6a, 6b	Х	Х	Х	During treatment		
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	6a, 6b	Х	X	Х	Pre-treatment, during treatment, post-treatment		
CM-7: Invasive Species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	6a, 6b	X	X	X	Post-treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

IMPACT CHECKLIST Oro Loma Marsh TSN: ISP-2004-7

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Oro Loma Marsh, Alameda County

TSN: ISP-2004-7

	Applicable		Applicable Mitigations* (by Treatment Method used at Site)				
Impact*	to Site	Backpack	Truck	Amphibious Vehicle	Aerial	Comments/Analysis of Residual Im- pact at Site	Additional Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE					NA/NE-Proposed activities will not elevate erosion above ambient levels	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	А			GEO-2		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE					NA/NE-Proposed activities will not take place within an estuarine beach	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE					NA/NE-No dredging /sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	GEO-5	GEO-5	GEO-5	GEO-5	No adverse impact (see PEIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE					NA/NE-Proposed activities will not take place within salt marsh pans	None
WQ-1: Degradation of water quality due to herbicide application	А	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 $\,$ $\,$ 1 of 6 $\,$

A - Applicable NA/NE - Not Applicable/No Effect

SU – Significant but unmitigable impact LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect

USFWS BO - US Fish & Wildlife Service Biological Opinion

IMPACT CHECKLIST Oro Loma Marsh TSN: ISP-2004-7

	Applicable			le Mitigations* Method used at Si	te)		
Impact*	to Site	Backpack	Truck	Amphibious Vehicle	Aerial	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
WQ-2: Degradation of water quality due to herbicide spills	А	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	А	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE					NA/NE-No dredging/excavation proposed for this site	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE					NA/NE-This impact only applies to PEIS/R Alternative 3	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE					NA/NE-Field surveys have found no Salt meadow or English cordgrass at this site	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE					NA/NE-Field surveys have found no Chilean cordgrass at this site	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE					NA/NE-Field surveys have found no eelgrass or other submerged aquatic plants at this site	None
BIO-2: Effects on special- status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE					NA/NE-Field surveys have found no special status plants at this site	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 2 of 6

A - Applicable NA/NE - Not Applicable/No Effect

SU – Significant but unmitigable impact LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect

USFWS BO - US Fish & Wildlife Service Biological Opinion

Oro Loma Marsh TSN: ISP-2004-7 IMPACT CHECKLIST

	Applicable			le Mitigations* Method used at Si	te)		
Impact*	to Site	Backpack	Truck	Amphibious Vehicle	Aerial	Comments/Analysis of Residual Im- pact at Site	Additional Mitigation Required
BIO-3: Effects on shorebirds and waterfowl.	А	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	BIO-4.1 as modi- fied by USFWS BO	BIO-4.1 as modified by USFWS BO	BIO-4.1 as modified by USFWS BO		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE					NA/NE-No harbor seal colonies at or near site	None
BIO-4.3: Effects on the southern sea otter.	NA/NE					NA/NE-Outside of the known range of the southern sea otter	None
BIO-5.1: Effects on the California clapper rail.	А	BIO-5.1	BIO-5.1	BIO-5.1	BIO-5.1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.2: Effects on the California black rail.	А	BIO-5.2	BIO-5.2	BIO-5.2	BIO-5.2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	А	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE					NA/NE-No California least terns or western snowy plovers within or adjacent to site.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 3 of 6

NA/NE - Not Applicable/No Effect A - Applicable

SU – Significant but unmitigable impact LTS USFWS BO – US Fish & Wildlife Service Biological Opinion LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

IMPACT CHECKLIST Oro Loma Marsh TSN: ISP-2004-7

	Applicable			le Mitigations* Method used at Si	ite)		
Impact*	to Site	Backpack	Truck	Amphibious Vehicle	Aerial	Comments/Analysis of Residual Im- pact at Site	Additional Mitigation Required
BIO-5.5: Effects on raptors (birds of prey).	А				BIO-5.5	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE					NA/NE-Outside of known range of delta smelt and Sacramento splittail	None
BIO-6.3: Effects on the tidewater goby.	NA/NE					NA/NE-Outside of the known range of the tidewater goby	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	BIO-6.4	BIO-6.4	BIO-6.4	BIO-6.4	LTS/NLTAE-with additional mitigation BIO-6(b) (Note: no mowing on site)	BIO-6.4(6) –R-11 will not be used adjacent to channel to minimize any potential adverse af- fects on estuarine fish
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE					NA/NE-Outside of habitat range of California Red Legged Frog and San Francisco Garter Snake	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE					NA/NE-Site activities will not create additional mosquito habitat	None
BIO-9: Effects on tiger beetle species.	NA/NE					LTS/NLTAE- Site conditions consistent with those anticipated in the PEIS/R – no mitigation required	None
AQ-1: Dust Emissions.	А	AQ-1	AQ-1	AQ-1	AQ-1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 4 of 6

A - Applicable NA/NE - Not Applicable/No Effect

SU – Significant but unmitigable impact LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect

IMPACT CHECKLIST Oro Loma Marsh TSN: ISP-2004-7

	Applicable			ole Mitigations* Method used at Sit	te)		
Impact*	to Site	Backpack	Truck	Amphibious Vehicle	Aerial	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
AQ-2: Smoke Emissions.	NA/NE					NA/NE-No burning proposed	None
AQ-3: Herbicide Effects on air quality.	А				AQ-3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
AQ-4: Ozone precursor emissions.	NA/NE					LTS/NLTAE-without mitigation	None
AQ-5: Carbon monoxide (CO) emissions.	NA/NE					LTS/NLTAE-without mitigation	None
N-1: Disturbance of sensitive receptors	А	N-1	N-1	N-1	N-1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-1: Worker Injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE					NA/NE-Methods not proposed for this site.	None
HS-2: Worker health effects from herbicide application.	А	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-3: Health effects to the public from herbicide application.	А	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 $\,$ 5 of 6 $\,$

A - Applicable NA/NE - Not Applicable/No Effect

SU – Significant but unmitigable impact LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect

USFWS BO - US Fish & Wildlife Service Biological Opinion

IMPACT CHECKLIST Oro Loma Marsh TSN: ISP-2004-7

	Applicable			le Mitigations* Method used at Sit	te)		
Impact*	to Site	Backpack	Truck	Amphibious Vehicle	Aerial	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
VIS-1: Alteration of views from removal of non-native cordgrass Infestations.	А	VIS-1	VIS-1	VIS-1	VIS-1	SU-impacts addressed in the PEIS/r and CEQA findings. Site conditions consistent with those anticipated within in the PEIS/R	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE					NA/NE-Applies only to PEIS/R Alternative 3 (No action)	None
LU-1: Land use conflicts be- tween herbicide use and sensi- tive receptors	А	LU-1	LU-1	LU-1	LU-1	LTS/NLTAE-Limited to less than significant by HS,N & AQ mitigations	None
LU-2: Land use conflicts from mechanical and burning treatment methods	NA/NE					NA/NE-Methods not proposed for this site.	None
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	А			CUL-1		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
CUL-2: Loss of Cultural Resources from Erosion.	NA/NE					NA/NE-Methods not proposed for this site	None
CUM-1: Effects of wetland restoration projects on spread of non-native cordgrass	NA/NE					NA/NE-site is an existing restoration site with established <i>Spartina</i> hybrids. Control of <i>Spartina</i> on this site will enhance restoration efforts.	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE					NA/NE-Without mitigation	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 6 of 6

NA/NE - Not Applicable/No Effect A - Applicable

SU – Significant but unmitigable impact LTS USFWS BO – US Fish & Wildlife Service Biological Opinion LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Oro Loma Marsh, Alameda County

TSN: ISP-2004-7

	Applicable Mitigation &					Implementation	Verification	n Signatures
Impact*	Conservation Measures*	Back- pack	Truck	Amphibious Vehicle	Aerial	Timing	Implementing Entity	ISP Field Supervisor
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	Minimize vehicle travel in areas subject to erosion. (GEO-2; CM-1)			Х		During treatment		
WQ-1: Degradation of Water Quality due to Herbicide Application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3, 4)	Х	Х	Х	Х	During treatment		
WQ-2: Degradation of Water Quality due to Herbicide Spills	Apply under supervision of trained applicator (WQ-2; CM-3)	Х	Х	X	Х	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	Х	X	X	Х	During treatment		
WQ-3: Degradation of Water Quality due to Fuel or Petro- leum Spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	Х	Х	X	Х	During treatment		
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	Minimize entry and re- entry into marsh, define access points (BIO-1.2; CM-1)	Х	Х	Х	Х	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	Х	Х	Х	Х	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &					Implementation	Verification	n Signatures
Impact*	Conservation Measures*	Back- pack	Truck	Amphibious Vehicle	Aerial	Timing	Implementing Entity	ISP Field Supervisor
BIO-3: Effects on shore-birds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pa- cific Flyway stopovers (BIO-3)	Х	Х	X	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	Х	Х	X	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	Х	Х	X	Х	During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	Х	Х	X		During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1; CM-15)	Х	Х	X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	Х	Х	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	Х	Х	X	Х	Pre- and during treatment		
BIO-5.1: Effects on Califor- nia Clapper Rail	Perform work only during Sept 1 thru Feb 1 to avoid CACR breeding season (BIO-5.1; CM-18)	Х	Х	Х		During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &					Implementation	Verification	Signatures
Impact*	Conservation Measures*	Back- pack	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
	For work within the CACR breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	Х	X	X	X	Pre-treatment		
	Provide CACR Field Biologist Supervision (BIO-5.1)	Х	Х	Х	X	Pre-treatment and During treatment		
	Assure that field person- nel are trained in general CACR biology and identi- fication as well as call detection (BIO-5.1)	X	Х	X	X	Pre-treatment and During treatment		
	Report any CACR activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	Х	Х	X	X	During treatment and Post-treatment		
BIO-5.2: Effects on California Black Rail	Perform work only during Sept 1 thru Feb 1 to avoid CABR breeding season (BIO-5.2)	Х	Х	Х		During treatment		
	For work within the CABR breeding season, call counts will be performed in the early spring according to FWS protocols (BIO-5.2)	Х	Х	X	Х	Pre-treatment		
	Provide CABR Field Bi- ologist Supervision (BIO- 5.2)	X	Х	Х	Х	Pre-treatment and During treatment		
	Assure that field person- nel are trained in general CABR biology and identi- fication as well as call detection (BIO-5.2)	Х	Х	X	Х	Pre-treatment and During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

Page 3 of 6

	Applicable Mitigation &					Implementation	Verification	n Signatures
Impact*	Conservation Measures*	Back- pack	Truck	Amphibious Vehicle	Aerial	Timing	Implementing Entity	ISP Field Supervisor
	Report any CABR activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.2)	Х	Х	Х	Х	During treatment and post-treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment re- port (BIO-5.3)	X	Х	X	X	During and post- treatment		
	Perform work according to Bio 5.1, post Clapper Rail breeding season protocols (most restrictive) (Bio 5.1;CM 18)	X	Х	X	X	During treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	Х	Х	X	Χ	During treatment		
	Watch for Song Sparrow presence in the work area during early season treat- ment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	Х	×	X	X	During treatment		
BIO-5.5: Effects on raptors (birds of prey).	Consult qualified biologist to determine possible raptor nesting presence (BIO-5.5)				Х	Pre-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)				Х	During treatment		
BIO-6.1: Effects on anadromous salmonids (win- ter-run and spring-run Chi- nook salmon, steelhead).	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &					Implementation	Verification	n Signatures
Impact*	Conservation Measures*	Back- pack	Truck	Amphibious Vehicle	Aerial	Timing	Implementing Entity	ISP Field Supervisor
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	X	Х	X	X	During treatment		
BIO-6.4: Effects on estua- rine fish populations of shal-	Minimize spraying near channels (BIO-6.4)	Х	Х	X	Х	During treatment		
low submerged intertidal mudflats and channels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	X	Х	X	X	During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ- 1)	Х	Х	Х	Х	During treatment		
AQ-3: Herbicide Effects on Air Quality.	Implement ISP herbicide drift management plan for aerial applications of her- bicide (AQ-3; CM-3, 4)				Х	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Х	Х	Х	Х	During treatment		
	Avoid use of helicopters within 1,500 ft of hospitals, schools, or houses during times of occupancy (N-1)				Х	During treatment		
HS-2: Worker Health Effects from Herbicide Application.	Follow handling and application procedures as identified on product label (HS-2; CM-3)	Х	Х	Х	Х	During treatment		
HS-3: Health Effects to the Public from Herbicide Application.	Minimize drift according to ISP drift management plan (HS-3; CM-3,4)	Х	Х	X	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &					Implementation	Verification	n Signatures
Impact*	Conservation Measures*	Back- pack	Truck	Amphibious Vehicle	Aerial	Timing	Implementing Entity	ISP Field Supervisor
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	Х	Х	Х	X	Pre-treatment		
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	X	×	X	X	Pre-treatment and during treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3, 4, 17)	Х	Х	Х	Х	During treatment		
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	Х	Х	Х	Х	Pre-treatment, dur- ing treatment, post- treatment		
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	Conduct Phase 1 records search for cultural re- sources on site before work (CUL-1)			Х		Pre-Treatment		
CM-7: Invasive Species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	Х	Х	Х	Х	Post-treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Palo Alto Baylands, Santa Clara County

TSN: ISP-2004-8

	Appli- cable to		licable Mitigation nent Method use		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Dig	Cover	at Site	Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE				NA/NE – Manual digging on site will be on a limited basis, no large-scale excavation proposed.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE				NA/NE - No equipment will be working on marsh or mudflat surfaces	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE				NA/NE - Proposed activities will not take place within an estuarine beach.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE				NA/NE - No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	NA/NE				No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE				NA/NE - Proposed activities will not take place within salt marsh pans.	None
WQ-1: Degradation of Water Quality due to Herbicide Application	А	WQ-1			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable/No Effect

Key:

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SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to		olicable Mitigatio ment Method us		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Dig	Cover	at Site	Required
WQ-2: Degradation of Water Quality due to Herbicide Spills	А	WQ-2			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	Α	WQ-3			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of Water Quality due to Contaminant Remobilization	NA/NE				NA/NE - No dredging or other sediment- mobilizing activities proposed.	None
WQ-5: Water Quality Effects Resulting from Sediment Accretion	NA/NE				NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE				NA/NE – Field surveys found no salt- meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	A	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE				NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE				NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE				NA/NE - Field surveys found no special- status plant species at site.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to		olicable Mitigation ment Method use		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Dig	Cover	at Site	Required
BIO-3: Effects on shorebirds and waterfowl.	Α	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Α	BIO-4.1 as modified by USFWS BO	BIO-4.1 as modified by USFWS BO	BIO-4.1 as modified by USFWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE				NA/NE - No harbor seal colonies within project area	None
BIO-4.3: Effects on the southern sea otter.	NA/NE				NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	А	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on the California black rail.	NA/NE				NA/NE – Outside of known range black rails.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE				NA/NE – Outside of known range CA least terns and western snowy plovers.	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE				NA/NE - No aerial applications proposed for this site.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	NA/NE	BIO-6.1			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli- cable to		cable Mitigatio ent Method us		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Dig	Cover	at Site	Required
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE				NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE				NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	BIO-6.4 – mini- mize spraying			LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: no mowing proposed because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any potential adverse af- fects on estuarine fish.
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE				NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE				NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE				NA/NE - No potential tiger beetle habitat will be affected.	None
AQ-1: Dust Emissions.	NA/NE	AQ-1			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-2: Smoke Emissions.	NA/NE				NA/NE – No burning proposed.	None
AQ-3: Herbicide Effects on Air Quality.	NA/NE				NA/NE-No aerial applications proposed	None
AQ-4: Ozone Precursor Emissions.	NA/NE				LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) Emissions.	NA/NE				LTS/NLTAE without mitigation.	None

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	Appli- cable to		olicable Mitigatio ment Method us		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Dig	Cover	at Site	Required
N-1: Disturbance of Sensitive Receptors	А	N-1			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker Injury from Accidents Associated with Manual and Mechanical Cordgrass Treatment.	А		HS-1	HS-1	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-2: Worker Health Effects from Herbicide Application.	А	HS-2			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health Effects to the Public from Herbicide Application.	А	HS-3			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	HS-4	HS-4	HS-4	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	А	VIS-1	VIS-1	VIS-1	SU - Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in Views from Native Marsh, Mudflat, and Open Water to Non-native Cordgrass Meadows and Monocultures.	NA/NE				NA/NE - Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land Use Conflicts Between Herbicide Use and Sensitive Re- ceptors	А				LTS/NLTAE - Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land Use Conflicts from Mechanical and Burning Treat- ment Methods	NA/NE				NA/NE - Methods not proposed for site	None

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	Appli- cable to		licable Mitigation ment Method use		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Dig	Cover	at Site	Required
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	Α	CUL-1	CUL-1	CUL-1	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of Cultural Resources from Erosion.	NA/NE				NA/NE - No erosion-producing activities proposed	None
CUM-1: Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE				NA/NE - No restoration projects proposed on this site	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE				NA/NE- No Mosquito Abatement Districts working on this site	None

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MITIGATION CHECKLIST

Palo Alto Baylands TSN: ISP-2004-8

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Palo Alto Baylands, Santa Clara County

TSN: ISP-2004-8

	Applicable Mitigation &				Implementation	Verification	Signatures
Impact	Conservation Measures	Herbicide	Dig	Covering	Timing	Implementing Entity	ISP Field Supervisor
WQ-1: Degradation of Water Quality due to Herbicide Applica- tion	Apply herbicide directly to plant at low tide and according to label. (WQ-1;CM-3,4)	X			During treatment		
WQ-2: Degradation of Water Quality due to Herbicide Spills	Apply under supervision of trained applicator (WQ-2;CM-3)	Х			During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2;CM-17)	Х			During treatment		
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	Implement spill and containment plan provided or approved by ISP (WQ-3;CM-17)	Х			During treatment		
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its	Minimize entry and re-entry into marsh , define access points (BIO-1.2;CM-1)	Х	Х	Х	During treatment		
hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	Х	Х	Х	During treatment		
	Avoid herbicide application to non- target vegetation adjacent to treat- ment area (BIO-1.2;CM-4)	Х			During treatment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers (BIO-3)	Х	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	Х	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	Applicable Mitigation &				Implementation	Verification	Signatures
Impact	Conservation Measures	Herbicide	Dig	Covering	Timing	Implementing Entity	ISP Field Supervisor
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1;CM-15)	X	X	X	During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	Х	Х	Х	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	Х	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	Х	Х	Х	Pre- and during treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1;CM-18)	X	Х	Х	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring ac- cording to FWS protocols (CM-18)	X	X	Х	Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	Х	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	X	Х	Х	Pre-treatment and during treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	Х	Х	Х	During and post treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	Х	Х	Х	During and post treatment		
	Avoid spraying or removing Grindelia plants in the marsh	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

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MITIGATION CHECKLIST

Palo Alto Baylands TSN: ISP-2004-8

	Applicable Mitigation &				Implementation	Verification	Signatures
Impact	Conservation Measures	Herbicide	Dig	Covering	Timing	Implementing Entity	ISP Field Supervisor
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	Х	Х	X	During treatment		
BIO-6.1: Effects on anadromous salmonids (Winter-run and spring-run Chinook Salmon, steelhead)	Herbicide treatments shall be minimized near channels and mudflats (BIO-6.1)	Х			During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow sub-	Minimize spraying near channels (BIO-6.4)	X			During treatment		
merged intertidal mudflats and channels.	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	Х			During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Х			During treatment		
HS-1: Worker Injury from Accidents Associated with Manual and Mechanical Cordgrass Treatment	Implement ISP-approved site safety plan or equivalent (HS-1)		Х	Х	During treatment		
HS-2: Worker Health Effects from Herbicide Application.	Follow handling and application procedures as identified on product label (HS-2;CM-3,17)	Х			During treatment		
HS-3: Health Effects to the Public from Herbicide Application.	Minimize drift according to ISP drift management plan (HS-3;CM-3,4,17)	Х			During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	X			Pre-treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,4,17)	X	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

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MITIGATION CHECKLIST

Palo Alto Baylands TSN: ISP-2004-8

	Applicable Mitigation &				Implementation	Verification	Signatures
Impact	Conservation Measures	Herbicide Dia Coverina - :		,	Implementing Entity	ISP Field Supervisor	
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	Х	Х	Х	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	Х	Х	Х	Pre-treatment and during treat- ment		
CM-7: Invasive Species	Monitor cleared patches for re- cruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	Х	Х	Х	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Pickleweed Park, San Rafael, Marin County

TSN: ISP-2004-9

Impact*	Appli- cable to Site		nlicable Mitigations* ment Method used at Site) Digging		Comments/Analysis of Residual Impact	Additional Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE	Herbiolide	Digging		NA/NE - Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE				NA/NE - No equipment will be working on marsh or mudflat surfaces	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE				NA/NE - Proposed activities will not take place within an estuarine beach.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE				NA/NE - No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	NA/NE				No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE				NA/NE - Proposed activities will not take place within salt marsh pans.	None
WQ-1: Degradation of Water Quality due to Herbicide Application	А	WQ-1			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of Water Quality due to Herbicide Spills	А	WQ-2			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli- cable to		olicable Mitigations* ment Method used at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging	at Site	Required
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	А	WQ-3		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of Water Quality due to Contaminant Remobilization	NA/NE			NA/NE - No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water Quality Effects Resulting from Sediment Accretion	NA/NE			NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE			NA/NE – Field surveys found no salt- meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	А	BIO-1.3	BIO-1.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE			NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	А	BIO-2	BIO-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-3: Effects on shorebirds and waterfowl.	А	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	BIO-4.1	BIO-4.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli- cable to		olicable Mitigations* ment Method used at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging	at Site	Required
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE			NA/NE - No harbor seal colonies within project area	None
BIO-4.3: Effects on the southern sea otter.	NA/NE			NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	А	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on the California black rail.	А	BIO-5.2	BIO-5.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE			NA/NE - Area not known to be a site for California least terns or western snowy plovers.	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE			NA/NE - No aerial applications proposed for this site.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	BIO-6.1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE			NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE			NA/NE – Outside of known range of tidewater goby.	None

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	Appli- cable to		licable Mitigations* nent Method used at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging	at Site	Required
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	BIO-6.4 – mini- mize spraying		LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: No mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any potential adverse af- fects on estuarine fish.
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE			NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE			NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE			NA/NE - No potential tiger beetle habitat will be affected.	None
AQ-1: Dust emissions.	NA/NE			NA/NE - Access will be on foot or via paved access road	None
AQ-2: Smoke emissions.	NA/NE			NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	NA/NE			NA/NE - No aerial applications proposed	None
AQ-4: Ozone precursor emissions.	NA/NE			LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE			LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	А	N-1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	Α		HS-1	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli- cable to		olicable Mitigations* ment Method used at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging	at Site	Required
HS-2: Worker health effects from herbicide application.	А	HS-2		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	HS-3		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	HS-4	HS-4	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	VIS-1	VIS-1	SU - Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE			NA/NE - Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts between herbicide use and sensitive receptors	А			LTS/NLTAE - Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from me- chanical and burning treatment methods	NA/NE			NA/NE - Methods not proposed for site	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	А	CUL-1	CUL-1	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE			NA/NE - No erosion-producing activities proposed	None
CUM-1- Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE			NA/NE - No restoration projects proposed on this site	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable / No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to		olicable Mitigations* ment Method used at Site)		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging		at Site	Required
CUM-2- Cumulative damage to marsh plain vegetation	NA/NE				NA/NE - No Mosquito Abatement Districts working on this site	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable / No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Pickleweed Park, San Rafael, Marin County

TSN: ISP-2004-9

	Applicable Mitigation &			Implementation	Verification Signatures		
Impact	Conservation Measures	Herbicide	Digging	Timing	Implementing Entity	ISP Field Supervisor	
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1;CM-3,4)	X		During treatment			
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2CM-3)	X		During treatment			
	Implement spill and containment plan provided or approved by ISP (WQ-2;CM-17)	X		During treatment			
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP (WQ-3;CM-17)	X		During treatment			
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic Smooth Cordgrass and	Minimize entry and re-entry into marsh , define access points (BIO-1.3;CM-1)						
its hybrids.	Avoid herbicide application to non- target vegetation adjacent to treat- ment area (BIO-1.3;CM-3,4)						
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass and its hy-	Minimize entry and re-entry into marsh , define access points (BIO-1.3;CM-1)	Х	Х	During treatment			
brids.	Avoid herbicide application to non- target vegetation adjacent to treat- ment area (BIO-1.3;CM-3,4)	X		During treatment			
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	Perform pre-project surveys for Circium hydrophilum hydrophilum (BIO-2;CM-22)	X	Х	Pre-treatment			
	Field crews will be instructed on ID and avoidance of <i>Circium hydrophilum hydrophilum</i> (BIO-2)	X	Х	Pre-treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

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Impact	Applicable Mitigation &	Herbicide	Digging	Implementation	Verification	Signatures ISP Field
тірасі	Conservation Measures	rierbiciae	Digging	Timing	Implementing Entity	Supervisor
	On site qualified botanical supervision (BIO-2;CM-23)	Х	Х	During treatment	•	·
	Cover non-target Circium hydrophilum hydrophilum with fabric during spray work (BIO-2)	Х		During treatment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers (BIO-3)	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	Х	Х	During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1;CM-15)	X	Х	During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	Х	Х	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	X	X	Pre- and during treatment		
BIO-5.1: Effects on the California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season.(BIO-5.1;CM-18)	Х	Х	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring ac- cording to FWS protocols (CM-18)	Х	Х	Pre-treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	Applicable Mitigation &			Implementation	Verification	
Impact	Conservation Measures	Herbicide	Digging	Timing	Implementing Entity	ISP Field Supervisor
	Provide CLRA Field biologist supervision(BIO-5.1)	X	X	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection(BIO-5.1)	X	X	Pre-treatment and during treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report.(BIO-5.1)	X	X	During and post- treatment		
BIO-5.2: Effects on the California Black Rail	Implement mitigations for BIO-5.1 above (BIO-5.1)	X	Х	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	X	X	During and post- treatment		
	Avoid spraying or removing Grindelia plants in the marsh	X	X	During treatment		
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	X	Х	During treatment		
BIO-6.1: Effects on anadromous salmonids (Winter-run and spring-run Chinook Salmon, steelhead)	Herbicide treatments shall be minimized near channels and mud-flats (BIO-6.1)	Х		During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow sub-	Minimize spraying near channels (BIO-6.4)	Х		During treatment		
merged intertidal mudflats and channels.	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	Х		During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	Х		During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

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	Applicable Mitigation &			Implementation	Verification Signatures		
Impact	Conservation Measures	Herbicide	Digging	Timing	Implementing Entity	ISP Field Supervisor	
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment	Implement ISP-approved site safety plan or equivalent (HS-1)		Х	During treatment			
HS-2: Worker health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2;CM-3,4,17)	Х		During treatment			
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan (HS-3;CM-3,4,17)	X		During treatment			
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	X		Pre-treatment			
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equiva- lent Site Safety and Spill Preven- tion plan on site (HS-4;Cm-3,4,17)	Х	Х	During treatment			
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	Х	Х	Pre-treatment, during treatment, post-treatment			
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	Х	Х	Pre-treatment and during treat- ment			
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	Х	Х	Post treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

TSN: ISP-2004-10

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Point Pinole Regional Shoreline, Contra Costa County

	Appli- cable to	Sub-areas included	(hv Treatment Method used at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitiga- tion Required	
Impact*	Site		Herbicide	Digging			
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE					LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE					NA/NE - Proposed activities are not ground disturbing and will not elevate erosion above ambient levels. Any vehicle traffic will be confined to existing access roadways	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE					NA/NE - Proposed activities will not disturb sub-surface vegetation, providing residual erosion resistance	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE					NA/NE - No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	A	All sub-areas	None	All		No adverse impact (see PEIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R	No mitigation required
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE					NA/NE - Proposed activities will not take place within salt marsh pans	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitiga- tion Required	
Impact*	Site		Herbicide	Digging			
WQ-1: Degradation of water quality due to herbicide application	А	Sub-area 10a, 10c	WQ-1			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-2: Degradation of water quality due to herbicide spills	А	Sub-area 10a, 10c	WQ-2			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	А	Sub-area 10a, 10c	WQ-3			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE					NA/NE - No dredging or other sediment mobilizing activities proposed	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE					NA/NE - This impact only applies to PEIR/S Alternative 3	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE					NA/NE - Field surveys found no salt-meadow cordgrass or English cordgrass at this site	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All sub-areas	BIO-1.2			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not Applicable/No Effect

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SU – Significant but unmitigable impact

USFWS BO – US Fish & Wildlife Service Biological Opinion

	Appli- cable to	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitiga- tion Required	
Impact*	Site		Herbicide	Digging			
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	А	Sub-area 10a	BIO-1.3	Bio-1.3		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE					NA/NE - Field surveys found no eelgrass or other submerged aquatic plants at the site	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	A	Sub-area 10a	BIO-2	BIO-2		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-3: Effects on shorebirds and waterfowl.	A	All sub-areas	BIO-3	BIO-3		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	A	All sub-areas	BIO-4.1 as modified by the USFWS BO	BIO-4.1 as modified by the USFWS BO		LTS/NLTAE - Potential impacts mitigated to less than significant (per PEIS/R, Impact/Mitigation BIO-4.1). Site conditions consistent with those anticipated in the PEIS/R	None
BIO-4.2: Effects on resident har- bor seal colonies of San Francisco Bay.	NA/NE					NA/NE - No harbor seal colonies at or near site	None
BIO-4.3: Effects on the southern sea otter.	NA/NE					NA/NE - Outside of the range of southern sea otters	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO – US Fish & Wildlife Service Biological Opinion

	Appli- cable to	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitiga- tion Required	
Impact*	Site		Herbicide	Digging			
BIO-5.1: Effects on the California clapper rail.	А	All sub-areas	BIO-5.1 as modified by the USFWS BO	BIO-5.1 as modified by the USFWS BO		LTS/NLTAE – At site - Potential project impacts mitigated at site SU cumulative impacts addressed in PEIS/R and CEQA findings	None
BIO-5.2: Effects on the California black rail.	А	All sub-areas	BIO-5.2	BIO-5.2		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	A	All sub-areas	BIO-5.3	BIO-5.3		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE					NA/NE - Outside of the range of least terns and snowy plovers.	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE					NA/NE - No aerial applications proposed for this site	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	A	Sub-areas 10a, 10c	BIO-6.1- minimize spraying			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE					NA/NE - Project site outside of delta smelt and Sacramento splittail range	None
BIO-6.3: Effects on the tidewater goby.	NA/NE					NA/NE - Project site outside of tidewater goby range	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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SU – Significant but unmitigable impact

USFWS BO – US Fish & Wildlife Service Biological Opinion

	Appli- cable to	Sub-areas included		Applicable Mitigations* (by Treatment Method used at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitiga- tion Required
Impact*	Site	moradod	Herbicide	Digging			
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	Sub-areas 10a, 10c	BIO-6.4- minimize spraying			LTS/NLTAE with additional mitigation BIO-6.4(b) No mowing proposed for this site	BIO-6.4(b)- R-11 will not be used adjacent to channels to minimize any potential adverse impacts on es- tuarine fish.
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE					NA/NE - Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE					NA/NE - Site activities will not create additional mosquito habitat	None
BIO-9: Effects on tiger beetle species.	NA/NE					NA/NE - No adverse impact. Site conditions consistent with those anticipated in the PEIS/R	None
AQ-1: Dust emissions.	A	All sub-areas	AQ-1			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
AQ-2: Smoke emissions.	NA/NE					NA/NE - No burning proposed	None
AQ-3: Herbicide effects on air quality.	NA/NE					NA/NE - No aerial applications proposed for this site	None
AQ-4: Ozone precursor emissions.	NA/NE					LTS/NLTAE without mitigation	None
AQ-5: Carbon monoxide (CO) emissions.	NA/NE					LTS/NLTAE without mitigation	None

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

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USFWS BO - US Fish & Wildlife Service Biological Opinion

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	Appli- cable to	Sub-areas included Applicable Mitigations* (by Treatment Method used at Site		Comments/Analysis of Residual Impact at Site	Additional Mitiga- tion Required	
Impact*	Site		Herbicide	Digging		
N-1: Disturbance of sensitive receptors	А	Sub areas 10a, 10c	N-1		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-1: Worker Injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE				NA/NE - No manual or mechanical treatment proposed	None
HS-2: Worker health effects from herbicide application.	А	Sub areas 10a, 10c	HS-2		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-3: Health effects to the public from herbicide application.	A	Sub areas 10a, 10c	HS-3		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	Sub areas 10a, 10c	HS-4	HS-4	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	A	All sub-areas	VIS-1	VIS-1	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE				NA/NE - Applies only to PEIS/R Alternative 3 (No Action)	None

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site) Herbicide Digging		Comments/Analysis of Residual Impact at Site	Additional Mitiga- tion Required	
Impact*	Site						
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	Sub-areas 10a, 10c	LU-1			LTS/NLTAE - Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from mechanical and burning treatment methods	NA/NE					NA/NE - Methods not proposed for the site	None
CUL-1: Disturbance or destruction of cultural resources from Access and Treatment.	NA/NE					NA/NE - No manual or mechanical methods proposed for this site	None
CUL-2: Loss of Cultural Resources from Erosion.	NA/NE					NA/NE - No erosion-producing activities proposed for this site	None
CUM-1- Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE					NA/NE - No restoration projects proposed on this site	None
CUM-2- Cumulative damage to marsh plain vegetation	NA/NE					NA/NE - No Mosquito Abatement Districts working on this site	None

NA/NE - Not Applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

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USFWS BO – US Fish & Wildlife Service Biological Opinion

MITIGATION CHECKLIST Point Pinole Regional Shoreline TSN: ISP-2004-10

Date / /
Date//

TSN: ISP-2004-10

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Point Pinole Regional Shoreline

		Applicable to			Implementation	Verification .	Signatures	
Impact	Applicable Mitigation	Sub-Area	Herbicide	Digging	Timing	Implement- ing Entity	ISP Field Supervisor	Notes
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1;CM-3,4)	10a, 10c	X		During treatment			
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2CM-3)	10a, 10c	Х		During treatment			
·	Implement spill and containment plan pro- vided or approved by ISP (WQ-2;CM-17)	10a, 10c	Х		During treatment			
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP(WQ-3;CM-17)	10a, 10c	Х		During treatment			
BIO-1.2: Effects on tidal marsh plant communi- ties affected by Atlantic	Minimize entry and re- entry into marsh (BIO- 1.2;CM-1)	All sub-areas	Х		During treatment			
smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickle- weed (FWS GL)	All sub-areas	Х		During treatment			
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2;CM-3,4)	All sub-areas	х		During treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

		Applicable to			Implementation	Verification .	Signatures	
Impact	Applicable Mitigation	Sub-Area	Herbicide	Digging	Timing	Implement- ing Entity	ISP Field Supervisor	Notes
	Cover adjacent non- target special-status vegetation with tempo- rary fabric as needed (BIO-1.2)	All sub-areas	X		During treatment			
BIO-1.3:Effects on tidal marsh plant communi- ties by Chilean cordgrass	Minimize entry and re- entry into marsh (BIO- 1.3;CM-1)	10a	Х	Х	During treatment			
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.3;CM-3,4)	10a	X	Х	During treatment			
	Cover adjacent non- target special-status vegetation with tempo- rary fabric as needed (BIO-1.3)	10a	X	Х	During treatment			
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	Pre-project surveys for Cordylanthus mollis mollis and Circium hy- drophilum hydrophi- lum(BIO-2;CM-22)	10a	Х	Х	Pre-treatment			
	Field crews will be instructed on ID and avoidance of Cordylanthus mollis mollis and Circium hydrophilum hydrophilum (BIO-2)	10a	Х	X	Pre-treatment			
	On site qualified botanical supervision (BIO-2;CM-23)	10a	Х	Х	During treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

		Applicable to			Implementation	Verification	Signatures	
Impact	Applicable Mitigation	Sub-Area	Herbicide	Digging	Timing	Implement- ing Entity	ISP Field Supervisor	Notes
	Cover non-target Cordy- lanthus mollis mollis and Circium hydrophi- lum hydrophilum with fabric during spray work (BIO-2)	10a	X		During treatment			
BIO-3: Effects on shore- birds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stop- overs (BIO-3)	All sub-areas	X	Х	During treatment			
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All sub-areas	Х	Х	During treatment			
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All sub-areas	Х	Х	During treatment			
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1;CM-15)	All sub-areas	Х	Х	During treatment			
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO- 4.1;CM-15)	All sub-areas	Х	Х	During treatment			
	Assume presence of SMHM on all suitable sites (CM 14)	All sub-areas	Х	Х	During treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

	A 11 A 121 11	Applicable to			Implementation	Verification .	Signatures	
Impact	Applicable Mitigation	Sub-Area	Herbicide	Digging	Timing	Implement- ing Entity	ISP Field Supervisor	Notes
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas	×	Х	Pre-treatment			
BIO-5.1: Effects on the California Clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1;CM-18)	All sub-areas	Х	Х	During treatment			
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM- 18)	All sub-areas	X	х	Pre treatment			
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub-areas	Х	Х	During treatment			
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	All sub-areas	Х	х	Pretreatment and during treatment			
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All sub-areas	X	Х	During and post treatment			
BIO-5.2: Effects on the California Black rail	Perform work only during Sept 1 thru Feb 1 to avoid CABR breeding season (BIO-5.2)	All sub-areas	Х	Х	During treatment			

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		Applicable to			Implementation	Verification .	Signatures	
Impact	Applicable Mitigation	Sub-Area	Herbicide	Digging	Timing	Implement- ing Entity	ISP Field Supervisor	Notes
	For work within the CABR breeding season, call counts will be performed in the early spring according to FWS protocols (BIO-5.2)	All Sub-areas	Х	X	Pre-treatment			
	Provide CABR Field Biologist Supervision (BIO-5.2)	All Sub-areas	Х	х	Pre-treatment and During treat- ment			
	Assure that field personnel are trained in general CABR biology and identification as well as call detection (BIO-5.2)	All Sub-areas	Х	X	Pre-treatment and During treat- ment			
	Report any CABR activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.2)	All Sub-areas	×	Х	During treatment and Post- treatment			
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt	Implement CLRA timing restriction (most restrictive)	All Sub-areas	Х	Х	During treatment			
marsh common yellow- throat.	Report any SMSS and SCYE activity immedi- ately to ISP Field Su- pervisor and in post- treatment report (BIO- 5.3)	All Sub-areas	Х	X	During and post treatment			
	Avoid spraying or re- moving Grindelia plants in the marsh	All Sub-areas	Х	Х	During treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

		Applicable to			Implementation	Verification	Signatures	
Impact	Applicable Mitigation	Sub-Area	Herbicide	Digging	Timing	Implement- ing Entity	ISP Field Supervisor	Notes
	Watch for Song Spar- row presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	All Sub-areas	X	Х	During treatment			
BIO-6.1: Effects on anadromous salmonids (winter-run and spring- run Chinook salmon, steelhead).	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	Sub-area 10a, 10c	X		During treatment			
	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	Sub-area 10a, 10c	X		During treatment			
BIO-6.4: Effects on estuarine fish populations of shallow submerged	Bio-6.4 – minimize spraying near channels (BIO-6.4)	Sub-area 10a, 10c	Х		During treatment			
intertidal mudflats and channels.	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish.	Sub-area 10a, 10c	Х		During treatment			
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	All sub-areas	Х	Х	During treatment			
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	Sub-areas 10a, 10c	Х		During treatment			
HS-2: Worker health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2;CM-3)	Sub-areas 10a, 10c	Х		During treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

		Applicable to			Implementation	Verification .	Signatures	
Impact	Applicable Mitigation	Sub-Area	Herbicide	Digging	Timing	Implement- ing Entity	ISP Field Supervisor	Notes
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan (HS-3;CM-3,4)	Sub-areas 10a, 10c	Х		During treatment			
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	Sub-areas 10a, 10c	Х		Pre-treatment			
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment. (HS-3)	Sub-areas 10a, 10c	Х		Pre-treatment and during treat- ment			
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,4,17)	Sub-areas 10a, 10c	×	Х	During treatment			
VIS-1: Alteration of views from removal of non-native cordgrass Infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	Sub-areas 10a, 10c	Х	Х	Pre-treatment, during treatment, post-treatment			
CM-7: Invasive species	Monitor cleared patches for recruitment of inva- sive plant species in- cluding perennial pep- perweed until native vegetation has become dominant (CM-7)	All sub -areas	Х	х	Post treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Southampton Marsh, Solano County

TSN: ISP-2004-11

	Appli- cable to		Applicable Mitigations* eatment Method used at Site)		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging		at Site	Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE				NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE				NA/NE – Method not proposed for this site	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE				NA/NE – Proposed activities will not take place within an estuarine beach.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE				NA/NE – No dredging/ or large-scale sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	A	None	None		No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE				NA/NE – Proposed activities will not take place within salt marsh pans.	None
WQ-1: Degradation of Water Quality due to Herbicide Application	A	WQ-1			LTS/NLTAE – Potential impacts mitigated to less than significant (per EIS/R, Impact/Mitigation WQ-1). Site conditions consistent with those anticipated in the PEIS/R.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact / Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to		olicable Mitigations* ment Method used at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging	at Site	Required
WQ-2: Degradation of Water Quality due to Herbicide Spills	А	WQ-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	А	WQ-3		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of Water Quality due to Contaminant Remobilization	NA/NE			NA/NE - No dredging or other sediment- mobilizing activities proposed.	None
WQ-5: Water Quality Effects Resulting from Sediment Accretion	NA/NE			NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE	BIO-1.1	BIO-1.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	NA/NE			NA/NE – Field surveys found no Atlantic smooth cordgrass at site.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE			NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE			NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	А	BIO-2	BIO-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

NA/NE - Not applicable/No Effect

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USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to		licable Mitigations* nent Method used at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging	at Site	Required
BIO-3: Effects on shorebirds and waterfowl.	Α	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	A	BIO-4.1 as modified by the USFWS BO	BIO-4.1 as modified by the USFWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE			NA/NE – No harbor seal colonies at or near site.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE			NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	А	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	SU at site – Short-term potential project impacts mitigated at site. LTS/NLTAE – cumulative impacts addressed in EIS/R and CEQA findings.	None
BIO-5.2: Effects on the California black rail.	А	BIO-5.2	BIO-5.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	BIO-5.2	BIO-5.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE			NA/NE – Outside of known range of California least terns and western snowy plovers.	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE			NA/NE – No aerial herbicide applications proposed	None

NA/NE - Not applicable/No Effect

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	Appli- cable to		licable Mitigations* nent Method used at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging	at Site	Required
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	BIO-6.1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	А	BIO-6.2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE			NA/NE – Proposed treatment will not occur within tidewater goby habitat	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	BIO-6.4 – minimize spraying		LTS/NLTAE with additional mitigation BIO-6.4(b)	BIO-6.4(b) – R-11 will not be used adjacent to channel to minimize any potential adverse af- fects on estuarine fish.
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE			NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE			NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE			NA/NE – No potential tiger beetle habitat will be affected.	None
AQ-1: Dust Emissions.	NA/NE			NA/NE – All access roads are paved.	None
AQ-2: Smoke Emissions.	NA/NE			NA/NE – No burning proposed.	None
AQ-3: Herbicide Effects on Air Quality.	NA/NE			NA/NE – No aerial herbicide applications proposed	None
AQ-4: Ozone Precursor Emissions.	NA/NE			LTS/NLTAE without mitigation.	None

NA/NE - Not applicable/No Effect

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USFWS BO - US Fish & Wildlife Service Biological Opinion

loop o o t*	Appli- cable to Site	(by Treatn	nlicable Mitigations* ment Method used at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Herbicide	Digging	at Site	Required
AQ-5: Carbon Monoxide (CO) Emissions.	NA/NE			LTS/NLTAE without mitigation.	None
N-1: Disturbance of Sensitive Receptors	NA/NE			NA/NE – No noise producing equipment proposed for use during treatment	None
HS-1: Worker Injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE			NA/NE – No digging operations proposed.	None
HS-2: Worker health effects from herbicide application.	А	HS-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	HS-3		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	HS-4		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE			NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	LU-1		LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from me- chanical and burning treatment methods	NA/NE			NA/NE – Methods not proposed for site	None

NA/NE - Not applicable/No Effect

LTS/NLTAE - Less Than Significant impact / Not Likely to Adversely Effect

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USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to		licable Mitigatio nent Method use	Comments/Analysis of Residual Impact	Additional Mitigation	
Impact*	Site	Herbicide	Digging	at Site	Required	
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	A	CUL-1	CUL-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None	
CUL-2: Loss of cultural resources from erosion.	NA/NE			NA/NE – No erosion-producing activities proposed	None	
CUM-1- Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE			NA/NE – No restoration projects proposed on this site	None	
CUM-2- Cumulative damage to marsh plain vegetation	NA/NE			NA/NE – No Mosquito Abatement Districts working on this site	None	

NA/NE - Not applicable/No Effect

Key:

LTS/NLTAE - Less Than Significant impact / Not Likely to Adversely Effect

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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Southampton Marsh, Solano County

Applicable Mitigation & Verification Signatures Implementation Implement-ISP Field Conservation Measures Impact* Herbicide Digging Timing ing Entity Supervisor (source **) WQ-1: Degradation of water quality Apply herbicide directly to **During treatment** due to herbicide application plant at low tide and according Χ to label (WQ-1;CM-3,4) WQ-2: Degradation of water quality Apply under supervision of **During treatment** due to herbicide spills Х trained applicator (WQ-2;CM-Implement spill and contain-During treatment ment plan provided or ap-Χ proved by ISP (WQ-2;CM-17) WQ-3: Degradation of water quality Implement spill and contain-**During treatment** Χ due to fuel or petroleum spills ment plan provided or approved by ISP. (WQ-3;CM-17) Minimize entry and re-entry BIO-1.1: Effects on tidal marsh plant **During treatment** Χ Χ communities affected by Salt into marsh (BIO-1.1;CM-1) meadow cordgrass and its hybrids. Avoid staging in high, dense During treatment vegetation such as gumplant Χ Χ or pickleweed (FWS GL) Avoid herbicide application to **During treatment** non-target vegetation adjacent Χ Χ to treatment area (BIO-1.1;CM-3,4) Use geotextile fabric to prevent **During treatment** treatment of non-target Cordy-Χ Χ lanthus mollis vegetation (BIO-1.1) BIO-2: Effects on special-status Pre-project surveys for Cordy-Pre-treatment plants (Soft bird's beak and/or Suisun lanthus mollis mollis and Cir-Χ Χ thistle) in tidal marshes cium hydrophilum hydrophilum(BIO-2;CM-22)

TSN: ISP-2004-11

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Mitigation &			1	Verification	on Signatures
Impact*	Conservation Measures (source**)	Herbicide	Digging	Implementation Timing	Implement- ing Entity	ISP Field Supervisor
	Field crews will be instructed on ID and avoidance of <i>Cordy-</i> <i>lanthus mollis mollis</i> and <i>Cir-</i> <i>cium hydrophilum hydrophilum</i> (BIO-2)	Х	Х	Pre- and during treatment		
	On site qualified botanical supervision (BIO-2;CM-23)	Х	Х	During treatment		
	Cover non-target Cordylanthus mollis mollis and Circium hydrophilum with fabric during spray work (BIO-2)	X		During treatment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers (BIO-3)	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	X	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	Х	Х	During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1;CM-15)	Х	Х	During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	Х	х	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	Х	Х	During treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

MITIGATION CHECKLIST Southampton Marsh TSN: ISP-2004-11

	Applicable Mitigation &				Verification	on Signatures
Impact*	Conservation Measures (source**)	Herbicide	Digging	Implementation Timing	Implement- ing Entity	ISP Field Supervisor
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	×	Х	Pre-treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1;CM- 18)	Х	Х	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	X	Х	Pre-treatment		
	Provide CLRA Field biologist supervision. (BIO-5.1)	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	Х	Х	Pre-treatment and during treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	х	Х	During and post- treatment		
BIO-5.2: Effects on California Black Rail	Conform with BIO-5.1	Х	Х	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh	Implement CLRA timing restriction (most restrictive).	Х	Х	During treatment		
common yellowthroat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	Х	Х	During and post- treatment		
	Avoid spraying or removing Grindelia plants in the marsh	Х	Х	During treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

MITIGATION CHECKLIST Southampton Marsh TSN: ISP-2004-11

	Applicable Mitigation &				Verification	n Signatures
Impact*	Conservation Measures (source**)	Herbicide	Digging	Implementation Timing	Implement- ing Entity	ISP Field Supervisor
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	Х	Х	During treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	Target herbicide applications to minimize herbicide use near channel (BIO-6.1)	Х		During treatment		
	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning.	Х		During treatment		
BIO-6.2: Effects on delta smelt and Sacramento splittail	Spray drift near channels shall be minimized and conform to ISP herbicide drift manage- ment plan or equivalent (BIO- 6.2;CM-13)	Х		During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Bio-6.4 – minimize spraying near intertidal mudflats and channels (BIO-6.4)	Х		During treatment		
	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish.	Х		During treatment		
HS-2: Worker health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2;CM-3)	Х		During treatment		
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan or equivalent (HS-3;CM-3,4)	Х		During treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

MITIGATION CHECKLIST Southampton Marsh TSN: ISP-2004-11

	Applicable Mitigation &				Verification	on Signatures
Impact*	Conservation Measures (source**)	Herbicide	Digging	Implementation Timing	Implement- ing Entity	ISP Field Supervisor
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	X		Pre-treatment		
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	Х		Pre-treatment and during treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,4,17)	X		During treatment		
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	Х	Х	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	Х	Х	Pre-treatment and during treatment		
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	Х		Post-treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

TSN: ISP-2004-12

Key:

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Southeast San Francisco Complex, San Francisco County

	Applicable	Sub			Applicable reatment Me					Additional
Impact*	to site	Area Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Comments/Analysis of Resid- ual Impact at site	Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE								LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-2: Erosion or to- pographic change of marsh and mudflat by vehicles used in eradi- cation	NA/NE								NA/NE - Methods not proposed for this Complex	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE								NA/NE - No excavation within estuarine beaches planned.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE								NA/NE - No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	All Sub- Areas	GEO-5	GEO-5	GEO-5	GEO-5	GEO-5	GEO-5	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE								NA/NE - Proposed activities will not take place within salt marsh pans	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

A - Applicable NA/NE - Not Applicable/No Effect

SU – Significant but unmitigable impact USFWS BO – US Fish & Wildlife Service Biological Opinion

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

	Applicable	Sub Area		Applicable Mitigations* (by Treatment Method used at site)						Additional
Impact*	to site	Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Comments/Analysis of Resid- ual Impact at site	Mitigation Required
WQ-1: Degradation of Water Quality due to Herbicide Application	А	All sub- areas	WQ-1	WQ-1	WQ-1				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of Water Quality due to Herbicide Spills	А	All sub- areas	WQ-2	WQ-2	WQ-2				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	А	All sub- areas	WQ-3	WQ-3	WQ-3	WQ-3			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of Water Quality due to Contaminant Remobili- zation	NA/NE								NA/NE - No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water Quality Effects Resulting from Sediment Accretion	NA/NE								NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by saltmeadow cordgrass and English cordgrass.	NA/NE								NA/NE – Field surveys found no salt-meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All Sub- Areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

A - Applicable

Key:

NA/NE - Not Applicable/No Effect

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LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

Key:

	Applicable	Sub Area				Mitigations				Additional
Impact*	to site	Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Comments/Analysis of Resid- ual Impact at site	Mitigation Required
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE								NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on sub- merged aquatic plant communities.	NA/NE								NA/NE – Field surveys found no eelgrass or other sub- merged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE								NA/NE - Field surveys found no special-status plant species at site.	None
BIO-3: Effects on shore- birds and waterfowl.	А	All Sub- Areas	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	NA/NE								NA/NE - Activities will not oc- cur within Salt marsh harvest mouse habitat	None
BIO-4.2: Effects on resident harbor seal colonies of San Fran- cisco Bay.	NA/NE								NA/NE - No harbor seal colonies at or near site.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE								NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on California clapper rail.	NA/NE								NA/NE - Sites within SE SF Complex not known to contain California Clapper Rail	None

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	Applicable	Sub Area				Mitigations [*] ethod used				Additional
Impact*	to site	Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Comments/Analysis of Resid- ual Impact at site	Mitigation Required
BIO-5.2: Effects on California black rail.	NA/NE								NA/NE – Outside of known range black rails.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	А	All Sub- Areas	BIO-5.2 as modi- fied by UFSWS BO	LTS/NLTAE – Potential project impacts mitigated at site.	None					
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE								NA/NE - Areas of treatment unsuitable for California least terns and/or western snowy plovers	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE								NA/NE - No aerial applications proposed for this Complex	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring- run Chinook salmon, steelhead).	А	All sub- areas	BIO-6.1	BIO-6.1	BIO-6.1				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE								NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE								NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	All sub- areas	Bio-6.4 – minimize spraying	Bio-6.4 – minimize spraying	Bio-6.4 – minimize spraying				LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: no mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R- 11 will not be used adjacent to channel to mini- mize any poten- tial adverse af- fects on estua- rine fish.

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Key:

	Applicable	Sub Area				Mitigations				Additional
Impact*	to site	Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Comments/Analysis of Resid- ual Impact at site	Mitigation Required
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE								NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE								NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE								NA/NE - no potential tiger beetle habitat will be affected.	None
AQ-1: Dust Emissions.	А	All sub- areas	AQ-1	AQ-1	AQ-1	AQ-1	AQ-1	AQ-1	NA/NE - access levees and roads are paved.	None
AQ-2: Smoke Emissions.	NA/NE								NA/NE – No burning proposed.	None
AQ-3: Herbicide Effects on Air Quality.	NA/NE								NA/NE - No aerial applications proposed	None
AQ-4: Ozone Precursor Emissions.	NA/NE								LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) Emissions.	NA/NE								LTS/NLTAE without mitigation.	None
N-1: Disturbance of Sensitive Receptors	А	All sub- areas	N-1	N-1	N-1	N-1			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker Injury from Accidents Associ- ated with Manual and Mechanical Cordgrass Treatment.	А	12a, 12b, 12i				HS-1	HS-1	HS-1	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Applicable	Sub				Mitigations' ethod used				Additional
Impact*	to site	Area Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Comments/Analysis of Resid- ual Impact at site	Mitigation Required
HS-2: Worker Health Effects from Herbicide Application.	А	All sub- areas	HS-2	HS-2	HS-2				LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health Effects to the Public from Herbicide Application.	А	All sub- areas	HS-3	HS-3	HS-3				LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All Sub- Areas	HS-4	HS-4	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	А	All Sub- areas	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	SU - Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in Views from Native Marsh, Mudflat, and Open Water to Non-native Cordgrass Meadows and Monocultures.	NA/NE								NA/NE - Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land Use Con- flicts Between Herbicide Use and Sensitive Re- ceptors	A	All sub- areas	LU-1	LU-1	LU-1				LTS/NLTAE - Limited to less than significant by HS, N and AQ mitigations.	None

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	Applicable	Sub				Mitigations ethod used				Additional
Impact*	to site	Area Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Comments/Analysis of Resid- ual Impact at site	Mitigation Required
LU-2: Land Use Con- flicts from Mechanical and Burning Treatment Methods	NA/NE								NA/NE - Methods not pro- posed for site	None
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	А	All Sub- Areas	CUL-1			CUL-1	CUL-1	CUL-1	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of Cultural Resources from Ero- sion.	NA/NE								NA/NE - No erosion-producing activities proposed	None
CUM-1: Effects of wet- land restoration projects on spread of non-native cordgrass	NA/NE								NA/NE - No restoration projects with the potential to spread Spartina proposed within this Complex during the proposed treatment schedule	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE								NA/NE - No Mosquito Abatement Districts working on this site	None

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USFWS BO - US Fish & Wildlife Service Biological Opinion

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

TSN: ISP-2004-12

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Southeast San Francisco Complex

	Applicable Mitigation &									Verification	Signatures
Impact*	Conservation Meas- ures*	Sub Area Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Implementing Entity	ISP Field Supervisor
WQ-1: Degradation of Water Quality due to Herbicide Application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3, 4)	All sub- areas	Х	Х	X				During treatment		
WQ-2: Degradation of Water Quality due to Herbicide Spills	Apply under supervision of trained applicator (WQ-2; CM-3)	All sub- areas	Х	Х	Х				During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub- areas	Х	Х	Х				During treatment		
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	Implement spill and containment plan pro- vided or approved by ISP (WQ-3; CM-17)	All sub- areas	Х	Х	Х	Х			During treatment		
BIO-1.2: Effects on tidal marsh plant communities affected	Minimize entry and re- entry into marsh (BIO- 1.2; CM-1)	All Sub- Areas	Х	Х	Х	X	Х	Х	During treatment		
by Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickle- weed (FWS GL)	All Sub- Areas	Х	Х	X	Х	Х	Х	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	Sub-Areas 12c, 12d, 12e, 12f	Х	Х	Х				During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &									Verification	Signatures
lmpact*	Conservation Meas- ures*	Sub Area Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Implementing Entity	ISP Field Supervisor
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stop- overs (BIO-3)	All Sub- Areas	X	X	Х	Х	X	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All Sub- Areas	Х	X	Х	Х	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All Sub- Areas	Х	X	Х	Х	Х	Х	During treatment		
BIO-5.3: Effects on tidal marsh song spar- row subspecies and the salt marsh com- mon yellowthroat.	Report any SMSS and SCYE activity immedi- ately to ISP Field Su- pervisor and in post- treatment report (BIO- 5.3)	All Sub- Areas	Х	X	X	X	X	X	During and post- treatment		
	Avoid spraying or removing Grindelia plants in the marsh (BIO-5.3)	All Sub- Areas	Х	X	X	X	X	X	During treatment		
	Watch for Song Spar- row presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	All Sub- Areas	X	X	X	X	X	Х	During treatment		
BIO-6.1: Effects on anadromous sal- monids (winter-run and spring-run Chi- nook salmon, steel- head).	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	All sub- areas	X	Х	Х				During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &									Verification	Signatures
Impact*	Conservation Meas- ures*	Sub Area Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Implementing Entity	ISP Field Supervisor
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub- areas	X	X	X				During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow sub-	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub- areas	Х	Х	X				During treatment		
merged intertidal mudflats and channels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub- areas	Х	Х	Х				During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	All sub- areas	Х	Х	Х	Х	Х	Х	During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub- areas	Х	Х	Х	Х			During treatment		
HS-1: Worker Injury from accidents Asso- ciated with manual and mechanical Cordgrass treatment	Follow ISP approved site safety protocols or equivalent (HS-1; CM-3)	Sub-Areas 12a, 12b, 12f				Х	Х	Х	During treatment		
HS-2: Worker Health Effects from Herbi- cide Application.	Follow handling and application procedures as identified on product label (HS-2; CM-3)	All sub- areas	Х	Х	Х				During treatment		
HS-3: Health Effects to the Public from Herbicide Application.	Minimize drift according to ISP drift management plan or equivalent (HS- 3; CM-3, 4)	All sub- areas	Х	Х	Х				During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &									Verification	Signatures
Impact*	Conservation Meas- ures*	Sub Area Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Implementing Entity	ISP Field Supervisor
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub- areas	Х	Х	Х				Pre-treatment		
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	All sub- areas	X	X	X				Pre-treatment and during treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3, 4, 17)	All Sub- Areas	Х	Х	Х	Х	Х	Х	During treatment		
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infesta- tions.	Post appropriate signage according to ISP signage protocols (VIS-1)	All Sub- Areas	Х	х	х	X	X	X	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	All Sub- Areas	X			X	X	X	Pre-treatment and during treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &									Verification	Signatures
Impact*	Conservation Meas- ures*	Sub Area Included	Back- pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Implementing Entity	ISP Field Supervisor
CM-7: Invasive Species	Monitor cleared patches for recruitment of inva- sive plant species in- cluding perennial pep- perweed until native vegetation has become dominant (CM-7)	All sub- areas	×	×	×	Х	Х	X	Post-treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Whale's Tail Complex

TSN: ISP-2004-13

					licable Mitig nent Method		te)	Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
Impact*	Applicable to Site	Applicable Sub-Site	Back- pack	Truck	Amphibi- ous Ve- hicle	Aerial	Boat		
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE							NA/NE – Erosional rates will not exceed ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	A	13a, 13b, 13c, 13d, 13e, 13f, 13g			GEO-2			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE							NA/NE – Treatments will not increase mobility of estuarine beaches above ambient levels.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE							NA/NE – Treatments will not involve the use of sediment removal techniques.	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	All Sub- Areas	GEO-5	GEO-5	GEO-5	GEO-5	GEO-5	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None

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NA/NE – Not applicable/No effect

Key:

LTS/NLTAE – Less than significant impact / Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO – US Fish & Wildlife Service Biological Opinion

IMPACT CHECKLIST Whale's Tail Complex TSN: ISP-2004-13

					icable Mitig		re)	Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
Impact*	Applicable to Site	Applicable Sub-Site	Back- pack	Truck	Amphibi- ous Ve- hicle	Aerial	Boat		
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	А	All Sub- areas	GEO-6	GEO-6	GEO-6	GEO-6	GEO-6	No adverse impact (see EIS/R GEO-6 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-1: Degradation of water quality due to herbicide application	А	All Sub- Areas	WQ-1	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbi- cide spills	А	All Sub- Areas	WQ-2	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	А	All Sub- Areas	WQ-3	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE							LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-5: Water quality ef- fects resulting from sedi- ment accretion	NA/NE							NA/NE – This impact only applies to EIS/R Alternative 3.	None

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IMPACT CHECKLIST Whale's Tail Complex TSN: ISP-2004-13

					icable Mitig		te)	Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
Impact*	Applicable to Site	Applicable Sub-Site	Back- pack	Truck	Amphibi- ous Ve- hicle	Aerial	Boat		
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE							NA/NE – Field surveys found no salt-meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	A	All Sub- Areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE							NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE							NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special- status plants (Soft bird's beak and/or Suisun this- tle) in tidal marshes	NA/NE							NA/NE - Field surveys found no special-status plant spe- cies at site.	None
BIO-3: Effects on shore-birds and waterfowl.	А	All Sub- Areas	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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					licable Mitig		te)	Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
Impact*	Applicable to Site	Applicable Sub-Site	Back- pack	Truck	Amphibi- ous Ve- hicle	Aerial	Boat		·
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	Sub-areas 13a, 13b, 13c, 13d, 13e, 13f, 13g			BIO-4.1			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE							NA/NE - No harbor seal colonies at or near site.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE							NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on California clapper rail.	А	All Sub- Areas	BIO-5.1	BIO-5.1	BIO-5.1	BIO-5.1	BIO-5.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on California black rail.	А	All Sub- Areas	BIO-5.2	BIO-5.2	BIO-5.2	BIO-5.2	BIO-5.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	All Sub- Areas	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	А	13a, 13b, 13c, 13d, 13g	BIO-5.4	BIO-5.4	BIO-5.4	BIO-5.4	BIO-5.4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not applicable / No Effect

LTS/NLTAE - Less Than Significant Impact / Not Likely to Adversely Effect

SU – Significant but Unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

					icable Mitig ent Method	ations* I used at Sit	te)	Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
Impact*	Applicable to Site	Applicable Sub-Site	Back- pack	Truck	Amphibi- ous Ve- hicle	Aerial	Boat		
BIO-5.5: Effects on raptors (birds of prey).	A	All Sub- Areas				BIO-5.5		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	All Sub- Areas	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE							NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE							NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	All Sub- Areas	BIO-6.4 – mini- mize spraying	BIO-6.4 – mini- mize spraying	BIO-6.4 – mini- mize spraying	BIO-6.4 – mini- mize spraying	BIO-6.4 – minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: no mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any potential adverse affects on estuarine fish.
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE							NA/NE – Outside of known range of California redlegged frog and San Francisco garter snake.	None

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			Applicable Mitigations* (by Treatment Method used at Site)				Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required	
Impact*	Applicable to Site	Applicable Sub-Site	Back- pack	Truck	Amphibi- ous Ve- hicle	Aerial	Boat		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	А	Sub areas 13a, 13b, 13c, 13d, 13e, 13f, 13g			BIO-8			NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE							NA/NE - No potential tiger beetle habitat will be affected.	None
AQ-1: Dust emissions.	А	All Sub- Areas	AQ-1	AQ-1	AQ-1	AQ-1	AQ-1	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-2: Smoke emissions.	NA/NE							NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	A	All Sub- Areas				AQ-3		LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-4: Ozone precursor emissions.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-5: Carbon monoxide (CO) emissions.	NA/NE							LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	А	All Sub- Areas	N-1	N-1	N-1	N-1	N-1	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None

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			Applicable Mitigations* (by Treatment Method used at Site)			Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required		
Impact*	Applicable to Site	Applicable Sub-Site	Back- pack	Truck	Amphibi- ous Ve- hicle	Aerial	Boat		
HS-1: Worker Injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE							LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-2: Worker health effects from herbicide application.	А	All Sub- Areas	HS-2	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	All Sub- Areas	HS-3	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All Sub- Areas	HS-4	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	All Sub- Areas	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	SU - Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE							NA/NE - Applies only to PEIS/R Alternative 3 (No Action)	None

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			Applicable Mitigations* (by Treatment Method used at Site)					Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
Impact*	Applicable to Site	Applicable Sub-Site	Back- pack	Truck	Amphibi- ous Ve- hicle	Aerial	Boat		
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	All Sub- Areas	LU-1	LU-1	LU-1	LU-1	LU-1	LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from mechanical and burning treatment meth- ods	NA/NE							LTS/NLTAE - Limited to less than significant AQ mitigations.	None
CUL-1: Disturbance or destruction of cultural re- sources from access and treatment.	А	Sub-areas 13a, 13b, 13c, 13d, 13e, 13f			CUI-1			LTS/NLTAE - Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE							NA/NE – No erosion- producing activities pro- posed	None
CUM-1: Effects of wetland restoration projects on spread of non-native cordgrass	А	All Sub- Areas	CUM-1	CUM-1	CUM-1	CUM-1	CUM-1	Potentially Significant-ISP will attempt coordination of control work at site with the South Bay Salt Ponds Restoration Project.	None
CUM-2: Cumulative damage to marsh plain vegetation	А	All-Sub- Areas	CUM-2	CUM-2	CUM-2	CUM-2	CUM-2	LTS/NLTAE - Without mitigation.	None
CM-7: Post-treatment invasion by invasive species	А	All Sub- Areas	CM-7	CM-7	CM-7	CM-7	CM-7	LTS/NLTAE - Potential impacts mitigated to less than significant.	None

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USFWS BO - US Fish & Wildlife Service Biological Opinion

TSN: ISP-2004-13

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Whale's Tail Complex, Alameda County

	Applicable Mitigation &			Amphibi-				Verification :	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	ous Ve- hicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	Minimize vehicle use in marsh (GEO-2; CM-1)			X			During treatment		
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	Spoils from Aquamog treatment work will be disposed of off site on levee tops or other upland, non-aquatic areas to dessicate and die (GEO-4)						During treatment		
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3 & 4)	Х	Х	Х	Х	Х	During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2;CM-3)	Х	Х	Х	Х	Х	During treatment		
	Implement spill and containment plan pro- vided by contractor and approved by WRA (WQ- 2;CM-17)	X	X	X	X	Х	During treatment		
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided by contractor and approved by WRA (WQ-3;CM-17).	Х	Х	Х	Х	Х	During treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Mitigation &			Amphibi-				Verification S	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	ous Ve- hicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
WQ-4: Degradation of water quality due to contaminant remobilization									
BIO-1.2: Effects on tidal marsh plant communities affected	Minimize entry and re- entry into marsh (BIO- 1.2;CM-1)	Х	Х	Х	Х	Х	During treatment		
by Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickle- weed (FWS GL)	Х	Х	Х	Х	Х	During treatment		
	Place mats or other protectors beneath heavy equipment operating in sensitive high marsh vegetation, especially gumplant (BIO-1.2)			Х			During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2;CM-3,4)	Х	Х	Х	Х	Х	During treatment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stop- overs. (BIO-3)	Х	Х	Х	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	Х	Х	Х	Х	Х	During treatment		

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	Applicable Mitigation & Conservation Measures	Back-		Amphibi- ous Ve-			Implementation	Verification S Implementing	ISP Field
Impact*	(source**)	pack	Truck	hicle	Boat	Aerial	Timing	Entity	Supervisor
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	Х	X	X	X	X	During treatment		
BIO-4.1: Effects on the salt marsh har- vest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1;CM-15)	X	Х	X	Х				
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO- 4.1;CM-15)			X					
	Assume presence of SMHM on all suitable sites (CM 14)	Х	Х	Х	Х	X			
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	X	Х	Х	Х	Х			
BIO-5.1: Effects on California clapper rail.	For work within the Clapper Rail breeding season, call counts will be performed prior to application of herbicide according to FWS pro- tocols (CM-18)					×	Pre-treatment		
	Provide CLRA Field biologist supervision. (BIO-5.1)	Х	Х	Х	Х	Х	During treatment		

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	Applicable Mitigation &			Amphibi-				Verification S	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	ous Ve- hicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection. (BIO-5.1)	X	Х	Х	X	Х	Pre-treatment and during treatment		
	Report any CLRA activity immediately to the on-site field biologist and in post-treatment report (BIO-5.1)	X	Х	X	X	Х	During and post- treatment		
BIO-5.3: Effects on tidal marsh song spar- row subspecies and the salt marsh com- mon yellowthroat.	Report any SMSS and SCYE activity immedi- ately to ISP Field Su- pervisor and in post- treatment report (BIO- 5.3)	X	X	X	X	Х	During treatment		
	Avoid spraying or re- moving Grindelia plants in the marsh	Х	Х	Х	Х	Х	During treatment		
	Watch for Song Spar- row presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	X	X	Х	Х	X	During and post- treatment		
BIO-5.4: Effects on California least terns and western snowy plovers.	Survey access levees for nesting CALT and WSPL prior to entry (BIO-5.4;CM-20)	Х	Х	Х	Х	Х	Pre-treatment		

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	Applicable Mitigation &			Amphibi-				Verification S	•
Impact*	Conservation Measures (source**)	Back- pack	Truck	ous Ve- hicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
	Report any CALT and WSPL activity immedi- ately to on-site field biologist and in post- treatment report (BIO- 5.4)	Х	Х	X	Х	Х	During and post- treatment		
BIO-5.5:Effects on raptors (birds of prey)	Identified nests shall be provided a buffer of 500 feet during spray opera- tions. (BIO-5.5)					X	During treatment		
BIO-6.1: Effects on anadromous sal- monids (winter-run and spring-run Chi-	Target herbicide applications to minimize herbicide use near channel. (BIO-6.1)	Х	Х	Х	Х	Х	During treatment		
nook salmon, steel- head).	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	X	Х	X	Х	Х	During treatment		
BIO-6.4: Effects on estuarine fish popula- tions of shallow sub- merged intertidal	Bio-6.4 – minimize spraying near intertidal mudflats and channels (BIO-6.4)	Х	X	Х	X	Х	During treatment		
mudflats and channels.	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish. (BIO-6.4)	Х	X	X	X	Х	During treatment		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	Monitor treatment activities for development of un-drained depressions in marsh, backfill or incised to drain impounded water (BIO-8)			Х			During treatment		

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Mitigation &			Amphibi-				Verification S	Signatures
Impact*	Conservation Measures	Back-	T	ous Ve-	Doot	Annini	Implementation Timing	Implementing	ISP Field
	(source**)	pack	Truck	hicle	Boat	Aerial		Entity	Supervisor
AQ-1: Dust emissions	Suspend activities when winds are too great to prevent visible dust clouds from affecting sensitive receptors (i.e., houses, schools, hospitals). (AQ-1)	X	X	Х	X	X	During treatment		
	Limit traffic speeds on any dirt access roads to 15 miles per hour. (AQ- 1)	Х	Х	Х	Х	Х	During treatment		
AQ-3: Herbicide effects on air quality	Implement ISP Drift Management plan for aerial applications of herbicide (AQ-3;CM- 3,4)					Х	During treatment		
N-1: Disturbance of sensitive receptors	Comply with local noise ordinances (N-1)	Х	Х	Х	X	Х	During treatment		
HS-1: Worker Injury from accidents associated with manual and mechanical Cordgrass treatment.	Appropriate safety procedures and equipment shall be used by workers to minimize risks associated with manual and mechanical treatment methods (HS-1)						During treatment		
HS-2: Worker health effects from herbicide application.	Follow handling and application procedures as identified on product label. (HS-2; CM-3)	Х	X	Х	Х	X	During treatment		
HS-3: Health effects to the public from herbicide application.	Minimize drift according to drift management plan provided by con- tractor and approved by WRA. (HS-3;CM-3,4)	Х	Х	Х	Х	Х	During treatment		

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	Applicable Mitigation &			Amphibi-				Verification S	•
l (*	Conservation Measures	Back-		ous Ve-			Implementation	Implementing	ISP Field
Impact*	(source**)	pack	Truck	hicle	Boat	Aerial	Timing	Entity	Supervisor
	Post appropriate signage within 24 hours of a treatment (HS-3;CM-3)	Х	Х	Х	Х	Х	Pre-treatment		
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment. (HS-3;CM-3)	Х	X	Х	X	X	Pre-treatment and during treatment		
HS-4: Health effects to workers or the pub- lic from accidents associated with treat- ment.	Maintain Site Safety and Spill Prevention plan on site. (HS-4)	X	X	Х	X	Х	During treatment		
VIS-1: Alteration of views from removal of non-native Cordgrass Infestations.	Post appropriate signage according to ISP signage protocols. (VIS-1)	Х	Х	Х	Х	Х	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or destruction of cul- tural resources from access and treat- ment.	Conduct Phase 1 records search of historic resources on site (CUL-1)			Х			Pre-treatment		
CUM-1: Effects of wetland restoration projects on spread of non-native cordgrass.	As approved by USFWS and required in RWQCB, BCDC, and Corps of Engineers permits, control of invasive cordgrass will continue at the project site until native vegetation has become established.	Х	Х	Х	Х	Х	Pre-treatment and during treatment		

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	Applicable Mitigation &			Amphibi-				Verification Signatures		
Impact*	Conservation Measures (source**)	Back- pack	Truck	ous Ve- hicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor	
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	Х	х	Х	Х	х	Post-treatment			

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: South San Francisco Bay Tidelands, Santa Clara County

lmpact*	Appli-	Applica- ble to sub-			licable Mitigati ent method us			Comments/Analysis of	Additional Mitigation
Impact	cable to Site	areas	Backpack	Truck	Boat	Amphibious vehicles	Aerial	Residual Impact at Site	Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE							NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE							NA/NE – No equipment will be working on marsh or mudflat surfaces	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE							NA/NE – Proposed activities will not take place within an estuarine beach.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE							NA/NE – No dredg- ing/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	NA/NE							NA/NE – No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and tur- bulence of tidewaters impounded in salt marsh pans.	NA/NE							NA/NE – Proposed activities will not take place within salt marsh pans.	None

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USFWS BO – US Fish & Wildlife Service Biological Opinion

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TSN: ISP-2004-15

Impact*	Appli-	Applica- ble to sub-		• •	licable Mitigati ent method us			Comments/Analysis of	Additional Mitigation
Impact	cable to Site	areas	Backpack	Truck	Boat	Amphibious vehicles	Aerial	Residual Impact at Site	Required
WQ-1: Degradation of water quality due to herbicide application	A	All Sub- areas	WQ-1	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	A	All Sub- areas	WQ-2	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	A	All Sub- areas	WQ-3	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE							NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE							NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE							NA/NE – Field surveys found no salt-meadow or English cordgrass at this site.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, September 2003 NA/NE - Not Applicable/No Effect LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect SU – Significant but unmitigable impact USFWS BO – US Fish & Wildlife Service Biological Opinion

	Appli-	Applica- ble to		• •	icable Mitigati ent method us			Comments/Analysis of	Additional
Impact*	cable to Site	sub- areas	Backpack	Truck	Boat	Amphibious vehicles	Aerial	Residual Impact at Site	Mitigation Required
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All Sub- areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE							NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE							NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE							NA/NE – Field surveys found no special-status plant species at site.	None
BIO-3: Effects on shorebirds and waterfowl.	А	All Sub- areas	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	Sub- areas 15a and 15c				BIO-4.1 as modified by USFWS BO		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, September 2003 NA/NE - Not Applicable/No Effect LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect SU – Significant but unmitigable impact USFWS BO – US Fish & Wildlife Service Biological Opinion

		Applica-		Арр	licable Mitigati	ions*		•	
Impact*	Appli-	ble to sub-		• •	ent method us			Comments/Analysis of	Additional Mitigation
,,,,,,,	cable to Site	areas	Backpack	Truck	Boat	Amphibious vehicles	Aerial	Residual Impact at Site	Required
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	A	Sub area 12a	BIO-4.2	BIO-4.2	BIO-4.2	BIO-4.2	BIO-4.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE							NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on California clapper rail.	А	All Sub- areas	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on California black rail.	NA/NE							NA/NE – Outside of known range black rails.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	A	All Sub- areas	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	A	All Sub- areas	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, September 2003 NA/NE - Not Applicable/No Effect

LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect SU – Significant but unmitigable impact USFWS BO – US Fish & Wildlife Service Biological Opinion

		Applica-		Аррі	icable Mitigat	ions*		,	Additional
Impact*	Appli-	ble to sub-		(by treatm	ent method us	sed at Site)		Comments/Analysis of Residual Impact at Site	Mitigation
	cable to Site	areas	Backpack	Truck	Boat	Amphibious vehicles	Aerial	Nesidual Impact at Site	Required
BIO-5.5: Effects on raptors (birds of prey).	NA/NE							NA/NE – No aerial applications proposed for this site.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	A	All sub- areas	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE							NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE							NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	All Sub- areas	BIO-6.4 – minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any potential adverse affects on estuarine fish.				
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE							NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, September 2003 NA/NE - Not Applicable/No Effect

LTS/NLTAE – Less Than Significant impact/Not Likely to Adversely Effect SU – Significant but unmitigable impact USFWS BO – US Fish & Wildlife Service Biological Opinion

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	Annli	Applica- ble to		• •	licable Mitigat ent method us			Comments/Analysis of	Additional
Impact*	Appli- cable to Site	sub- areas	Backpack	Truck	Boat	Amphibious vehicles	Aerial	Residual Impact at Site	Mitigation Required
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE							NA/NE – Site activities will not create additional mosquito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE							NA/NE – No potential tiger beetle habitat will be af- fected.	None
AQ-1: Dust Emissions.	А	Sub ar- eas 15a, 15c		AQ-1				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-2: Smoke Emissions.	NA/NE							NA/NE – No burning proposed.	None
AQ-3: Herbicide Effects on Air Quality.	NA/NE							NA/NE – No aerial applications proposed	None
AQ-4: Ozone Precursor Emissions.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) Emissions.	NA/NE							LTS/NLTAE without mitigation.	None
N-1: Disturbance of Sensitive Receptors	А	All Sub- areas	N-1	N-1	N-1	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker Injury from Accidents Associated with Manual and Mechanical Cordgrass Treatment.	NA/NE							NA/NE – No manual or mechanical removal pro- posed.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, September 2003

NA/NE - Not Applicable/No Effect

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Impact*	Appli-	Applica- ble to sub-		• •	licable Mitigat ent method us			Comments/Analysis of	Additional Mitigation
Impact	cable to Site	areas	Backpack	Truck	Boat	Amphibious vehicles	Aerial	Residual Impact at Site	Required
HS-2: Worker Health Effects from Herbicide Application.	А	All Sub-	HS-2	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health Effects to the Public from Herbicide Application.	A	All Sub- areas	HS-3	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associ- ated with treatment.	A	All Sub- areas	HS-4	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass Infestations.	А	All Sub- areas	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA find- ings. Site conditions con- sistent with those antici- pated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE							NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	All Sub- areas	LU-1	LU-1	LU-1	LU-1	LU-1	LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None

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Impact*	Appli-	Applica- ble to sub-			licable Mitigat ent method us			Comments/Analysis of	Additional Mitigation
	cable to Site	areas	Backpack	Truck	Boat	Amphibious vehicles	Aerial	Residual Impact at Site	Required
LU-2: Land use conflicts from me- chanical and burning treatment methods	NA/NE							NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	A		CUL-1					LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE							NA/NE – No erosion- producing activities pro- posed	None
CUM-1- Effects of wetland restoration projects on spread of nonnative cordgrass.	A		CUM-1					Potentially Significant – ISP and SCVWD will co- ordinate control work at site with the South Bay Salt Ponds Restoration Project.	None
CUM-2- Cumulative damage to marsh plain vegetation	NA/NE							NA/NE – No Mosquito Abatement Districts work- ing on this site	None

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TSN: ISP-2004-15

SITE-SPECIFIC PROJECT MITIGATION

Site Name: South San Francisco Bay Tidelands, Santa Clara County

	Applicable Mitigation &		Implementation	Implementing ISP Fleid Supervisor Int		
Impact*	Conservation Measures	Herbicide	Timing		ISP Field Supervisor	
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1;CM-3,4)	Х	During treatment			
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2;CM-3)	Х	During treatment			
	Implement spill and containment plan provided or approved by ISP (WQ-2;CM-17)	Х	During treatment			
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP (WQ-3;CM-17)	Х	During treatment			
BIO-1.2: Effects on tidal marsh plant communities affected by	Minimize entry and re-entry into marsh, define access points (BIO-1.2;CM-1)	Х	During treatment			
Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	Х	During treatment			
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2;CM-4)	Х	During treatment			
BIO-3: Effects on shorebirds, waterfowl & marshland birds	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers (BIO-3)	Х	During treatment			
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	Х	During treatment			
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	Х	During treatment			
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1;CM-15)	Х	During treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

MITIGATION CHECKLIST South Bay Marshes: TSN: ISP-2004-15

	Applicable Mitigation &		Implementation	Verification	Signatures
Impact*	Conservation Measures	Herbicide	Timing	Implementing Entity	ISP Field Supervisor
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1;CM-15)	Х	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	Х	Pre-treatment		
BIO-4.2: Effects on resident har- bor seal colonies of San Fran-	Minimize vehicle and foot access to marsh within 1000 feet of haul out sites (BIO-4.2)	Х	During treatment		
cisco Bay.	Avoid approaching haul out sites within 2000 feet (or any distance that elicits vigilance behavior) when pups are present. (BIO-4.2)	Х	During treatment		
	Follow ISP spill prevention plan or equivalent BIO-4.2;CM-3,4)	Х	During treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breeding season (BIO-5.1;CM-18)	Х	During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	Х	Pre-treatment and during treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	Х	During and post treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	Х	During and post- treatment		
	Avoid spraying or removing Grindelia plants in the marsh	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

MITIGATION CHECKLIST South Bay Marshes: TSN: ISP-2004-15

	Applicable Mitigation &		Implementation	Verification Signatures Implementing ISP Field Supervisor		
Impact*	Conservation Measures	Herbicide	Timing			
BIO-5.4: Effects on California least terns and western snowy	Survey access levees for nesting CALT and WSPL prior to entry (BIO-5.4;CM-20)	Х	Pre-treatment			
plovers.	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.4)	Х	During and post- treatment			
BIO-6.1: Effects on anadromous salmonids (Winter-run and spring-run Chinook Salmon, steelhead)	Herbicide treatments shall be minimized near channels and mudflats (BIO-6.1)	Х	During treatment			
BIO-6.4: Effects on estuarine fish	Minimize spraying near channels (BIO-6.4)	X	During treatment			
populations of shallow sub- merged intertidal mudflats and channels.	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	Х	During treatment			
AQ-1: Dust emissions	Suspend activities when winds are too great to prevent visible dust clouds from affecting sensitive receptors (i.e., houses, schools, hospitals). (AQ-1)	Х	During treatment			
	Limit traffic speeds on any dirt access roads to 15 miles per hour. (AQ-1)	Х	During treatment			
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	Х	During treatment			
HS-2: Worker health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2;CM-3,17)	Х	During treatment			
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan (HS-3;CM-3,4,17)	Х	During treatment			
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pretreatment (HS-3)	Х	Pre-treatment			
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,4,17)	Х	During treatment			

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

MITIGATION CHECKLIST South Bay Marshes: TSN: ISP-2004-15

	Applicable Mitigation &		Implementation	Verification	Signatures
Impact*	Conservation Measures	Herbicide	Timing	Implementing Entity	ISP Field Supervisor
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	X	Pre-treatment, dur- ing treatment, post- treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	Х	Pre-treatment and during treatment		
CUM-1: Effects of wetland restoration projects on spread of nonnative cordgrass.	Potentially Significant-ISP and SCVWD will coordinate control work at site with the South Bay Salt Ponds Restoration Project.	Х	Pre-treatment, Dur- ing treatment, post- treatment		
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	Х	Post-treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Cooley Landing

TSN: ISP-2004-16

			(b)	Applicable / Treatment M	Mitigations* lethod used a	t Site)		Additional
Impact*	Applicable to Site	Back- pack	Truck	Amphibious vehicle	Boat	Aerial	Comments/Analysis of Residual Impact at Site	Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE						NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	A			GEO-2			Herbicide: Residual impact LTS/NLTAE Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-3: Remobilization of sand in cordgrass stabilized estuarine beaches	NA/NE						NA/NE – No sandy estuarine beaches are present at the project site	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE						NA/NE – No dredg- ing/sediment disposal pro- posed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	GEO-5	GEO-5	GEO-5	GEO-5	GEO-5	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE – Not applicable/No effect

LTS/NLTAE – Less than significant impact / Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO – US Fish & Wildlife Service Biological Opinion

	Anniinalda (n		(b)	Applicable y Treatment M	Mitigations* ethod used a	t Site)	O a manual to the order of	Additional
Impact*	Applicable to Site	Back- pack	Truck	Amphibious vehicle	Boat	Aerial	Comments/Analysis of Residual Impact at Site	Mitigation Required
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	А	GEO-6	GEO-6	GEO-6	GEO-6	GEO-6	No adverse impact (see EIS/R GEO-6 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-1: Degradation of water quality due to herbicide application	А	WQ-1	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	A	WQ-2	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	A	WQ-3	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE						NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE						NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE						NA/NE – Field surveys found no salt-meadow or English cordgrass at this site.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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	Applicable to		(b)	y Treatment M	Mitigations* lethod used a	t Site)	I	Comments/Analysis of	Additional Mitigation
Impact*	Site	Back- pack	Truck	Amphibious vehicle	Boat	Aerial		Residual Impact at Site	Required
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE							NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE							NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special- status plants in tidal marshes.	NA/NE							NA/NE – Field surveys found no special-status plant species at site.	None
BIO-3: Effects on shorebirds and waterfowl.	А	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	NA/NE							NA/NE – No salt marsh harvest mouse or tidal marsh shrew on or near site.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE							NA/NE – No harbor seal colonies at or near site.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE							NA/NE – Outside of known range of southern sea otters.	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not applicable / No Effect

Key:

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	A 15 11 1		(b)	Applicable y Treatment M	Mitigations* lethod used a	at Site)	Additional
Impact*	Applicable to Site	Back- pack	Truck	Amphibious vehicle	Boat	Aerial	Comments/Analysis of Mitigation Residual Impact at Site Required
BIO-5.1: Effects on California clapper rail.	А	BIO-5.1	BIO-5.1	BIO-5.1	BIO-5.1	BIO-5.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.
BIO-5.2: Effects on the California black rail.	NA/NE						NA/NE – Outside of known range black rails.
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	A	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.
BIO-5.4: Effects on California least terns and western snowy plovers.	A	BIO-5.4	BIO-5.4	BIO-5.4	BIO-5.4	BIO-5.4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.
BIO-5.5: Effects on raptors (birds of prey).	А					BIO-5.5	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE						NA/NE – Outside of known delta smelt and Sacramento splittail range.

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not applicable / No Effect

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	Applicable to		(b	Y Treatment M	e Mitigations* lethod used a	t Site)	Comments/Analysis of	Additional
Impact*	Applicable to Site	Back- pack	Truck	Amphibious vehicle	Boat	Aerial	Comments/Analysis of Residual Impact at Site	Mitigation Required
BIO-6.3: Effects on the tidewater goby.	NA/NE						NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	BIO-6.4 – mini- mize spraying	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any potential adverse affects on estuarine fish.
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE						NA/NE – Suitable habitat for California red-legged frog and San Francisco garter snake is not present at the site.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE						NA/NE – Site activities will not create additional mos- quito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE						NA/NE – No potential tiger beetle habitat will be af- fected.	None
AQ-1: Dust emissions.	А	AQ-1	AQ-1	AQ-1	AQ-1	AQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-2: Smoke emissions.	NA/NE						NA/NE – No burning proposed.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not applicable / No Effect

LTS/NLTAE - Less Than Significant Impact / Not Likely to Adversely Effect

SU – Significant but Unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	A 11 1		(b)	Applicable y Treatment M	Mitigations* ethod used a		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Additional Mitigation
Impact*	Applicable to Site	Back- pack	Truck	Amphibious vehicle	Boat	Aerial	-	gation uired
AQ-3: Herbicide effects on air quality.	A					AQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	
AQ-4: Ozone precursor emissions.	NA/NE						LTS/NLTAE without mitigation.	
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE						LTS/NLTAE without mitigation.	
N-1: Disturbance of sensitive receptors	A	N-1	N-1	N-1	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	
HS-1: Worker Injury from accidents associated with manual and mechanical cordgrass treatment.	А						LTS/NLTAE – Potential impacts mitigated to less than significant per EIS/R Impact/Mitigation HS-1.	
HS-2: Worker health effects from herbicide application.	А	HS-2	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	
HS-3: Health effects to the public from herbicide application.	А	HS-3	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	

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	Applicable to	Back-	(b	Applicable by Treatment M Amphibious	1	Comments/Analysis of	Additional Mitigation		
Impact*	Site	pack	Truck	vehicle	Boat	Aerial		Residual Impact at Site	Required
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	HS-4	HS-4	HS-4	HS-4	HS-4		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native Cordgrass Infestations.	А	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1		SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in Views from native marsh, Mudflat, and open eater to non-native Cordgrass meadows and monocultures.	NA/NE							NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts be- tween herbicide use and sensi- tive receptors	А	LU-1	LU-1	LU-1	LU-1	LU-1		LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from mechanical and burning Treatment Methods	А							NA/NE-No mechanical or burning methods proposed on this site.	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	NA/NE							NA/NE – No-ground disturbing treatment methods proposed	None
CUL-2: Loss of cultural resources from erosion.	NA/NE							NA/NE – No erosion- producing activities pro- posed	None

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Impact*	Applicable to	Back- pack	(b <u>'</u> Truck	Applicable y Treatment M Amphibious vehicle	Mitigations* lethod used a Boat	t Site) Aerial	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
CUM-1- Effects of wetland restoration projects on spread of non-native cordgrass	А	CUM-1	CUM-1	CUM-1	CUM-1	CUM-1	LTS/NLTAE – Project site is a wetland restoration project, therefore control of invasive <i>Spartina</i> inherently reduces the spread to wetland restoration projects	None
CUM-2- Cumulative damage to marsh plain vegetation	А			CUM-2			NA/NE – No Mosquito Abatement Districts working on this site	None
CM-7- Post-treatment invasion by invasive species	А	CM-7	CM-7	CM-7	CM-7	CM-7	LTS/NLTAE – Potential impacts mitigated to less than significant (per USFWS BO CM-7).	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

NA/NE - Not applicable / No Effect

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USFWS BO - US Fish & Wildlife Service Biological Opinion

TSN: ISP-2004-16

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Cooley Landing, San Mateo County

	Applicable Mitigation &			Am-				Verification :	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	phibious Vehicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	Minimize vehicle use in marsh (GEO-2; CM-1)			X			During treatment		
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3 & 4)	Х	Х	Х	Х	Х	During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2;CM-3)	Х	Х	Х	Х	Х	During treatment		
	Implement spill and containment plan pro- vided by contractor and approved by WRA (WQ- 2;CM-17)	Х	Х	Х	Х	х	During treatment		
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided by contractor and approved by WRA (WQ-3;CM-17).	Х	Х	Х	Х	Х	During treatment		
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	Minimize entry and re- entry into marsh (BIO- 1.2;CM-1)	Х	Х	Х	Х	Х	During treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Mitigation &			Am-				Verification 3	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	phibious Vehicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
	Avoid staging in high, dense vegetation such as gumplant or pickle- weed (FWS GL)	X	Х	X	X	Х	During treatment		
	Place mats or other protectors beneath heavy equipment operating in sensitive high marsh vegetation, especially gumplant (BIO-1.2)			X			During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2;CM-3,4)	Х	Х	Х	Х	Х	During treatment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stop- overs. (BIO-3)	Х	Х	Х	Х	х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	Х	Х	Х	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	Х	Х	Х	Х	Х	During treatment		

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Mitigation &			Am-				Verification S	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	phibious Vehicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
BIO-5.1: Effects on California clapper rail.	For work within the Clapper Rail breeding season, call counts will be performed prior to application of herbicide according to FWS pro- tocols (CM-18)	X	X	X	X	X	Pre-treatment		
	Provide CLRA Field biologist supervision. (BIO-5.1)	Х	Х	Х	X	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection. (BIO-5.1)	X	х	Х	Х	X	Pre-treatment and during treatment		
	Report any CLRA activity immediately to the on-site field biologist and in post-treatment report (BIO-5.1)	X	Х	X	Х	X	During and post- treatment		
BIO-5.3: Effects on tidal marsh song spar- row subspecies and the salt marsh com- mon yellowthroat.	Report any SMSS and SCYE activity immedi- ately to ISP Field Su- pervisor and in post- treatment report (BIO- 5.3)	Х	Х	Х	Х	Х	During treatment		
	Avoid spraying or re- moving Grindelia plants in the marsh	Х	Х	Х	Х	Х	During treatment		

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	Applicable Mitigation &			Am-				Verification S	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	phibious Vehicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
	Watch for Song Spar- row presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels.	X	X	х	×	X	During and post- treatment		
BIO-5.4: Effects on California least terns and western snowy plovers.	Survey access levees for nesting CALT and WSPL prior to entry (BIO-5.4;CM-20)	Х	Х	X	Х	Х	Pre-treatment		
	Report any CALT and WSPL activity immedi- ately to on-site field biologist and in post- treatment report (BIO- 5.4)	X	Х	Х	Х	Х	During and post- treatment		
BIO-5.5:Effects on raptors (birds of prey)	Identified nests shall be provided a buffer of 500 feet during spray opera- tions. (BIO-5.5)					Х	During treatment		
BIO-6.1: Effects on anadromous sal- monids (winter-run and spring-run Chi-	Target herbicide applications to minimize herbicide use near channel. (BIO-6.1)	Х	Х	Х	Х	Х	During treatment		
nook salmon, steel- head).	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	Х	Х	Х	Х	Х	During treatment		

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Mitigation &			Am-				Verification S	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	phibious Vehicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
BIO-6.4: Effects on estuarine fish popula- tions of shallow sub- merged intertidal mudflats and chan- nels.	Bio-6.4 – minimize spraying near intertidal mudflats and channels (BIO-6.4)	X	X	Х	х	X	During treatment		
	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish. (BIO-6.4)	X	X	Х	х	X	During treatment		
AQ-1: Dust emissions	Suspend activities when winds are too great to prevent visible dust clouds from affecting sensitive receptors (i.e., houses, schools, hospitals). (AQ-1)	Х	X	Х	×	Х	During treatment		
	Limit traffic speeds on any dirt access roads to 15 miles per hour. (AQ- 1)	Х	Х	Х	Х	Х	During treatment		
AQ-3: Herbicide effects on air quality	Implement ISP Drift Management plan for aerial applications of herbicide (AQ-3;CM- 3,4)					Х	During treatment		
N-1: Disturbance of sensitive receptors	Comply with local noise ordinances (N-1)	Х	Х	Х	Х	Х	During treatment		
HS-2: Worker health effects from herbicide application.	Follow handling and application procedures as identified on product label. (HS-2;CM-3)	Х	Х	Х	X	Х	During treatment		

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Mitigation &			Am-				Verification S	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	phibious Vehicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
HS-3: Health effects to the public from herbicide application.	Minimize drift according to drift management plan provided by con- tractor and approved by WRA. (HS-3;CM-3,4)	X	Х	X	X	X	During treatment		
	Post appropriate signage within 24 hours of a treatment (HS-3;CM-3)	Х	Х	Х	Х	Х	Pre-treatment		
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment. (HS-3;CM-3)	X	Х	X	X	×	Pre-treatment and during treatment		
HS-4: Health effects to workers or the pub- lic from accidents associated with treat- ment.	Maintain Site Safety and Spill Prevention plan on site. (HS-4)	Х	Х	Х	Х	х	During treatment		
VIS-1: Alteration of views from removal of non-native Cordgrass Infestations.	Post appropriate signage according to ISP signage protocols. (VIS-1)	Х	Х	Х	Х	Х	Pre-treatment, during treatment, post-treatment		
CUM-1: Effects of wetland restoration projects on spread of non-native cordgrass.	As approved by USFWS and required in RWQCB, BCDC, and Corps of Engineers permits, control of invasive cordgrass will continue at the project site until native vegetation has become established.	X	Х	Х	X	X	Pre-treatment and during treatment		

^{*} Impact numbering from ISP Programmatic EIS/R, September 2003.

^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

	Applicable Mitigation &			Am-				Verification S	Signatures
Impact*	Conservation Measures (source**)	Back- pack	Truck	phibious Vehicle	Boat	Aerial	Implementation Timing	Implementing Entity	ISP Field Supervisor
CM-7: Invasive species	Monitor cleared patches for recruitment of inva- sive plant species in- cluding perennial pep- perweed until native vegetation has become dominant (CM-7)	X	Х	Х	Х	Х	Post-treatment		

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^{**}Mitigations and control measures include ISP Programmatic EIS/R mitigations (e.g., BIO-1.2), U.S. FWS general biological opinion conservation measures (e.g., CM-3), U.S. FWS site-specific biological opinion conservation measures (e.g., SSCM-3), recommendations from U.S. FWS guidance letters (e.g., FWS GL), and California Department of Fish and Game recommendations (e.g., DFG).

TSN: ISP-2005-17

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Alameda and San Leandro Bay, Alameda County

	Applicable	Out Ave	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods						
Impact*	to Site	Sub-Area Included	Truck	Aerial	Boat	Amph	Back- pack	Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE							NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	А	All sub- areas ex- cept 17f & 17g				GEO-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE							NA/NE – No excavation within estuarine beaches planned. Any cordgrass treated within this Complex on estuarine beaches will be treated with herbicide leaving intact root masses. Root masses will naturally degrade on site.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE							NA/NE – No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	All Sub- Areas						No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	А	All Sub- Areas						NA/NE – No mitigation required for work near or in salt marsh pans.	None

Key: *Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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	Applicable	Sub-Area		Applic y Treatme rious herbi		used at S			
Impact*	to Site	Included	Truck	Aerial	Boat	Amph	Back- pack	Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
WQ-1: Degradation of water quality due to herbicide application	А	All Sub- Areas	WQ-1	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	А	All Sub- Areas	WQ-2	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	А	All Sub- Areas	WQ-3	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE							NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water quality ef- fects resulting from sedi- ment accretion	NA/NE							NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE							NA/NE – Field surveys found no salt-meadow or English cordgrass within this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All Sub- Areas	BIO- 1.2	BIO- 1.2	BIO- 1.2	BIO- 1.2	BIO- 1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE							NA/NE – Field surveys found no Chilean cordgrass within this site.	None

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	Applicable	Sub-Area		Applic y Treatme rious herbi		used at S			
Impact*	to Site	Included	Truck	Aerial	Boat	Amph	Back- pack	Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE							NA/NE – Field surveys found no eelgrass or other submerged aquatic plants within site.	None
BIO-2: Effects on special- status plants (Soft bird's beak and/or Suisun this- tle) in tidal marshes	NA/NE							NA/NE – Field surveys found no special-status plant species within site.	None
BIO-3: Effects on shore-birds and waterfowl.	А	All Sub- Areas	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	All sub- areas ex- cept 17f & 17g				BIO- 4.1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE							LTS/NLTAE – No sub-areas within site contain harbor seal colonies.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE							NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	A	17a, 17b, 17c, 17d, 17e, 17g, 17h, 17j, 17k, 17l, 17m	BIO- 5.1 as modi- fied by UFSW S BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R. MAY AFFECT- On Sub-Areas 17a and 17c. Impacts will be mitigated by phasing treatments within Site as a whole.	Phasing of treatments within the Site, on Sub-Areas 17a, 17c, 17d, 17h				

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	Applicable	Sub-Area		Applic y Treatme rious herbi		used at S			
Impact*	to Site	Included	Truck	Aerial	Boat	Amph	Back- pack	Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
BIO-5.2: Effects on the California black rail.	A	17a, 17b, 17c, 17d, 17e, 17g, 17k, 17l, 17m	BIO- 5.2	BIO- 5.2	BIO- 5.2	BIO- 5.2	BIO- 5.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	All Sub- Areas except 17f	BIO- 5.3	BIO- 5.3	BIO- 5.3	BIO- 5.3	BIO- 5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	А	17a, 17b, 17c, 17h, 17j	BIO- 5.4	BIO- 5.4	BIO- 5.4	BIO- 5.4	BIO- 5.4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.5: Effects on raptors (birds of prey).	А	Sub-areas 17c, 17d, 17h, 17k, 17l & 17j		BIO- 5.5				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	All Sub- Areas	BIO- 6.1	BIO- 6.1	BIO- 6.1	BIO- 6.1	BIO- 6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE							NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE							NA/NE – Outside of known range of tidewater goby.	None

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NA/NE - Not Applicable/No Effect

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SU – Significant but unmitigable impact

	Applicable	Sub-Area	Back- (
Impact*	to Site	Included	Truck	Aerial	Boat	Amph	Back- pack	Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	All sub- areas	BIO- 6.4 – mini- mize spray- ing	LTS/NLTAE with additional mitigation BIO-6.4(b)	BIO-6.4(b) - R-11 will not be used adjacent to chan- nel to minimize potential affects on estuarine fish.				
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE							NA/NE – Outside of known range of California red- legged frog and San Francisco garter snake. Salini- ties of areas slated for treatment are too high.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	А	All Sub- areas ex- cept 17f & 17g				BIO-8		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-9: Effects on tiger beetle species.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-1: Dust emissions.	NA/NE							NA/NE – Access routes paved.	None
AQ-2: Smoke emissions.	NA/NE							NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	А	Sub-areas 17c, 17d, 17h, 17k, 17l & 17j		AQ-3				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-4: Ozone precursor emissions.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE							LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	А	All sub- areas	N-1	N-1	N-1	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

A - Applicable

Key:

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

	Applicable	Sub-Area		Applic y Treatme rious herbi		used at S			
Impact*	to Site	Included	Truck	Aerial	Boat	Amph	Back- pack	Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE							NA/NE – Methods not proposed for this site	None
HS-2: Worker health effects from herbicide application.	Α	All sub- areas	HS-2	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	All sub- areas	HS-3	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All sub- areas	HS-4	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	A	All sub- areas	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE							NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	All sub- areas	LU-1	LU-1	LU-1	LU-1	LU-1	LTS/NLTAE – Limited to less than significant by HS, and N mitigations.	None

A - Applicable

Key:

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

	Applicable	Sub-Area							
Impact*	to Site	Included	Truck	Aerial	Boat	Amph	Back- pack	Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
LU-2: Land use conflicts from mechanical and burning treatment meth- ods	NA/NE							NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	А	All sub- areas	CUL-1		CUL-1	CUL-1	CUL-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE							NA/NE – No erosion-producing activities proposed	None
CUM-1- Effects of wetland restoration projects on spread of non-native cordgrass	NA/NE							NA/NE – No restoration projects with the potential to spread Spartina proposed within this Complex during the proposed treatment schedule	None
CUM-2- Cumulative damage to marsh plain vegetation	А	All Sub- areas ex- cept 17f & 17g				CUM- 2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

A - Applicable

Key:

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

TSN: ISP-2005-17

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Alameda and San Leandro Bay, Alameda County

Impact*	Applicable Mitigation &	Sub Area	Truck	Aerial	Boat	Argo	Back-	Implementa-	Verification S Implementing	Signatures ISP Field
mpaot	Conservation Measures*	Included	rraon	7107101	Boat	711g0	pack	tion Timing	Entity	Supervisor
GEO-2: Erosion or to- pographic change of marsh and mudflat by vehicles used in eradi- cation	Minimize vehicle travel in the marsh and mudflats (GEO-2; CM-1)	All sub- areas ex- cept 17f & 17g				Х		During treatment		
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3 & 4)	All sub- areas	Х	Х	X	Х	X	During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2; CM-3)	All sub- areas	Х	Х	Χ	Х	Х	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	All sub- areas	X	Х	X	Х	X	During treatment		
BIO-1.2: Effects on tidal marsh plant communi- ties affected by Atlantic	Minimize entry and re- entry into marsh (BIO-1.2; CM-1)	All sub- areas	X	X	X	Х	Х	During treatment		
smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub- areas	Х	X	X	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

l	Applicable Mitigation &	Sub Area	Turale	Apriol	Doot	A	Back-	Implementa-	Verification	
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	All sub- areas	Х	Х	X	Х	X	During treatment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers. (BIO-3)	All sub- areas	X	Х	X	X	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	All sub- areas	Х	Х	X	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	All sub- areas	X	Х	Х	Х	X	During treatment		
	Helicopters will not be operated within 1000 feet of active major foraging or roosting sites (BIO-3)	Sub-areas 17c, 17d, 17h, 17k, 17l & 17		Х				During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	All sub- areas ex- cept 17f & 17g				X		During treatment		
	Use protective mats or other covering over pickle- weed in areas of repeated access (BIO-4.1; CM-15)	All sub- areas ex- cept 17f & 17g				Х		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All Sub- Areas except 17f	X	Х	X	X	X	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back- pack	Implementa- tion Timing	Verification S Implementing	ISP Field
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub- areas ex- cept 17f & 17g				X	pasit	Pre- and during treatment	Entity	Supervisor
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1; CM-18)	17a, 17b, 17c, 17d, 17e, 17g, 17h, 17j, 17k, 17l, 17m	Х		X	X	Х	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	Sub-areas 17c, 17d, 17h, 17k, 17l & 17j		Х				During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	17a, 17b, 17c, 17d, 17e, 17g, 17h, 17j, 17k, 17l, 17m	Х	Х	Х	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	17a, 17b, 17c, 17d, 17e, 17g, 17h, 17j, 17k, 17l, 17m	Х	Х	Х	Х	Х	During treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	17a, 17b, 17c, 17d, 17e, 17g, 17h, 17j, 17k, 17l, 17m	Х	Х	Х	Х	Х	During treatment		

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	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification S	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
BIO-5.2: Effects on the California black rail.	Implement mitigation and avoidance procedures for California clapper rail (BIO-5.1)	17a, 17b, 17c, 17d, 17e, 17g, 17k, 17l, 17m	Х	X	X	X	Х	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment re- port (BIO-5.3)	All Sub- Areas except 17f	Х		X	X	Х	During and post-treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All Sub- Areas except 17f	Х	Х	Х	Х	Х	During treatment		
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	All Sub- Areas except 17f	X	X	Х	Х	X	During treatment		
BIO-5.4: Effects on California least terns and western snowy plovers.	Survey levees for terns and plovers prior to treat- ment (BIO-5.4)	17a, 17b, 17c, 17h, 17j	Х	Х	Х	Х	Х	Pre- treatment and during treatment		
BIO-5.5: Effects on raptors (birds of prey).	Consult qualified biologist to determine possible raptor nesting presence (BIO-5.5)	Sub-areas 17c, 17d, 17h, 17k, 17l & 17j		Х				Pre- treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	Sub-areas 17c, 17d, 17h, 17k, 17l & 17j		Х				Pre- treatment and during treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring- run Chinook salmon,	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	All Sub- Areas	Х	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification S	
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
steelhead).	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub- areas	Х	Х	X	X	Х	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
intertidal mudflats and channels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub- areas	X	X	X	X	Х	During treatment		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	Monitor access route for the formation of un- drained depressions in tire ruts or foot trails (BIO-8)	All Sub- areas ex- cept 17f & 17g				Х		During treatment		
	Backfill or cut drainage into shallow depressions left in the marsh by control work to minimize standing water where appropriate (BIO-8)	All Sub- areas ex- cept 17f & 17g				X		Post- treatment		
AQ-3: Herbicide effects on air quality.	Implement ISP approved drift management plan (AQ-3; CM-3,4)	Sub-areas 17c, 17d, 17h, 17k, 17l & 17j		Х				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
HS-2: Worker Health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2; CM-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		

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	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification 3	
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan or equivalent (HS-3; CM-3, 4)	All sub- areas	X	X	Х	Х	Х	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub- areas	X	Х	X	X	Х	Pre- treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	All sub- areas	X	X	X	X	X	Pre- treatment and during treatment		
	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,17)	All sub- areas	Х	Х	X	Х	Х	During treatment		
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	All sub- areas	X	X	X	X	Х	Pre- treatment, during treatment, post- treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered pre- historic or historic re- sources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological miti- gation has taken place (CUL-1)	All sub- areas	X		X	X	X	Pre- treatment and during treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification S	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
CUM-2: Cumulative damage to marsh plain vegetation	Coordinate treatment schedule with the Mos- quito abatement district in order to minimize cumula- tive impacts (CUM-2)	All Sub- areas ex- cept 17f & 17g				X		Pre- treatment		
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	Х	Х	Х	Х	Х	Post- treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

TSN: ISP-2004-18

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Colma Creek and San Bruno Marsh Complex, San Mateo County

		0.1.1		(by Treatm	icable Mitiga ent Method u picide Treatm	ised at Site)	:		Additional
Impact*	Applicable to Site	Sub-Area Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE							NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	А	18a, 18b, 18d, 18e, 18f, 18g, 18h				GEO-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE							NA/NE – No excavation within estuarine beaches planned. Any cordgrass treated within this Complex on estuarine beaches will be treated with herbicide leaving intact root masses. Root masses will naturally degrade on site.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE							NA/NE – No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	All sub- areas	None	None	None	None	None	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and tur- bulence of tidewaters impounded in salt marsh pans.	А	All sub- areas	None	None	None	None	None	NA/NE – No mitigation required for work near or in salt marsh pans.	None
WQ-1: Degradation of water quality due to herbicide application	А	All sub- areas	WQ-1	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	А	All sub- areas	WQ-2	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

A - Applicable

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LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO – US Fish & Wildlife Service Biological Opinion

				(by Treatm	icable Mitiga ent Method u picide Treatm	used at Site)	:		Additional
Impact*	Applicable to Site	Sub-Area Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
WQ-3: Degradation of water quality due to fuel or petroleum spills	А	All sub- areas	WQ-3	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE							NA/NE – No dredging or other sediment- mobilizing activities proposed.	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE							NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE							NA/NE – Field surveys found no salt- meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All sub- areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE							NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE							NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE							NA/NE – Field surveys found no special- status plant species at site.	None
BIO-3: Effects on shorebirds and waterfowl.	А	All sub- areas	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	A	18a, 18b, 18d, 18e, 18f, 18g, 18h				BIO-4.1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE							NA/NE –No harbor seal colonies within areas targeted for <i>Spartina</i> treatment under this plan.	None

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				(by Treatm	icable Mitiga ent Method u picide Treatm	ised at Site)	:		Additional
Impact*	Applicable to Site	Sub-Area Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
BIO-4.3: Effects on the southern sea otter.	NA/NE							NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	А	All sub- areas	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant on Sub-Areas 18a and 18h. Site conditions consistent with those anticipated in the PEIS/R. MAY AFFECT- On Sub-Areas 18c, 18d, 18e, 18f, and 18g. Impacts will be mitigated by phasing treatments within Site as a whole.	Phasing of treatments within the Site, on Sub-Areas 18a, 18c, 18d, 18e, 18f, and 18g
BIO-5.2: Effects on the California black rail.	А	All sub- areas	BIO-5.2	BIO-5.2	BIO-5.2	BIO-5.2	BIO-5.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	All sub- areas	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE							NA/NE – Outside of known California least tern and western snowy plover range.	None
BIO-5.5: Effects on raptors (birds of prey).	А	18d, 18e, 18f, 18g		BIO-5.5				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	All sub- areas	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE							NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE							NA/NE – Outside of known range of tidewater goby.	None

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USFWS BO – US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Sub-Area Included	Truck	(by Treatm	icable Mitiga ient Method u bicide Treatm Boat	used at Site)	Back-	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	All sub- areas	BIO-6.4 - mini- mize spraying	BIO-6.4 - mini- mize spraying	BIO-6.4 - mini- mize spraying	BIO-6.4 - mini- mize spraying	BIO-6.4 - minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: No mowing proposed because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any poten- tial adverse affects on estuarine fish.
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE							NA/NE – Outside of known range of Califor- nia red-legged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	А	18a, 18b, 18d, 18e, 18f, 18g, 18h				BIO-8		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-9: Effects on tiger beetle species.	NA/NE							NA/NE – No potential tiger beetle habitat will be affected.	None
AQ-1: Dust emissions.	А	18e	AQ-1	AQ-1	AQ-1	AQ-1	AQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-2: Smoke emissions.	NA/NE							NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	А	18d, 18e, 18f, 18g		AQ-3				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-4: Ozone precursor emissions.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE							LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	А	All sub- areas	N-1	N-1	N-1	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE							NA/NE – Methods not proposed for this site	None

A - Applicable

Key:

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Anniin ahin in	Out Am		(by Treatm	icable Mitiga ent Method o bicide Treatn		:		Additional
Impact*	Applicable to Site	Sub-Area Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
HS-2: Worker health effects from herbicide application.	А	All sub- areas	HS-2	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	All sub- areas	HS-3	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All sub- areas	HS-4	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	All sub- areas	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE							NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	All sub- areas	LU-1	LU-1	LU-1	LU-1	LU-1	LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from mechanical and burning treatment methods	NA/NE							NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	А	All sub- areas	CUL-1		CUL-1	CUL-1	CUL-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE							NA/NE – No erosion-producing activities proposed	None
CUM-1- Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE							NA/NE – No restoration projects with the potential to spread <i>Spartina</i> proposed within this Complex during the proposed treatment schedule	None
CUM-2- Cumulative damage to marsh plain vegetation	А	18d, 18e, 18f, 18g				CUM-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

A - Applicable

Key:

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

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USFWS BO – US Fish & Wildlife Service Biological Opinion

TSN: ISP-2005-18

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Colma Creek and San Bruno Marsh Complex, San Mateo County

	Applicable Mitigation &	Sub Area			_	_	Back-	Implementa-	Verification	
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	Minimize vehicle travel in the marsh and mudflats (GEO-2; CM-1)	18a, 18b, 18d, 18e, 18f, 18g				Х		During treatment		
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3 & 4)	All sub- areas	Х	Х	X	Х	Х	During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2; CM-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
WQ-3: Degradation of water quality due to fuel or petro- leum spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
BIO-1.2: Effects on tidal marsh plant communities	Minimize entry and re-entry into marsh (BIO-1.2; CM-1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
affected by Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &	Sub Area					Back-	Implementa-		Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
BIO-3: Effects on shore- birds, waterfowl & marsh- land birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers. (BIO-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mud-flats emerge. (BIO-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Helicopters will not be operated within 1000 feet of active major foraging or roosting sites (BIO-3)	18d, 18e, 18f, 18g		Х				During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	18a, 18b, 18d, 18e, 18f, 18g				х		During treatment		
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1; CM-15)	18a, 18b, 18d, 18e, 18f, 18g				Х		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All Sub- Areas	Х	Х	Х	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	18a, 18b, 18d, 18e, 18f, 18g				Х		Pre- and during treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1; CM-18)	All Sub- areas	Х		Х	X	Х	During treatment		

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	18d, 18e, 18f, 18g		Х				During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All Sub- areas	Х	Х	X	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	All Sub- areas	Х	X	X	X	X	During treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All Sub- Areas	X	Х	X	X	X	During treatment		
BIO-5.2: Effects on the California black rail.	Implement mitigation and avoidance procedures for California clapper rail (BIO-5.1)	All Sub- Areas	Х	Х	X	X	X	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO- 5.3)	All Sub- Areas	Х		X	X	X	During and post-treatment		
	Avoid spraying or removing Grindelia plants in the marsh (BIO-5.3)	All Sub- Areas	Х	Х	Х	Х	Х	During treatment		
	Watch for Song Sparrow presence in the work area during early season treat- ment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	All Sub- Areas	X	X	X	X	X	During treatment		

Impact*	Applicable Mitigation &	Sub Area	Truck	Aerial	Boat	Argo	Back-	Implementa-	Verification Implementing	Signatures ISP Field
Impact	Conservation Measures*	Included	Truck	Acriai	Doar	Aigo	pack	tion Timing	Entity	Supervisor
BIO-5.5: Effects on raptors (birds of prey).	Consult qualified biologist to determine possible raptor nesting presence (BIO-5.5)	18d, 18e, 18f, 18g		Х				Pre- treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	18d, 18e, 18f, 18g		Х				Pre- treatment and during treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	All Sub- Areas	X	Х	Х	Х	Х	During treatment		
salmon, steelhead).	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub- areas	Х	Х	X	Х	Х	During treatment		
BIO-6.4: Effects on estua- rine fish populations of shal- low submerged intertidal	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub- areas	Х	X	X	Х	Х	During treatment		
mudflats and channels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub- areas	X	X	X	Х	Х	During treatment		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	Monitor access route for the formation of un-drained depressions in tire ruts or foot trails (BIO-8)	18a, 18b, 18d, 18e, 18f, 18g, 18h				Х		During treatment		
	Backfill or cut drainage into shallow depressions left in the marsh by control work to minimize standing water where appropriate (BIO-8)	18a, 18b, 18d, 18e, 18f, 18g, 18h				Х		Post- treatment		

	Applicable Mitigation &	Sub Area					Back-	Implementa-		Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
AQ-1: Dust emissions	Limit traffic speeds on any dirt access roads to 15 miles per hour. (AQ-1)	All sub- areas	X	Х	X	Х	Х	Pre- treatment, during treatment, post- treatment		
AQ-3: Herbicide effects on air quality.	Implement ISP approved drift management plan (AQ-3; CM-3, 4)	18d, 18e, 18f, 18g		Х				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
HS-2: Worker Health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2; CM-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan or equivalent (HS-3; CM-3,4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub- areas	Х	Х	Х	Х	Х	Pre- treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	All sub- areas	Х	X	Х	X	Х	Pre- treatment and during treatment		
	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3, 17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	All sub- areas	Х	X	X	X	X	Pre- treatment, during treatment, post- treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	All sub- areas	X		X	X	X	Pre- treatment and during treatment		
CUM-2: Cumulative damage to marsh plain vegetation	Coordinate treatment schedule with the Mosquito abatement district in order to minimize cumulative impacts (CUM-2)	18a, 18b, 18d, 18e, 18f, 18g, 18h				Х		Pre- treatment		
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	Х	Х	Х	Х	Х	Post- treatment		

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: West San Francisco Bay, San Mateo County

TSN: ISP-2004-19

Impact*	Applicable to	Sub-Area		Applio (by Treatme arious herb		used at Site	-	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Included	Truck	Aerial	Boat	Argo	pack	at Site	Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE							NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	А	19e, 19h, 19i, 19j, 19k, 19l 19n, 19o, 19p, 19q				GEO-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE							NA/NE – No excavation within estuarine beaches planned. Any cordgrass treated within this Complex on estuarine beaches will be treated with herbicide leaving intact root masses. Root masses will naturally degrade on site.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE							NA/NE – No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	19b, 19e, 19h, 19i, 19j, 19k, 19o, 19p	None	None	None	None	None	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	А	19p	None	None	None	None	None	NA/NE – No mitigation required for work near or in salt marsh pans.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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USFWS BO - US Fish & Wildlife Service Biological Opinion

	Applicable to	Sub-Area		Applion (by Treatment) Sarious herb		used at Site	,	Comments/Anglypia of Pacidyal Impact	Additional
Impact*	Applicable to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
WQ-1: Degradation of water quality due to herbicide application	A	All sub- areas	WQ-1	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	А	All sub- areas	WQ-2	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	А	All sub- areas	WQ-3	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE							NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE							NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE							NA/NE – Field surveys found no salt- meadow or English cordgrass within this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All sub- areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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		Sub-Area		(by Treatme	cable Mitiga ent Method icide Treatr	used at Site	,		Additional
Impact*	Applicable to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	А	19k	BIO-1.3			BIO-1.3	BIO-1.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE							NA/NE – Field surveys found no eel- grass or other submerged aquatic plants within site.	None
BIO-2: Effects on special- status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE							NA/NE – Field surveys found no special-status plant species within site.	None
BIO-3: Effects on shorebirds and waterfowl.	А	All sub- areas	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	19a, 19i, 19l, 19n, 19p,	BIO-4.1	BIO-4.1	BIO-4.1	BIO-4.1	BIO-4.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE							LTS/NLTAE – No sub-areas within site contain harbor seal colonies.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE							NA/NE – Outside of known range of southern sea otters.	None

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		Sub-Area		Applio by Treatme) arious herb		used at Site	•		Additional
Impact*	Applicable to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
BIO-5.1: Effects on the California clapper rail.	А	All Sub- areas	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on the California black rail.	NA/NE							NA/NE – Outside of known range black rails.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	А	19a, 19b, 19e, 19f, 19i, 19k, 19n, 19p	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE							NA/NE – No least tern or western snowy plover within sub-areas of this site.	None
BIO-5.5: Effects on raptors (birds of prey).	A	19p		BIO-5.5				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	All sub- areas	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE							NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE							NA/NE – Outside of known range of tidewater goby.	None

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		Sub-Area		Applio by Treatme) arious herb)		used at Site	•		Additional
Impact*	Applicable to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	All sub- areas	BIO-6.4 - minimize spraying	BIO-6.4 – mini- mize spraying	BIO-6.4 - minimize spraying	BIO-6.4 - minimize spraying	BIO-6.4 – mini- mize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: No mowing proposed because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used ad- jacent to channel to minimize any poten- tial ad- verse af- fects on estuarine fish.
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE							NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake. Salinities of areas slated for treatment are too high.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	А	19e, 19h, 19i, 19j, 19k, 19l 19n, 19o, 19p, 19q				BIO-8		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-9: Effects on tiger beetle species.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-1: Dust emissions.	А	All sub- areas	AQ-1					NA/NE – Access routes paved.	None
AQ-2: Smoke emissions.	NA/NE							NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	А	19p		AQ-3				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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		Applicable to Sub-Area		Applio (by Treatmo arious herb)		used at Site	-		Additional
Impact*	Applicable to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
AQ-4: Ozone precursor emissions.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE							LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	A	All sub- areas	N-1	N-1	N-1	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE							NA/NE – Methods not proposed for this site	None
HS-2: Worker health effects from herbicide application.	А	All sub- areas	HS-2	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	A	All sub- areas	HS-3	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	A	All sub- areas	HS-4	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	All sub- areas	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None

A - Applicable

NA/NE - Not Applicable/No Effect

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SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

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West San Francisco Bay TSN: ISP-2005-19

		Out Area	· ·	by Treatme		ntions* used at Site ment metho	•		Additional
Impact*	Applicable to Site	Sub-Area Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE							NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts be- tween herbicide use and sensi- tive receptors	А	All sub- areas	LU-1	LU-1	LU-1	LU-1	LU-1	LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from mechanical and burning treatment methods	NA/NE							NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	А	All sub- areas	CUL-1a		CUL-1a	CUL-1a	CUL-1a	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE							NA/NE – No erosion-producing activities proposed	None
CUM-1- Effects of wetland restoration projects on spread of non-native cordgrass	NA/NE							NA/NE – No restoration projects with the potential to spread Spartina pro- posed within this Complex during the proposed treatment schedule	None
CUM-2- Cumulative damage to marsh plain vegetation	А	All sub- areas	CUM-2	CUM-2	CUM-2	CUM-2	CUM-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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TSN: ISP-2005-19

SITE-SPECIFIC PROJECT MITIGATION

Site Name: West San Francisco Bay, San Mateo County

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
GEO-2: Erosion or to- pographic change of marsh and mudflat by vehicles used in eradi- cation	Minimize vehicle travel in the marsh and mudflats (GEO-2; CM-1)	19e, 19h, 19i, 19j, 19k, 19l 19n, 19o, 19p, 19q				X		During treatment		
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3 & 4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2; CM-3)	All sub- areas	Х	Х	Х	X	Х	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	All sub- areas	Х	Х	Х	Х		During treatment		
BIO-1.2: Effects on tidal marsh plant communi-	Minimize entry and re-entry into marsh (BIO-1.2; CM-1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
ties affected by Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
BIO-1.3: Effects on tidal marsh plant communi-	Minimize entry and re-entry into marsh (BIO-1.2; CM-1)	19k	X			X	X	During treatment		
ties affected by Chilean cordgrass.	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3,4)	19k	Х			Х	Х	During treatment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers. (BIO-3)	All sub- areas	Х	X	Х	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mud-flats emerge. (BIO-3)	All sub- areas	Х	Х	Χ	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	All sub- areas	Х	Х	Χ	Х	Х	During treatment		
	Helicopters will not be operated within 1000 feet of active major foraging or roosting sites (BIO-3)	19p		Х				During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	19e, 19h, 19i, 19j, 19k, 19l 19n, 19o, 19p, 19q				X		During treatment		
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1; CM-15)	19e, 19h, 19i, 19j, 19k, 19l 19n, 19o, 19p, 19q				Х		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	19a, 19i, 19l, 19n, 19p	Х	Х	Х	Х	Х	During treatment		

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	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub- areas				Х	Х	Pre- and during treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1; CM-18)	All Sub- areas	Х		X	Х	Х	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	19p		X				During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO- 5.3)	All sub- areas	Х		Х	Х	Х	During and post-treatment		
	Avoid spraying or removing Grindelia plants in the marsh (BIO-5.3)	All sub- areas	Х	X	Х	Х	Х	During treatment		

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	Applicable Mitigation &	Sub Area					Back-	Implementa-		Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	Watch for Song Sparrow presence in the work area during early season treat- ment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	All sub- areas	X	×	X	X	Х	During treatment		
BIO-5.5: Effects on raptors (birds of prey).	Consult qualified biologist to determine possible raptor nesting presence (BIO-5.5)	19p		X				Pre- treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	19p		Х				Pre- treatment and during treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	All sub- areas	Х	Х	Χ	Х	Х	During treatment		
run Chinook salmon, steelhead).	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub- areas	X	Х	Х	X	Х	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub- areas	X	X	Х	Х	Х	During treatment		
intertidal mudflats and channels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	Monitor access route for the formation of un-drained depressions in tire ruts or foot trails (BIO-8)	19e, 19h, 19i, 19j, 19k, 19l 19n, 19o, 19p, 19q				Х		During treatment		

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	Applicable Mitigation &	Sub Area					Back-	Implementa-		Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	Backfill or cut drainage into shallow depressions left in the marsh by control work to minimize standing water where appropriate (BIO-8)	19e, 19h, 19i, 19j, 19k, 19l 19n, 19o, 19p, 19q				X		Post- treatment		
AQ-1: Dust Emissions	Maintain 15 mph speed limit when traveling on unpaved levees or access roads (AQ- 1)	All sub- areas	X					During treatment		
AQ-3: Herbicide effects on air quality.	Implement ISP approved drift management plan (AQ-3; CM-3,4)	19p		Х				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
HS-2: Worker Health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2; CM-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan or equivalent (HS-3; CM-3,4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub- areas	Х	Х	Х	X	Х	Pre- treatment		
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	All sub- areas	Х	X	×	X	Х	Pre- treatment and during treatment		

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	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3,17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	All sub- areas	X	Х	х	Х	Х	Pre- treatment, during treatment, post- treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	All sub- areas	Х	Х	Х	Х	Х	Pre- treatment and during treatment		
CUM-2: Cumulative damage to marsh plain vegetation	Coordinate treatment schedule with the Mosquito abatement district in order to minimize cumulative impacts (CUM-2)	All sub- areas	Х	Х	Х	Х	Х	Pre- treatment		
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	Х	Х	Х	Х	Х	Post- treatment		

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TSN: ISP-2005-20

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: San Leandro and Hayward Shoreline, Alameda County

	Applicable			(by Treatm	icable Mitiga ent Method u bicide Treatm		:		Additional
Impact*	to Site	Sub-Area Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE							NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	А	Sub-areas 20c-t				GEO-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE							NA/NE – No excavation within estuarine beaches planned. Any cordgrass treated within this Complex on estuarine beaches will be treated with herbicide leaving intact root masses. Root masses will naturally degrade on site.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE							NA/NE – No dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	All Sub- Areas	None	None	None	None	None	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	А	20c, 20d, 20e, 20f, 20m, 20n, 20o	None	None	None	None	None	NA/NE – No mitigation required for work near or in salt marsh pans.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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NA/NE - Not Applicable/No Effect

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SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Applicable	Sub-Area		(by Treatm	icable Mitiga ent Method u picide Treatm				Additional
Impact*	to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
WQ-1: Degradation of water quality due to herbicide application	А	All sub- areas	WQ-1	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	А	All sub- areas	WQ-2	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of water quality due to fuel or petro-leum spills	А	All sub- areas	WQ-3	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE							NA/NE – No dredging or other sediment- mobilizing activities proposed.	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE							NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE							NA/NE – Field surveys found no salt- meadow or English cordgrass within this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All sub- areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE							NA/NE – Field surveys found no Chilean cordgrass within this site.	None
BIO-1.4: Effects on sub- merged aquatic plant commu- nities.	NA/NE							NA/NE – Field surveys found no eelgrass or other submerged aquatic plants within site.	None

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	Applicable	Sub-Area		(by Treatm	icable Mitiga ent Method u picide Treatm				Additional
Impact*	to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
BIO-2: Effects on special- status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE							NA/NE – Field surveys found no special- status plant species within site.	None
BIO-3: Effects on shorebirds and waterfowl.	А	All sub- areas	BIO-3	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	20f, 20h, 20l, 20m, 20n, 20o, 20p	BIO-4.1	BIO-4.1	BIO-4.1	BIO-4.1	BIO-4.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE							LTS/NLTAE – No sub-areas within site contain harbor seal colonies.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE							NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	А	20d, 20e, 20f, 20g, 20h, 20l, 20i, 20m, 20n, 20o	BIO-5.1 as modi- fied by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant on Sub-Areas 20d, 20e, 20f, 20g, 20h, 20l, and 20i. Site conditions consistent with those anticipated in the PEIS/R. MAY AFFECT- On Sub-Areas 20m, 20n, and 20o. Impacts will be mitigated by phasing treatments within Site as a whole.	Phasing of treatments within the Site, on Sub- Areas 20m, 20n, and 20o.				
BIO-5.2: Effects on the California black rail.	NA/NE							NA/NE – Outside of known range black rails.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	All sub- areas	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Applicable	Sub-Area		(by Treatm	icable Mitiga ent Method u picide Treatm	used at Site)			Additional
Impact*	to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE							NA/NE – No least tern or western snowy plover within sub-areas of this site.	None
BIO-5.5: Effects on raptors (birds of prey).	А	Sub-areas, 20b, 20c-h, 20k-t		BIO-5.5				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	All sub- areas	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE							NA/NE – Outside of known delta smelt and Sacramento splittail range.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE							NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	All sub- areas	BIO-6.4 - minimize spraying	BIO-6.4 - minimize spraying	BIO-6.4 - minimize spraying	BIO-6.4 - minimize spraying	BIO-6.4 - minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: No mowing proposed because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adja- cent to chan- nel to mini- mize any potential ad- verse affects on estuarine fish.
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE							NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake. Salinities of areas slated for treatment are too high.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	А	Sub-areas 20c-t				BIO-8		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Applicable	Sub-Area	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					_ Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
BIO-9: Effects on tiger beetle species.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-1: Dust emissions.	А	All sub- areas	AQ-1	AQ-1	AQ-1	AQ-1	AQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-2: Smoke emissions.	NA/NE							NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	А	Sub-areas, 20b, 20c-h, 20k-t		AQ-3				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
AQ-4: Ozone precursor emissions.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE							LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	А	All sub- areas	N-1	N-1	N-1	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE							NA/NE – Methods not proposed for this site	None
HS-2: Worker health effects from herbicide application.	А	All sub- areas	HS-2	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	All sub- areas	HS-3	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Applicable	Out Ans		(by Treatm	licable Mitiga nent Method u bicide Treatm	used at Site)			Additional
Impact*	to Site	Sub-Area Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All sub- areas	HS-4	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	All sub- areas	VIS-1	VIS-1	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE							NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts be- tween herbicide use and sen- sitive receptors	А	All sub- areas	LU-1	LU-1	LU-1	LU-1	LU-1	LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from mechanical and burning treatment methods	NA/NE							NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	А	All sub- areas	CUL-1a		CUL-1a	CUL-1a	CUL-1a	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE							NA/NE – No erosion-producing activities proposed	None
CUM-1- Effects of wetland restoration projects on spread of non-native cordgrass	NA/NE							NA/NE – No restoration projects with the potential to spread <i>Spartina</i> proposed within this Complex during the proposed treatment schedule	None

A - Applicable

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

					icable Mitiga ent Method ι				
	Applicable	Sub-Area		Various herb	picide Treatm	ent methods			Additional
Impact*	to Site	Included	Truck	Aerial	Boat	Argo	Back- pack	Comments/Analysis of Residual Impact at Site	Mitigation Required
CUM-2- Cumulative damage to marsh plain vegetation	А	Sub-areas 20c-t				CUM-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

A - Applicable

Key:

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

TSN: ISP-2005-20

SITE-SPECIFIC PROJECT MITIGATION

Site Name: San Leandro and Hayward Shoreline, Alameda County

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
GEO-2: Erosion or to- pographic change of marsh and mudflat by vehicles used in eradi- cation	Minimize vehicle travel in the marsh and mudflats (GEO-2; CM-1)	Sub-areas 20c-t				X		During treatment		
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3 & 4)	All sub- areas	Х	Х	X	X	X	During treatment		
WQ-2: Degradation of water quality due to	Apply under supervision of trained applicator (WQ-2; CM-3)	All sub- areas	Х	X	Х	X	Х	During treatment		
herbicide spills	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub- areas	Х	X	X	Х	Х	During treatment		
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
BIO-1.2: Effects on tidal marsh plant communi-	Minimize entry and re-entry into marsh (BIO-1.2; CM-1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
ties affected by Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub- areas	X	Х	Х	Х	Х	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

l	Applicable Mitigation &	Sub Area	Turnele	Annial	Doot	A 11010	Back-	Implementa-		Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers. (BIO-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
	Helicopters will not be operated within 1000 feet of active major foraging or roosting sites (BIO-3)	Sub-areas, 20b, 20c-h, 20k-t		Х				During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	Sub-areas 20c-t				Х		During treatment		
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1; CM-15)	Sub-areas 20c-t				Х		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All Sub- Areas	Х	Х	Х	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	20f, 20h, Sub-areas 20c-t				Х		Pre- and during treatment		

	Applicable Mitigation &	Sub Area					Back-	Implementa-		Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA bread- ing season (BIO-5.1; CM-18)	All terrestrial treatments on 20d, 20e, 20f, 20g, 20h, 20l, 20i, 20m, 20n, 20o	X		X	X	X	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	Sub-areas, 20b, 20c-h, 20k-t		Х				During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	20d, 20e, 20f, 20g, 20h, 20l, 20i, 20m, 20n, 20o	X	Х	X	Х	Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	20d, 20e, 20f, 20g, 20h, 20l, 20i, 20m, 20n, 20o	X	Х	Х	Х	Х	During treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	20d, 20e, 20f, 20g, 20h, 20l, 20i, 20m, 20n, 20o	X	Х	Х	Х	Х	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow- throat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	All Sub- Areas	X	Х	Х	Х	Х	During and post- treatment		
	Avoid spraying or removing Grindelia plants in the marsh (BIO-5.3)	All Sub- Areas	Х	Х	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back- pack	Implementa- tion Timing	Verification Implementing Entity	Signatures ISP Field Supervisor
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	All Sub- Areas	Х	Х	Х	Х	Х	During treatment		·
BIO-5.5: Effects on raptors (birds of prey).	Consult qualified biologist to determine possible raptor nesting presence (BIO-5.5)	Sub-areas, 20b, 20c-h, 20k-t		Х				Pre- treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	Sub-areas, 20b, 20c-h, 20k-t		Х				Pre- treatment and during treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	All Sub- Areas	Х	Х	Х	Х	Х	During treatment		
run Chinook salmon, steelhead).	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
BIO-6.4: Effects on estuarine fish popula-	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
tions of shallow sub- merged intertidal mud- flats and channels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	Monitor access route for the for- mation of un-drained depres- sions in tire ruts or foot trails (BIO-8)	Sub-areas 20c-t				Х		During treatment		

	Applicable Mitigation &	Sub Area					Back-	Implementa-	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	Backfill or cut drainage into shallow depressions left in the marsh by control work to minimize standing water where appropriate (BIO-8)	Sub-areas 20c-t				X		Post- treatment		
AQ-1: Dust emissions	Limit traffic speeds on any dirt access roads to 15 miles per hour. (AQ-1)	All sub- areas	Х	X	Х	X	X	Pre- treatment, during treatment, post- treatment		
AQ-3: Herbicide effects on air quality.	Implement ISP approved drift management plan (AQ-3; CM-3, 4)	Sub-areas, 20b, 20c-h, 20k-t		X				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub- areas	Х	X	Х	Х	Х	During treatment		
HS-2: Worker Health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2; CM-3)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan or equivalent (HS-3; CM-3, 4)	All sub- areas	Х	Х	X	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pretreatment (HS-3)	All sub- areas	Х	X	X	X	X	Pre- treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	All sub- areas	Х	Х	Х	Х	Х	Pre- treatment and during treatment		

	Applicable Mitigation &	Sub Area					Back-	Implementa-		Signatures
Impact*	Conservation Measures*	Included	Truck	Aerial	Boat	Argo	pack	tion Timing	Implementing Entity	ISP Field Supervisor
	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3, 17)	All sub- areas	Х	Х	Х	Х	Х	During treatment		
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	All sub- areas	X	X	X	X	X	Pre- treatment, during treatment, post- treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	All sub- areas	Х		X	X	X	Pre- treatment and during treatment		
CUM-2: Cumulative damage to marsh plain vegetation	Coordinate treatment schedule with the Mosquito abatement district in order to minimize cumulative impacts (CUM-2)	Sub-areas 20c-t				Х		Pre- treatment		
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	X	Х	Х	Х	Х	Post- treatment		

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Ideal Marsh, Alameda County

TSN: ISP-2005-21

Impact*	Applica- ble to Site	(by T Back- pack		e Mitigations dethod used Aerial		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE					NA/NE-Proposed activities will not elevate erosion above ambient levels	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	А				GEO-2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE					NA/NE – No excavation within estuarine beaches planned. Any cordgrass treated within this Site on estuarine beaches will be treated with herbicide leaving intact root masses. Root masses will naturally degrade on site.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE					NA/NE-No dredging /sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	A					No adverse impact (see PEIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE					NA/NE-Proposed activities will not take place within salt marsh pans	None
WQ-1: Degradation of water quality due to herbicide application	А	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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A - Applicable

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

Impact*	Applica- ble to Site	(by 1 Back- pack		e Mitigations Method used Aerial		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
WQ-2: Degradation of water quality due to herbicide spills	A	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	А	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE					NA/NE-No dredging/excavation proposed for this site	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE					NA/NE-This impact only applies to PEIS/R Alternative 3	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE					NA/NE-Field surveys have found no Salt meadow or English cordgrass at this site	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE					NA/NE-Field surveys have found no Chilean cordgrass at this site	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE					NA/NE-Field surveys have found no eel- grass or other submerged aquatic plants at this site	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE					NA/NE-Field surveys have found no special status plants at this site	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

2 of 6

A - Applicable

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

June 14	Applica- ble to	Back-	reatment M		at Site) Amphibious	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	pack	Truck	Aerial	Vehicle	at Site	Required
BIO-3: Effects on shorebirds and waterfowl.	А	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	A	BIO-4.1 as modified by USFWS BO	BIO-4.1 as modified by USFWS BO	BIO-4.1 as modified by USFWS BO	BIO-4.1 as modified by USFWS BO	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE					NA/NE-No harbor seal colonies at or near site	None
BIO-4.3: Effects on the southern sea otter.	NA/NE					NA/NE-Outside of the known range of the southern sea otter	None
BIO-5.1: Effects on the California clapper rail.	А	BIO-5.1	BIO-5.1	BIO-5.1	BIO-5.1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.2: Effects on the California black rail.	А	BIO-5.2	BIO-5.2	BIO-5.2	BIO-5.2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE					NA/NE-No California least terns or western snowy plovers within or near site	None
BIO-5.5: Effects on raptors (birds of prey).	А			BIO-5.5		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

3 of 6

A - Applicable

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

	Applica- ble to	(by T Back-	Applicable reatment M	Mitigations dethod used		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	pack	Truck	Aerial	Vehicle	at Site	Required
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	Α	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE					NA/NE-Outside of known range of delta smelt and Sacramento splittail	None
BIO-6.3: Effects on the tidewater goby.	NA/NE					NA/NE-Outside of the known range of the tidewater goby	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Α	BIO-6.4	BIO-6.4	BIO-6.4	BIO-6.4	LTS/NLTAE-with additional mitigation BIO-6(b) (Note: no mowing on site)	BIO-6.4(6) –R-11 will not be used adjacent to channel to minimize any potential adverse af- fects on estuarine fish
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE					NA/NE-Outside of habitat range of California Red Legged Frog and San Francisco Garter Snake	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	А				BIO-8	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-9: Effects on tiger beetle species.	NA/NE					LTS/NLTAE- Site conditions consistent with those anticipated in the PEIS/R – no mitigation required	None
AQ-1: Dust Emissions.	А	AQ-1	AQ-1	AQ-1	AQ-1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
AQ-2: Smoke Emissions.	NA/NE					NA/NE-No burning proposed	None
AQ-3: Herbicide Effects on air quality.	MA/NE					NA/NE-Aerial treatments not proposed for this site.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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A - Applicable

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

Impact*	Applica- ble to Site	(by 1 Back- pack	Applicable reatment M	e Mitigations dethod used Aerial		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
AQ-4: Ozone precursor emissions.	NA/NE					LTS/NLTAE-without mitigation	None
AQ-5: Carbon monoxide (CO) emissions.	NA/NE					LTS/NLTAE-without mitigation	None
N-1: Disturbance of sensitive receptors	А	N-1	N-1	N-1	N-1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-1: Worker Injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE					NA/NE-No manual or mechanical treatments proposed for this site.	None
HS-2: Worker health effects from herbicide application.	А	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-3: Health effects to the public from herbicide application.	А	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
VIS-1: Alteration of views from removal of non-native cordgrass Infestations.	А	VIS-1	VIS-1	VIS-1	VIS-1	SU-impacts addressed in the PEIS/r and CEQA findings. Site conditions consistent with those anticipated within in the PEIS/R	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE					NA/NE-Applies only to PEIS/R Alternative 3 (No action)	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

A - Applicable

NA/NE - Not Applicable/No Effect

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SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applica- ble to Site	(by 1 Back- pack	Applicable reatment N	e Mitigations dethod used Aerial		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	LU-1	LU-1	LU-1	LU-1	LTS/NLTAE-Limited to less than significant by HS, N & AQ mitigations	None
LU-2: Land use conflicts from me- chanical and burning treatment methods	А					NA/NE-methods not proposed for site	None
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	А				CUL-1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
CUL-2: Loss of Cultural Resources from Erosion.	NA/NE					NA/NE-Methods not proposed for this site	None
CUM-1: Effects of wetland restora- tion projects on spread of non- native cordgrass	NA/NE					NA/NE-Area is not near any current restoration efforts	None
CUM-2: Cumulative damage to marsh plain vegetation	А				CUM-2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None

* Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

A - Applicable

Key:

NA/NE - Not Applicable/No Effect

LTS/NLTAE - Less Than Significant impact/Not Likely to Adversely Effect

SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Ideal Marsh, Alameda County

TSN: ISP-2005-21

	Applicable Mitigation &					Verification	Signatures
Impact*	Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Implementing Entity	ISP Field Supervisor
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	Minimize vehicle travel in areas subject to erosion. (GEO-2; CM-1)			X	During treatment		
WQ-1: Degradation of Water Quality due to Herbicide Application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3, 4)	Х	Х	X	During treatment		
WQ-2: Degradation of Water Quality due to Herbicide Spills	Apply under supervision of trained applicator (WQ-2; CM-3)	X	X	Х	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	X	Х	Х	During treatment		
WQ-3: Degradation of Water Quality due to Fuel or Petro- leum Spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	Х	Х	Х	During treatment		
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	Minimize entry and re- entry into marsh, define access points (BIO-1.2; CM-1)	Х	Х	Х	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	Х	Х	Х	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	Х	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &					Verification	Signatures
Impact*	Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Implementing Entity	ISP Field Supervisor
BIO-3: Effects on shore-birds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pa- cific Flyway stopovers (BIO-3)	X	Х	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	X	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	X	Х	X	During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	Х	X	X	During treatment		
	Use protective mats or other covering over pickle- weed in areas or repeated access (BIO-4.1; CM-15)	Х	Х	Х	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	Х	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	Х	X	X	Pre- and during treat- ment		
BIO-5.1: Effects on California Clapper Rail	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breeding season (BIO-5.1; CM-18)	Х	Х	Х	During treatment		

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	Applicable Mitigation &					Verification	Signatures
Impact*	Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Implementing Entity	ISP Field Supervisor
	For work within the CLRA breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)				Pre-treatment		
	Provide CLRA Field Bi- ologist Supervision (BIO- 5.1)	Х	Х	Х	Pre-treatment and Dur- ing treatment		
	Assure that field person- nel are trained in general CLRA biology and identifi- cation as well as call de- tection (BIO-5.1)	Х	X	Х	Pre-treatment and During treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	Х	Х	Х	During treatment and Post-treatment		
BIO-5.2: Effects on California Black Rail	Perform work only during Sept 1 thru Feb 1 to avoid CABR breeding season (BIO-5.2)	Х	Х	Х	During treatment		
	For work within the CABR breeding season, call counts will be performed in the early spring according to FWS protocols (BIO-5.2)				Pre-treatment		
	Provide CABR Field Bi- ologist Supervision (BIO- 5.2)	Х	Х	Х	Pre-treatment and Dur- ing treatment		
	Assure that field person- nel are trained in general CABR biology and identi- fication as well as call detection (BIO-5.2)	Х	Х	Х	Pre-treatment and During treatment		

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	Applicable Mitigation &			A			Signatures
Impact*	Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Implementing Entity	ISP Field Supervisor
	Report any CABR activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.2)	X	Х	Х	During treatment and post-treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment re- port (BIO-5.3)	X	X	X	During and post- treat- ment		
	Perform work according to Bio 5.1, post Clapper Rail breeding season protocols (most restrictive) (Bio 5.1;CM 18)	X	X	X	During treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	Х	X	Х	During treatment		
	Watch for Song Sparrow presence in the work area during early season treat- ment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	X	X	X	During treatment		
BIO-6.1: Effects on anadromous salmonids (win- ter-run and spring-run Chi- nook salmon, steelhead).	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	Х	Х	Х	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	X	Х	Х	During treatment		
BIO-6.4: Effects on estua- rine fish populations of shal-	Minimize spraying near channels (BIO-6.4)	Х	Х	Х	During treatment		

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	Applicable Mitigation &			4 177		Verification	Signatures
Impact*	Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Implementing Entity	ISP Field Supervisor
low submerged intertidal mudflats and channels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	Х	X	X	During treatment		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	Monitor access route for the formation of un- drained depressions in tire ruts or foot trails (BIO-8)			Х	During treatment and post-treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ- 1)	Х	Х	Х	During treatment		
AQ-3: Herbicide Effects on Air Quality.	Implement ISP herbicide drift management plan for aerial applications of her- bicide (AQ-3; CM-3, 4)				During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Х	Х	Х	During treatment		
HS-2: Worker Health Effects from Herbicide Application.	Follow handling and application procedures as identified on product label (HS-2;CM-3)	Х	Х	Х	During treatment		
HS-3: Health Effects to the Public from Herbicide Application.	Minimize drift according to ISP drift management plan (HS-3;CM-3,4)	Х	Х	Х	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	Х	Х	Х	Pre-treatment		

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	Applicable Mitigation &					Verification	Signatures
Impact*	Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Implementing Entity	ISP Field Supervisor
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	X	X	X	Pre-treatment and during treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,4,17)	X	Х	Х	During treatment		
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	Х	Х	Х	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	Report all discovered pre- historic or historic re- sources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological miti- gation has taken place (CUL-1)			X	During treatment		
CUM-2: Cumulative damage to marsh plain vegetation	Coordinate treatment schedule with the Mos- quito abatement district in order to minimize cumula- tive impacts (CUM-2)			Х	During and Post treat- ment		
CM-7: Invasive Species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	Х	Х		Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Two Points Complex, Contra Costa County

TSN: ISP-2005-22

Impact*	Applicable to Site	Applicable to Sub-area	Applicable M reatment Meth Truck	ite) Digging	Comments/Analysis of Residual Impact at Site	Additional Miti- gation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE				NA/NE-Proposed activities will not elevate erosion above ambient levels	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	А	Sub-areas 22d & 22e		GEO-2	NA/NE- No vehicles pro- posed for use in marsh within this site.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE				NA/NE – No excavation within estuarine beaches planned. Any cordgrass treated within this Site on estuarine beaches will be treated with herbicide leaving intact root masses. Root masses will naturally degrade on site.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE				NA/NE-No dredging /sediment disposal pro- posed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	A	All Sub- areas			No adverse impact (see PEIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE				NA/NE-Proposed activities will not take place within salt marsh pans	None

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SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

IMPACT CHECKLIST Two Points Complex TSN: ISP-2005-22

Impact*	Applicable to Site	Applicable to Sub-area		Applicable M eatment Meth Truck	itigations* nod used at S Aerial	ite) Digging	Comments/Analysis of Residual Impact at Site	Additional Miti- gation Required
WQ-1: Degradation of water quality due to herbicide application	А	Sub-areas 22a-d, 22f	WQ-1	WQ-1	WQ-1		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-2: Degradation of water quality due to herbicide spills	А	Sub-areas 22a-d, 22f	WQ-2	WQ-2	WQ-2		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	A	Sub-areas 22a-d, 22f	WQ-3	WQ-3	WQ-3		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE						NA/NE-No dredg- ing/excavation proposed for this site	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE						NA/NE-This impact only applies to PEIS/R Alternative 3	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE						NA/NE-Field surveys have found no Salt meadow or English cordgrass at this site	None

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IMPACT CHECKLIST Two Points Complex TSN: ISP-2005-22

Impact*	Applicable to Site	Applicable to Sub-area	(by Ti Backpack	Applicable M reatment Meth Truck		ite) Digging	Comments/Analysis of Residual Impact at Site	Additional Miti- gation Required
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All sub- areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE						NA/NE-Field surveys have found no Chilean cordgrass at this site	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE						NA/NE-Field surveys have found no eelgrass or other submerged aquatic plants at this site	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE						NA/NE-Field surveys have found no special status plants at this site	None
BIO-3: Effects on shorebirds and waterfowl.	А	All sub- areas	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	All sub- areas	BIO-4.1 as modified by USFWS BO	BIO-4.1 as modified by USFWS BO	BIO-4.1 as modified by USFWS BO	BIO-4.1 as modified by USFWS BO	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE						NA/NE-No harbor seal colonies at or near site	None

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Impact*	Applicable to Site	Applicable to Sub-area	(by Ti Backpack	Applicable M reatment Meth Truck		ite) Digging	Comments/Analysis of Residual Impact at Site	Additional Miti- gation Required
BIO-4.3: Effects on the southern sea otter.	NA/NE						NA/NE-Outside of the known range of the southern sea otter	None
BIO-5.1: Effects on the California clapper rail.	А	All Sub- areas	BIO-5.1	BIO-5.1	BIO-5.1	BIO-5.1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.2: Effects on the California black rail.	A	All Sub- areas	BIO-5.2	BIO-5.2	BIO-5.2	BIO-5.2	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	All Sub- areas	BIO-5.3	BIO-5.3	BIO-5.3	BIO-5.3	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE						NA/NE-No California least terns or western snowy plovers within or near site	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE						NA/NE- No aerial applications proposed within this site.	None

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IMPACT CHECKLIST Two Points Complex TSN: ISP-2005-22

Impact*	Applicable to Site	Applicable to Sub-area		Applicable M reatment Meth Truck		ite) Digging	Comments/Analysis of Residual Impact at Site	Additional Miti- gation Required
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	А	Sub-areas 22a-d, 22f	BIO-6.1	BIO-6.1	BIO-6.1		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE						NA/NE-Outside of known range of delta smelt and Sacramento splittail	None
BIO-6.3: Effects on the tidewater goby.	NA/NE						NA/NE-Outside of the known range of the tidewater goby	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	Sub-areas 22a-d, 22f	BIO-6.4	BIO-6.4	BIO-6.4		LTS/NLTAE-with additional mitigation BIO-6(b) (Note: no mowing on site)	BIO-6.4(6) –R- 11 will not be used adjacent to channel to minimize any potential ad- verse affects on estuarine fish
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE						NA/NE-Outside of habitat range of California Red Legged Frog and San Francisco Garter Snake	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE						NA/NE- No vehicles pro- posed for use in marsh within this site.	None

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IMPACT CHECKLIST Two Points Complex TSN: ISP-2005-22

	Applicable to	Applicable to		Applicable M reatment Metl		Site)	Comments/Analysis of Residual Impact	Additional Miti- gation
Impact*	Site	Sub-area	Backpack	Truck	Aerial	Digging	at Site	Required
BIO-9: Effects on tiger beetle species.	NA/NE						LTS/NLTAE- Site conditions consistent with those anticipated in the PEIS/R – no mitigation required	None
AQ-1: Dust Emissions.	А	All Sub- areas	AQ-1	AQ-1	AQ-1	AQ-1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
AQ-2: Smoke Emissions.	NA/NE						NA/NE-No burning pro- posed	None
AQ-3: Herbicide Effects on air quality.	NA/NE						NA/NE- No aerial applications proposed within this site.	None
AQ-4: Ozone precursor emissions.	NA/NE						LTS/NLTAE-without mitigation	None
AQ-5: Carbon monoxide (CO) emissions.	NA/NE						LTS/NLTAE-without mitigation	None
N-1: Disturbance of sensitive receptors	A	Sub-areas 22a-d, 22f	N-1	N-1	N-1		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-1: Worker Injury from accidents associated with manual and mechanical cordgrass treatment.	NA/NE						NA/NE-No manual or me- chanical treatments pro- posed for this site.	None

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IMPACT CHECKLIST Two Points Complex TSN: ISP-2005-22

Impact*	Applicable to Site	Applicable to Sub-area		Applicable M reatment Metl Truck		Site) Digging	Comments/Analysis of Residual Impact at Site	Additional Miti- gation Required
HS-2: Worker health effects from herbicide application.	А	Sub-areas 22a-d, 22f	HS-2	HS-2	HS-2		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-3: Health effects to the public from herbicide application.	A	Sub-areas 22a-d, 22f	HS-3	HS-3	HS-3		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	A	Sub-areas 22a-d, 22f	HS-4	HS-4	HS-4		LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
VIS-1: Alteration of views from removal of non-native cordgrass Infestations.	A	All Sub- areas	VIS-1	VIS-1	VIS-1	VIS-1	SU-impacts addressed in the PEIS/r and CEQA findings. Site conditions consistent with those an- ticipated within in the PEIS/R	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE						NA/NE-Applies only to PEIS/R Alternative 3 (No action)	None
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	Sub-areas 22a-d, 22f	LU-1	LU-1	LU-1		LTS/NLTAE-Limited to less than significant by HS,N & AQ mitigations	None

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Immost*	Applicable to Site	Applicable to Sub-area	(by Tı	Applicable M. reatment Meth	nod used at S		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site	Sub-area	Backpack	Truck	Aerial	Digging	at Site	Required
LU-2: Land use conflicts from me- chanical and burning treatment meth- ods	NA/NE						NA/NE-methods not pro- posed for site	None
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	А	All Sub- areas	CUL-1	CUL-1		CUL-1	LTS/NLTAE-Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R	None
CUL-2: Loss of Cultural Resources from Erosion.	NA/NE						NA/NE-Methods not pro- posed for this site	None
CUM-1: Effects of wetland restoration projects on spread of non-native cordgrass	NA/NE						NA/NE-Area is not near any current restoration efforts	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE						NA/NE- No vehicles pro- posed for use in marsh within this site.	None

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TSN: ISP-2005-22

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Two Points Complex, Contra Costa County

MITIGATION CHECKLIST

Impact*	Applicable Mitigation & Conservation Measures*	Applicable sub-areas	Backpack	Truck	Aerial	Digging	Implementa- tion Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
WQ-1: Degradation of Water Quality due to Herbicide Application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3, 4)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment	mg Lindy	Gaper vises:
WQ-2: Degradation of Water Quality due to Herbicide Spills	Apply under supervision of trained applicator (WQ-2; CM-3)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
	Implement spill and contain- ment plan provided or ap- proved by ISP (WQ-2; CM-17)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
BIO-1.2: Effects on tidal marsh plant communities affected	Minimize entry and re-entry into marsh, define access points (BIO-1.2; CM-1)	Sub-areas 22a-d, 22f	Х	Х			During treat- ment		
by Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers (BIO-3)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		

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MITIGATION CHECKLIST Two Points Complex TSN: ISP-2005-22

	Applicable Mitigation &	Applicable					Implementa-		Signatures
Impact*	Conservation Measures*	sub-areas	Backpack	Truck	Aerial	Digging	tion Timing	Implement- ing Entity	ISP Field Supervisor
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
BIO-4.1: Effects on the salt marsh har- vest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	All sub- areas	Х	X	X	Х	During treat- ment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1; CM-15)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	Assume presence of SMHM on all suitable sites (CM 14)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub- areas	Х	Х	Х	Х	Pre- and during treat- ment		
BIO-5.1: Effects on California Clapper Rail	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breeding season (BIO-5.1; CM-18)	All sub- areas	X	Х	Х	Х	During treat- ment		
	For work within the CLRA breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	All sub- areas	Х	X	X	X	Pre- treatment		
	Provide CLRA Field Biologist Supervision (BIO-5.1)	All sub- areas	Х	Х	Х	Х	Pre- treatment and During treatment		
	Assure that field personnel are trained in general CLRA biology and identification as well as call detection (BIO-5.1)	All sub- areas	Х	X	X	Х	Pre- treatment and During treatment		

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MITIGATION CHECKLIST Two Points Complex TSN: ISP-2005-22

	Applicable Mitigation &	Applicable					Implementa-	Verification	Signatures
Impact*	Conservation Measures*	sub-areas	Backpack	Truck	Aerial	Digging	tion Timing	Implement- ing Entity	ISP Field Supervisor
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All sub- areas	Х	X	X	X	During treat- ment and Post- treatment		
BIO-5.2: Effects on California Black Rail	Perform work only during Sept 1 thru Feb 1 to avoid CABR breeding season (BIO-5.2)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	For work within the CABR breeding season, call counts will be performed in the early spring according to FWS protocols (BIO-5.2)	All sub- areas	Х	Х	Х	X	Pre- treatment		
	Provide CABR Field Biologist Supervision (BIO-5.2)	All sub- areas	Х	Х	Х	X	Pre- treatment and During treatment		
	Assure that field personnel are trained in general CABR biology and identification as well as call detection (BIO-5.2)	All sub- areas	Х	Х	Х	Х	Pre- treatment and During treatment		
	Report any CABR activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.2)	All sub- areas	Х	Х	Х	Х	During treat- ment and post- treatment		
BIO-5.3: Effects on tidal marsh song spar- row subspecies and the salt marsh com-	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	All sub- areas	Х	Х	Х	Х	During and post- treat- ment		
mon yellowthroat.	Perform work according to Bio 5.1, post Clapper Rail breeding season protocols (most restrictive) (Bio 5.1;CM 18)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	Avoid spraying or removing Grindelia plants in the marsh (BIO-5.3)	All sub- areas	Х	Х	Х	Х	During treat- ment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

MITIGATION CHECKLIST

Two Points Complex TSN: ISP-2005-22

Impact*	Applicable Mitigation & Conservation Measures*	Applicable sub-areas	Backpack	Truck	Aerial	Digging	Implementa- tion Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
	Watch for Song Sparrow presence in the work area during early season treatment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	All sub- areas	Х	Х	Х	X	During treat- ment		
BIO-6.1: Effects on anadromous sal- monids (winter-run	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
and spring-run Chi- nook salmon, steel- head).	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
BIO-6.4: Effects on estuarine fish popula-	Minimize spraying near channels (BIO-6.4)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
tions of shallow sub- merged intertidal mudflats and chan- nels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment	g treat-	
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)		Х	Х	Х	Х	During treat- ment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
HS-2: Worker Health Effects from Herbi- cide Application.	Follow handling and application procedures as identified on product label (HS-2; CM-3)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
HS-3: Health Effects to the Public from Herbicide Application.	Minimize drift according to ISP drift management plan (HS-3; CM-3, 4)	Sub-areas 22a-d, 22f	Х	Х	Х		During treat- ment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	Sub-areas 22a-d, 22f	Х	Х	Х		Pre- treatment		

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MITIGATION CHECKLIST

Two Points Complex TSN: ISP-2005-22

Impact*	Applicable Mitigation & Conservation Measures*	Applicable sub-areas	Backpack	Truck	Aerial	Digging	Implementa- tion Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public ac- cess to area 24 hours before and after treatment (HS-3)	Sub-areas 22a-d, 22f	X	X	Х		Pre- treatment and during treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3,4,17)	All Sub- areas	Х	Х	Х	X	During treat- ment		
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infesta- tions.	Post appropriate signage according to ISP signage protocols (VIS-1)	All Sub- areas	Х	Х	Х	Х	Pre- treatment, during treat- ment, post- treatment		
CUL-1: Disturbance or Destruction of Cul- tural Resources from Access and Treat- ment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	All Sub- areas	Х	Х		Х	During treatment		
CM-7: Invasive Species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	Х	Х	Х	Х	Post- treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Marin Outliers, Marin County

TSN: ISP-2004-23

		Sub-Area	Applicable	e Mitigations* used a	(by Treatme at Site)	ent Method	Comments/Analysis of	Additional
Impact*	Applicable to Site	Included	Truck	Back- pack	Boat	Digging	Residual Impact at Site	Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE						NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE						NA/NE – No vehicles will be used in the marsh for treatment on this Site.	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE						NA/NE – No excavation within estuarine beaches planned. Any cordgrass treated within this Complex on estuarine beaches will be treated with herbicide leaving intact root masses. Root masses will naturally degrade on site.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	А	Sub-areas 23a-d, 23f-h, 23l & 23n				GEO-4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	A	All Sub- Areas	None	None	None	None	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None

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Key:

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USFWS BO – US Fish & Wildlife Service Biological Opinion

		Out Ans	Applicable	e Mitigations* used a	(by Treatme at Site)	ent Method	Comments/Analysis of	Additional
Impact*	Applicable to Site	Sub-Area Included	Truck	Back- pack	Boat	Digging	Residual Impact at Site	Mitigation Required
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE						NA/NE – No mitigation required for work near or in salt marsh pans.	None
WQ-1: Degradation of water quality due to herbicide application	А	All sub- areas ex- cept 23a & 23l	WQ-1	WQ-1	WQ-1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	A	All sub- areas ex- cept 23a & 23l	WQ-2	WQ-2	WQ-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of water quality due to fuel or petroleum spills	A	All sub- areas ex- cept 23a & 23l	WQ-3	WQ-3	WQ-3		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of water quality due to contaminant remobilization	NA/NE						NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water quality effects resulting from sediment accretion	NA/NE						NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE						NA/NE – Field surveys found no salt-meadow or English cordgrass within this site.	None

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Impact*	Applicable to Site	Sub-Area Included	Applicable Truck	Back-	at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	A	All sub- areas	BIO-1.2	pack BIO-1.2	BIO-1.2	Digging BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	A	Sub-Areas 23a, 23d, 23e	BIO-1.3	BIO-1.3	BIO-1.3	BIO-1.3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE						NA/NE – Field surveys found no eelgrass or other submerged aquatic plants within site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE						NA/NE – Field surveys found no special-status plant species within site.	None
BIO-3: Effects on shorebirds and waterfowl.	А	All sub- areas	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	Sub-Areas 23b, 23d, 23e, 23g, 23j	BIO-4.1	BIO-4.1		BIO-4.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident har- bor seal colonies of San Fran- cisco Bay.	NA/NE						LTS/NLTAE – No sub- areas within site contain harbor seal colonies.	None

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		Sub-Area	Applicable	e Mitigations* used a	(by Treatme at Site)	ent Method	Comments/Analysis of	Additional Mitigation
Impact*	Applicable to Site	Included	Truck	Back- pack	Boat	Digging	Residual Impact at Site	Mitigation Required
BIO-4.3: Effects on the southern sea otter.	NA/NE						NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	А	Sub-Areas 23e, 23j	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO		BIO-5.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on the California black rail.	NA/NE						NA/NE – Outside of known range black rails.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	А	Sub-Area 23e	BIO-5.3		BIO-5.3		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.4: Effects on California least terns and western snowy plovers.	NA/NE						NA/NE – No least tern or western snowy plover within sub-areas of this site.	None
BIO-5.5: Effects on raptors (birds of prey).	NA/NE						NA/NE – No aerial applications proposed for any subareas in this Site.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	A	All sub- areas	BIO-6.1	BIO-6.1	BIO-6.1	BIO-6.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	NA/NE						NA/NE – Outside of known delta smelt and Sacra- mento splittail range.	None

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		Sub-Area	Applicable	e Mitigations* used a	(by Treatme at Site)	ent Method	Comments/Analysis of	Additional
Impact*	Applicable to Site	Included	Truck	Back- pack	Boat	Digging	Residual Impact at Site	Mitigation Required
BIO-6.3: Effects on the tidewater goby.	NA/NE						NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	All sub- areas ex- cept 23a & 23l	BIO-6.4 – mini- mize spraying	BIO-6.4 - mini- mize spraying	BIO-6.4 - mini- mize spraying		LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: No mowing proposed because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used ad- jacent to channel to minimize any poten- tial ad- verse af- fects on estuarine fish.
BIO-7: Effects on California red- legged frog and San Francisco garter snake.	NA/NE						NA/NE – Outside of known range of California red- legged frog and San Fran- cisco garter snake. Salini- ties of areas slated for treatment are too high.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE						NA/NE – No equipment capable of causing permanent ruts in marsh will be used during treatment.	None
BIO-9: Effects on tiger beetle species.	NA/NE						LTS/NLTAE without mitigation.	None
AQ-1: Dust emissions.	А	Sub-Area 23b	Х				LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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		Cub Area	Applicable		* (by Treatm at Site)	ent Method	Comments/Analysis of	Additional
Impact*	Applicable to Site	Sub-Area Included	Truck	Back- pack	Boat	Digging	Residual Impact at Site	Mitigation Required
AQ-2: Smoke emissions.	NA/NE						NA/NE – No burning proposed.	None
AQ-3: Herbicide effects on air quality.	NA/NE						NA/NE – Aerial treatment methods not proposed for this site.	None
AQ-4: Ozone precursor emissions.	NA/NE						LTS/NLTAE without mitigation.	None
AQ-5: Carbon Monoxide (CO) emissions.	NA/NE						LTS/NLTAE without mitigation.	None
N-1: Disturbance of sensitive receptors	A	All sub- areas	N-1	N-1	N-1		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	А	Sub-areas 23a-23d, 23f-g, 23l & 23n				HS-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-2: Worker health effects from herbicide application.	А	All sub- areas ex- cept 23a & 23l	HS-2	HS-2	HS-2		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-3: Health effects to the public from herbicide application.	А	All sub- areas ex- cept 23a & 23l	HS-3	HS-3	HS-3		LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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		Out Ans	Applicable	e Mitigations* used a	(by Treatme at Site)	ent Method	Comments/Analysis of	Additional
Impact*	Applicable to Site	Sub-Area Included	Truck	Back- pack	Boat	Digging	Residual Impact at Site	Mitigation Required
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All sub- areas	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	А	All sub- areas	VIS-1	VIS-1	VIS-1	VIS-1	SU – Impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in views from native marsh, mudflat, and open water to non-native cordgrass meadows and monocultures.	NA/NE						NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land use conflicts between herbicide use and sensitive receptors	А	All sub- areas ex- cept 23a & 23l	LU-1	LU-1	LU-1		LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land use conflicts from mechanical and burning treatment methods	NA/NE						NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	A	All sub- areas	CUL-1a	CUL-1a	CUL-1a	CUL-1a	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of cultural resources from erosion.	NA/NE						NA/NE – No erosion- producing activities pro- posed	None

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		Sub-Area	Applicable	•	(by Treatme at Site)	ent Method	Comments/Analysis of	Additional
Impact*	Applicable to Site	Included	Truck	Back- pack	Boat	Digging	Residual Impact at Site	Mitigation Required
CUM-1- Effects of wetland resto- ration projects on spread of non- native cordgrass	NA/NE						NA/NE – No restoration projects with the potential to spread <i>Spartina</i> proposed within this Complex during the proposed treatment schedule	None
CUM-2- Cumulative damage to marsh plain vegetation	NA/NE						NA/NE – Vegetation disturbing machinery will not be used on this site.	None

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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Marin Outliers, Marin County

TSN: ISP-2005-23

Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Backpack	Boat	Digging	Implementation Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	Dug plant material will be disposed of off-site on levee tops or other upland, non- aquatic areas to desiccate and die (GEO-4)	All sub- areas				Х			
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3 & 4)	All sub- areas	Х	Х	Х		During treatment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2; CM-3)	All sub- areas	Х	Х	Х		During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub- areas	Х	Х	Х		During treatment		
WQ-3: Degradation of water quality due to fuel or petroleum spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	All sub- areas	Х	Х	Х		During treatment		
BIO-1.2: Effects on tidal marsh plant communi-	Minimize entry and re-entry into marsh (BIO-1.2; CM-1)	All sub- areas	Х	Х	Х	Х	During treatment		
ties affected by Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub- areas	Х	Х	Х	Х	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	All sub- areas	Х	Х	XX		During treatment		

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	Applicable Mitigation &	Sub Area					Implementation	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Backpack	Boat	Digging	Timing	Implement- ing Entity	ISP Field Supervisor
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	Minimize entry and re-entry into marsh (BIO-1.2; CM-1)	Sub-Areas 23a, 23d, 23e	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	Sub-Areas 23a, 23d, 23e	Х	X	Х		During treatment		
BIO-3: Effects on shorebirds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers. (BIO-3)	All sub- areas	Х	Х	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mud-flats emerge. (BIO-3)	All sub- areas	Х	Х	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	All sub- areas	X	Х	Х	Х	During treatment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	Sub-Areas 23b, 23d, 23e, 23g, 23j	Х	Х		Х	During treatment		
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1; CM-15)	Sub-Areas 23b, 23d, 23e, 23g, 23j	Х	Х		Х	During treatment		
	Assume presence of SMHM on all suitable sites (CM-14)	Sub-Areas 23b, 23d, 23e, 23g, 23j	Х	Х		Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM-16).	Sub-Areas 23b, 23d, 23e, 23g, 23j	Х	Х		Х	Pre- and during treatment		

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	Applicable Mitigation &	Sub Area					Implementation	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Backpack	Boat	Digging	Timing	Implement- ing Entity	ISP Field Supervisor
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1; CM-18)	Sub-Areas 23e, 23j	Х	Х		Х	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	Sub-Areas 23e, 23j	X	X		X	During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	Sub-Areas 23e, 23j	Х	Х		Х	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	Sub-Areas 23e, 23j	Х	X		X	During treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	Sub-Areas 23e, 23j	Х	X		Х	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO- 5.3)	Sub-Area 23e	Х		X		During and post- treatment		
	Avoid spraying or removing Grindelia plants in the marsh (BIO-5.3)	Sub-Area 23e	Х		Х		During treatment		
	Watch for Song Sparrow presence in the work area during early season treat- ment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	Sub-Area 23e	Х		X		During treatment		

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	Applicable Mitigation &	Sub Area					Implementation	Verification	Signatures
Impact*	Conservation Measures*	Included	Truck	Backpack	Boat	Digging	Timing	Implement- ing Entity	ISP Field Supervisor
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-	Target herbicide applications to minimize herbicide use near channel (BIO-6.1).	All sub- areas	Х	X	Х	Х	During treatment		
run Chinook salmon, steelhead).	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub- areas	Х	X	Х	Х	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub- areas	Х	X	Х		During treatment		
intertidal mudflats and channels.	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub- areas	X	X	X		During treatment		
AQ-1: Dust Emissions	Maintain 15 mph speed limit when traveling on unpaved levees or access roads (AQ- 1)	Sub-Area 2b	Х				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub- areas	Х	Х	Х		During treatment		
HS-1: Worker injury from accidents associated with manual and mechanical cordgrass treatment.	Appropriate safety procedures and equipment shall be used by workers to minimize risks associated with manual and mechanical treatment methods (HS-1)	Sub-areas 23a-23d, 23f-g, 23l & 23n				Х			
HS-2: Worker Health effects from herbicide application.	Follow handling and application procedures as identified on product label (HS-2; CM-3)	Sub-areas 23a-23d, 23f-g, 23l & 23n	X	X	Х		During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Backpack	Boat	Digging	Implementation Timing	Implement-	Signatures ISP Field
HS-3: Health effects to the public from herbicide application.	Minimize drift according to ISP drift management plan or equivalent (HS-3; CM-3,4)	All sub- areas	Х	Х	Х		During treatment	ing Entity	Supervisor
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub- areas	Х	Х	Х		Pre-treatment		
	Avoid scheduling herbicide application near high public use areas during weekends or holidays, or close public access to area 24 hours before and after treatment (HS-3)	All sub- areas	Х	Х	X		Pre-treatment and during treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3, 17)	All sub- areas	Х	Х	Х	Х	During treatment		
VIS-1: Alteration of views from removal of non-native cordgrass infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	All sub- areas	Х	Х	Х	х	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	All sub- areas	Х	Х	Х	Х	Pre-treatment and during treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &	Sub Area	- ,	5 , ,	5 .	5. ·	Implementation ng Timing	Verification Signatures	
Impact*	Conservation Measures*	Included	Truck	Backpack	Boat	Digging		Implement- ing Entity	ISP Field Supervisor
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	X	Х	X	X	Post-treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Petaluma River Complex, Sonoma County

TSN: ISP-2007-24

	Appli-	Sub-Area Included	(by		le Mitigations' Method used		Comments/Analysis of Re-	
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	sidual Impact at Site	Additional Mitigation Required
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE						NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE						NA/NE – No equipment will be working on marsh or mudflat surfaces	None
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE						NA/NE – Proposed activities will not take place within an estuarine beach.	None
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE						NA/NE – No dredg- ing/sediment disposal pro- posed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	A	All Sub- Areas	GEO-5	GEO-5	GEO-5	GEO-5	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE						NA/NE – Proposed activities will not take place within salt marsh pans.	None

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

A - Applicable

NA/NE - Not Applicable/No Effect

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SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

	Appli- cable to	Sub-Area Included	(by		le Mitigations Method used	at Site)	Comments/Analysis of Re- sidual Impact	Additional Mitigation
Impact*	Site		Backpack	Boat	Truck	Amphibious Vehicle	at Site	Required
WQ-1: Degradation of Water Quality due to herbicide application	Α	All Sub- Areas	WQ-1	WQ-1	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of Water Quality due to herbicide spills	А	All Sub- Areas	WQ-2	WQ-2	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of Water Quality due to fuel or petroleum spills	Α	All Sub- Areas	WQ-3	WQ-3	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of Water Quality due to Contaminant Remobilization	NA/NE						NA/NE – No dredging or other sediment-mobilizing activities proposed.	None
WQ-5: Water Quality Effects Resulting from Sediment Accretion	NA/NE						NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE						NA/NE – Field surveys found no salt-meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	A	All Sub- Areas	BIO-1.2	BIO-1.2	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli-	Sub-Area Included	(by		le Mitigations Method used		Comments/Analysis of Re-	
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	sidual Impact at Site	Additional Mitigation Required
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE						NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE						NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE						NA/NE – Field surveys found no special-status plant species at site.	None
BIO-3: Effects on shorebirds and waterfowl.	A	All Sub- Areas	BIO-3	BIO-3	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	A	All Sub- Areas	BIO-4.1	BIO-4.1	BIO-4.1	BIO-4.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident har- bor seal colonies of San Francisco Bay.	NA/NE						NA/NE – Outside of known range of harbor seal.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE						NA/NE – Outside of known range of southern sea otters.	None

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Petaluma River Complex TSN: ISP-2007-24

Impact*	Appli- cable to Site	Sub-Area Included		Treatment	le Mitigations' Method used	at Site) Amphibious	Comments/Analysis of Re- sidual Impact at Site	Additional Mitigation Required
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	A	All Sub- Areas	BIO-6.1 as modified by UFSWS BO	BIO-6.1 as modified by UFSWS BO	BIO-6.1 as modified by UFSWS BO	BIO-6.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	А	All Sub- Areas	Bio-6.2	Bio-6.2	Bio-6.2	Bio-6.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE						NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	A	All Sub- Areas	BIO-6.4 – minimize spraying	BIO-6.4 – mini- mize spraying	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: no mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to mini- mize any potential adverse affects on estuarine fish.
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE						NA/NE – Outside of known range of California redlegged frog and San Francisco garter snake.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE						NA/NE – Site activities will not create additional mos- quito habitat.	None
BIO-9: Effects on tiger beetle species.	NA/NE						NA/NE – no potential tiger beetle habitat will be af- fected.	None

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	Appli-	Sub-Area Included	(by		le Mitigations Method used		Comments/Analysis of Re-	A delicion of A Alicensia	
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	sidual Impact at Site	Additional Mitigation Required	
AQ-1: Dust Emissions.	А	All Sub- Areas	AQ-1	AQ-1	AQ-1	AQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None	
AQ-2: Smoke Emissions.	NA/NE						NA/NE – no burning proposed.	None	
AQ-3: Herbicide Effects on Air Quality.	NA/NE	All Sub- Areas	AQ-3	AQ-3	AQ-3	AQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None	
AQ-4: Ozone Precursor Emissions.	NA/NE						LTS/NLTAE without mitigation.	None	
AQ-5: Carbon monoxide (CO) Emissions.	NA/NE						LTS/NLTAE without mitigation.	None	
N-1: Disturbance of Sensitive Receptors	А	Sub-Area 24a	N-1	N-1	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None	
HS-1: Worker Injury from Accidents Associated with Manual and Mechanical Cordgrass Treatment.	NA/NE						NA/NE – Methods not proposed for site.	None	
HS-2: Worker Health Effects from Herbicide Application.	A	All Sub- Areas	HS-2	HS-2	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None	

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	Appli- cable to	Sub-Area Included	(by		le Mitigations Method used		Comments/Analysis of Re- sidual Impact	Additional Mitigation
Impact*	Site		Backpack	Boat	Truck	Vehicle	at Site	Required
HS-3: Health Effects to the Public from Herbicide Application.	А	All Sub- Areas	HS-3	HS-3	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associ- ated with treatment.	A	All Sub- Areas	HS-4	HS-4	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	А	All Sub- Areas	VIS-1	VIS-1	VIS-1	VIS-1	SU – impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in Views from Native Marsh, Mudflat, and Open Water to Non-native Cordgrass Meadows and Monocultures.	NA/NE						NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land Use Conflicts Between Herbicide Use and Sensitive Re- ceptors	А	All Sub Areas					LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land Use Conflicts from Mechanical and Burning Treat- ment Methods	NA/NE						NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	А	All Sub- Areas				CUI-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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	Appli-	' '			le Mitigations Method used		Comments/Analysis of Re-	
Impact*	cable to Site		Backpack	Boat	Truck	Amphibious Vehicle	sidual Impact at Site	Additional Mitigation Required
CUL-2: Loss of Cultural Resources from Erosion.	NA/NE						NA/NE – No erosion- producing activities pro- posed	None
CUM-1: Effects of wetland restoration projects on spread of nonnative cordgrass	Α	24b	CUM-1	CUM-1	CUM-1	CUM-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE						NA/NE – Without mitigation	None

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TSN: ISP-2007-24

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Petaluma River Complex, Sonoma County

	Applicable Mitigation &	Applicable				A man hihi a	Implementa-	Verification Implement-	Signatures ISP Field
Impact*	Conservation Measures*	Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	tion Timing	ing Entity	Supervisor
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3, 4)	All sub- areas	X	Х	Х	X	During treat- ment		
WQ-2: Degradation of water quality due to herbicide spills	Apply under supervision of trained applicator (WQ-2; CM-3)	All sub- Areas	Х	X	X	Х	During treat- ment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-3, 17)	All sub- areas	X	X	Х	Х	During treat- ment		
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	All sub- areas	Х	Х	Х	Х	During treat- ment		
BIO-1.2: Effects on tidal marsh plant communi- ties affected by Atlantic smooth cordgrass and	Minimize entry and re- entry into marsh, define access points (BIO-1.2; CM-1)	All Sub- areas	Х	Х	Х	Х	During treat- ment		
its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	All sub- areas	Х	Х	Х	Х	During treat- ment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &	A 1 1 1					ttt-		Signatures
Impact*	Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Implementa- tion Timing	Implement- ing Entity	ISP Field Supervisor
BIO-3: Effects on shore- birds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pa- cific Flyway stopovers (BIO-3)	All sub- areas	X	X	X	X	During treat- ment	gy	- Cupo. House
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All sub- areas	Х	Х	Х	X	During treat- ment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All sub- areas	Х	Х	Х	Х	During treat- ment		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	All sub- areas	X	Х	Х	X	During treat- ment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1; CM-15)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	Assume presence of SMHM on all suitable sites (CM 14)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub- areas	X	Х	Х	Х	Pre- and dur- ing treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1; CM-18)	All sub- areas	Х	Х	Х	Х	During treat- ment		

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	Applicable Mitigation &	A li l. l .							Signatures
Impact*	Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Implementa- tion Timing	Implement- ing Entity	ISP Field Supervisor
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	All sub- areas					Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub- areas	X	Х	X	X	During treat- ment		
	Assure that field person- nel are trained in general CLRA biology and CLRA identification and call de- tection (BIO-5.1)	All sub- areas	Х	х	X	Х	Pre-treatment and during treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All sub- areas	Х	Х	Х	Х	During and post-treatment		
BIO-5.2: Effects on California Black Rail	Conform with BIO-5.1	All sub- areas	Х	Х	Х	Х	Pre-, during, and post- treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellow-throat.	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment re- port (BIO-5.3)	All sub- areas	Х	Х	Х	Х	During and post-treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All sub- areas	Х	Х	Х	X	During treat- ment		
	Watch for Song Sparrow presence in the work area during early season treat- ment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	All sub- areas	X	X	X	X	During treat- ment		

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	Applicable Mitigation &	Applicable					Implementa-		Signatures
Impact*	Conservation Measures*	Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	tion Timing	Implement- ing Entity	ISP Field Supervisor
BIO-5.4: Effects on California least terns and western snowy plovers.	Survey access levees for nesting CALT and WSPL prior to entry (BIO-5.4; CM-20)	All sub- areas	Х	X	Х	Х	Pre-treatment		
	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment re- port (BIO-5.4)	All sub- areas	Х	х	X	Х	During and post-treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring- run Chinook salmon, steelhead).	Minimize herbicide applications (BIO-6.1)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.1)	All sub- areas	Х	Х	Х	Х	During treat- ment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near channels (BIO-6.4)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub- areas	X	X	X	X	During treat- ment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ- 1)	All sub- areas	Х	Х	Х	Х	During treat- ment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &	Applicable					Implemente		Signatures
Impact*	Conservation Measures*	Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Implementa- tion Timing	Implement- ing Entity	ISP Field Supervisor
AQ-3: Herbicide effects on air quality.	Implement ISP approved drift management plan (AQ-3; CM-3, 4)	All sub- areas	X	Х	Х	X	During treat- ment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Sub-Area 24a	X	Х	X	X	During treat- ment		
HS-2: Worker Health Effects from Herbicide Application.	Follow handling and application procedures as identified on product label (HS-2; CM-3, 4)	All sub- areas	X	Х	Х	Х	During treat- ment		
HS-3: Health Effects to the Public from Herbicide Application.	Minimize drift according to ISP drift management plan (HS-3; CM-3, 4)	All sub- areas	Х	Х	Х	Х	During treat- ment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub- areas	X	Х	X	X	Pre-treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3, 4,17)	All sub- areas	Х	Х	Х	Х	During treat- ment		
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	All sub- areas	Х	Х	Х	Х	Pre-treatment, during treat- ment, post- treatment		
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	Report all discovered pre- historic or historic re- sources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological miti- gation has taken place (CUL-1)	All sub- areas				X	Pre-treatment and during treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Implementa- tion Timing	Verification Implement- ing Entity	Signatures ISP Field Supervisor
CM-7: Invasive Species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub- areas	Х	Х	Х	Х	Post-treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

TSN: ISP-2008-26

SITE-SPECIFIC PROJECT MITIGATION

Site Name: North San Pablo Bat Complex, Napa and Solano Counties

	Applicable Mitigation &	Annilia alda Occila			landon o de tien	Verificatio	n Signatures
Impact*	Conservation Measures*	Applicable Sub- area	Back- pack	Boat	Implementation Timing	Implement- ing Entity	ISP Field Supervisor
WQ-1: Degradation of water quality due to herbicide application	Apply herbicide directly to plant at low tide and according to label. (WQ-1; CM-3, 4)	All sub-areas	Х	Х	During treatment		
WQ-2: Degradation of water quality due to	Apply under supervision of trained applicator (WQ-2; CM-3)	All sub-Areas	Х	Х	During treatment		
herbicide spills	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-3, 17)	All sub-areas	Х	Х	During treatment		
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	Implement spill and containment plan provided or approved by ISP (WQ-3; CM-17)	All sub-areas	Х	Х	During treatment		
BIO-1.2: Effects on tidal marsh plant communi-	Minimize entry and re-entry into marsh, define access points (BIO-1.2; CM-1)	All Sub-areas	Х	Х	During treatment		
ties affected by Atlantic smooth cordgrass and its hybrids.	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	Х	Х	During treatment		
	Avoid herbicide application to non- target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	All sub-areas	Х	Х	During treatment		
BIO-3: Effects on shore- birds, waterfowl & marshland birds.	Avoid working within 1,000 feet of occupied mudflats during peak Pacific Flyway stopovers (BIO-3)	All sub-areas	Х	Х	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All sub-areas	Х	Х	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All sub-areas	Х	Х	During treatment		

^{*}Impact numbering from ISP Control Program Programmatic EIS/R, September 2003. Mitigations are from corresponding numbered mitigation in the same document, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

	Applicable Mitigation &	A 11 11 0 1				Verification	n Signatures
Impact*	Conservation Measures*	Applicable Sub- area	Back- pack	Boat	Implementation Timing	Implement- ing Entity	ISP Field Supervisor
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	Use shortest possible access route through any pickleweed habitat. Flag areas of repeated access (BIO-4.1; CM-15)	All sub-areas	Х	Х	During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1; CM-15)	All sub-areas	Х	Х	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All sub-areas	Х	Х	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas	Х	Х	Pre- and during treatment		
BIO-5.1: Effects on California clapper rail.	Perform work only during Sept 1 thru Feb 1 to avoid CLRA breading season (BIO-5.1; CM-18)	All sub-areas	Х	Х	During treatment		
	For work within the Clapper Rail breeding season, call counts will be performed in the early spring according to FWS protocols (CM-18)	All sub-areas			Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub-areas	Х	X	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	All sub-areas	Х	X	Pre-treatment and during treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All sub-areas	Х	Х	During and post- treatment		
BIO-5.2: Effects on California Black Rail	Conform with BIO-5.1	All sub-areas	Х	Х	Pre-, during, and post-treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	All sub-areas	Х	Х	During and post- treatment		

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	Applicable Mitigation &	A 1' 11 0 1				Verification	n Signatures
Impact*	Conservation Measures*	Applicable Sub- area	Back- pack	Boat	Implementation Timing	Implement- ing Entity	ISP Field Supervisor
marsh common yellow- throat.	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All sub-areas	Х	X	During treatment		
	Watch for Song Sparrow presence in the work area during early season treat- ment work (pre-August), especially in the smaller, upper reaches of channels (BIO-5.3)	All sub-areas	X	X	During treatment		
BIO-5.4: Effects on California least terns and western snowy	Survey access levees for nesting CALT and WSPL prior to entry (BIO-5.4; CM-20)	All sub-areas	Х	Х	Pre-treatment		
plovers.	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.4)	All sub-areas	X	Х	During and post- treatment		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring- run Chinook salmon, steelhead).	Minimize herbicide applications (BIO-6.1)	All sub-areas	Х	Х	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.1)	All sub-areas	Х	Х	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near channels (BIO-6.4)	All sub-areas	Х	Х	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	All sub-areas	Х	Х	During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	All sub-areas	Х	Х	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub- area	Back- pack	Boat	Implementation Timing	Verificatio Implement- ing Entity	n Signatures ISP Field Supervisor
AQ-3: Herbicide effects on air quality.	Implement ISP approved drift management plan (AQ-3; CM-3, 4)	All sub-areas	Х	Х	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Sub-Area 24a	Х	Х	During treatment		
HS-2: Worker Health Effects from Herbicide Application.	Follow handling and application procedures as identified on product label (HS-2; CM-3, 4)	All sub-areas	Х	Х	During treatment		
HS-3: Health Effects to the Public from Herbi-	Minimize drift according to ISP drift management plan (HS-3; CM-3, 4)	All sub-areas	X	Х	During treatment		
cide Application.	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	Х	Х	Pre-treatment		
HS-4: Health effects to workers or the public from accidents associated with treatment.	Maintain ISP or approved equivalent Site Safety and Spill Prevention plan on site (HS-4; CM-3, 4,17)	All sub-areas	Х	Х	During treatment		
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	Post appropriate signage according to ISP signage protocols (VIS-1)	All sub-areas	Х	Х	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	Report all discovered prehistoric or historic resources to the ISP Field Supervisor and a qualified archeologist or historic resources consultant and suspend all work at site until archaeological mitigation has taken place (CUL-1)	All sub-areas			Pre-treatment and during treatment		
CM-7: Invasive Species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	All sub-areas	Х	Х	Post-treatment		

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TSN: ISP-2008-26

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: North San Pablo Bay Complex, Napa and Solano Counties

	Appli- cable to	Sub-Area Included	Applicable Mitiga- tions* (by Treatment Method used at Site)		tions* (by Treatment		tions* (by Treatment		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site		Backpack	Boat	at Site	Required				
GEO-1: Erosion or deposition of sediment at treatment site	NA/NE				NA/NE – Proposed activities are not ground disturbing and will not elevate erosion above ambient levels.	None				
GEO-2: Erosion or topographic change of marsh and mudflat by vehicles used in eradication	NA/NE				NA/NE – No equipment will be working on marsh or mudflat surfaces	None				
GEO-3: Remobilization of sand in cordgrass-stabilized estuarine beaches	NA/NE				NA/NE – Proposed activities will not take place within an estuarine beach.	None				
GEO-4: Increased demand for sediment disposal and potential spread of invasive cordgrass via sediment disposal.	NA/NE				NA/NE – No dredging/sediment disposal proposed	None				
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	А	All Sub- Areas	GEO-5	GEO-5	No adverse impact (see EIS/R GEO-5 discussion). Site conditions consistent with those anticipated in the PEIS/R.	None				
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	NA/NE				NA/NE – Proposed activities will not take place within salt marsh pans.	None				
WQ-1: Degradation of Water Quality due to herbicide application	Α	All Sub- Areas	WQ-1	WQ-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None				

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003

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A - Applicable

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SU – Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Appli- cable to Site	Sub-Area Included	Applicable tion (by Trea Method use Backpack	s* atment	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
,			-			
WQ-2: Degradation of Water Quality due to herbicide spills	А	All Sub- Areas	WQ-2	WQ-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-3: Degradation of Water Quality due to fuel or petroleum spills	A	All Sub- Areas	WQ-3	WQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-4: Degradation of Water Quality due to Contaminant Remobilization	NA/NE				NA/NE – No dredging or other sediment- mobilizing activities proposed.	None
WQ-5: Water Quality Effects Resulting from Sediment Accretion	NA/NE				NA/NE – This impact only applies to EIS/R Alternative 3.	None
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	NA/NE				NA/NE – Field surveys found no salt-meadow or English cordgrass at this site.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	А	All Sub- Areas	BIO-1.2	BIO-1.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	NA/NE	Sub-area 26a	BIO-1.3	BIO-1.3	NA/NE – Field surveys found no Chilean cordgrass at site.	None
BIO-1.4: Effects on submerged aquatic plant communities.	NA/NE				NA/NE – Field surveys found no eelgrass or other submerged aquatic plants at site.	None
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	NA/NE	All Sub- areas	BIO-2	BIO-2	NA/NE – Field surveys found no special-status plant species at site.	None

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Impact*	Appli- cable to Site	Sub-Area Included	Applicable tion (by Trea Method use Backpack	s* atment	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
					U. 5.11	·
BIO-3: Effects on shorebirds and waterfowl.	А	All Sub- Areas	BIO-3	BIO-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	А	All Sub- Areas	BIO-4.1	BIO-4.1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-4.2: Effects on resident harbor seal colonies of San Francisco Bay.	NA/NE				NA/NE – Outside of known range of harbor seal.	None
BIO-4.3: Effects on the southern sea otter.	NA/NE				NA/NE – Outside of known range of southern sea otters.	None
BIO-5.1: Effects on the California clapper rail.	A	All Sub- Areas	BIO-5.1 as modified by UFSWS BO	BIO-5.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.2: Effects on the California black rail.	A	All Sub- areas	BIO-5.2 as modified by UFSWS BO	BIO-5.2 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	A	All Sub- Areas	BIO-5.3 as modified by UFSWS BO	BIO-5.3 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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Impact*	Appli- cable to Site	Sub-Area Included	Applicable tion (by Trea Method use Backpack	s* atment	Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
BIO-5.4: Effects on California least terns and western snowy plovers.	А	Sub-Areas 5c and 5d	BIO-5.4 as modified by UFSWS BO	BIO-5.4 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-5.5: Effects on raptors (birds of prey).	А	All Sub- Areas			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	A	All Sub- Areas	BIO-6.1 as modified by UFSWS BO	BIO-6.1 as modified by UFSWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.2: Effects on delta smelt and Sacramento splittail.	Α	All Sub- Areas	Bio-6.2	Bio-6.2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
BIO-6.3: Effects on the tidewater goby.	NA/NE				NA/NE – Outside of known range of tidewater goby.	None
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	А	All Sub- Areas	BIO-6.4 – minimize spraying	BIO-6.4 – mini- mize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: no mowing proposed accept in test plots because of unacceptable impacts to birds)	BIO-6.4(b) - R-11 will not be used adjacent to channel to minimize any potential adverse affects on estuarine fish.
BIO-7: Effects on California red-legged frog and San Francisco garter snake.	NA/NE			_	NA/NE – Outside of known range of California red-legged frog and San Francisco garter snake.	None

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	Appli- cable to	Sub-Area Included	Applicable Mitiga- tions* (by Treatment Method used at Site)		tions* (by Treatment		Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site		Backpack	Boat	at Site	Required		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	NA/NE				NA/NE – Site activities will not create additional mosquito habitat.	None		
BIO-9: Effects on tiger beetle species.	NA/NE				NA/NE – no potential tiger beetle habitat will be affected.	None		
AQ-1: Dust Emissions.	NA/NE				NA/NE - Access to treatment areas on paved roads of via water.	None		
AQ-2: Smoke Emissions.	NA/NE				NA/NE – no burning proposed.	None		
AQ-3: Herbicide Effects on Air Quality.	NA/NE	All Sub- Areas	AQ-3	AQ-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None		
AQ-4: Ozone Precursor Emissions.	NA/NE				LTS/NLTAE without mitigation.	None		
AQ-5: Carbon monoxide (CO) Emissions.	NA/NE				LTS/NLTAE without mitigation.	None		
N-1: Disturbance of Sensitive Receptors	А	All Sub- areas	N-1	N-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None		
HS-1: Worker Injury from Accidents Associated with Manual and Mechanical Cordgrass Treatment.	NA/NE				NA/NE – Methods not proposed for site.	None		
HS-2: Worker Health Effects from Herbicide Application.	А	All Sub- Areas	HS-2	HS-2	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None		

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	Appli- cable to	Sub-Area Included	Applicable tion (by Trea Method use	s* atment ed at Site)	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site		Backpack	Boat	at Site	Required
HS-3: Health Effects to the Public from Herbicide Application.	А	All Sub- Areas	HS-3	HS-3	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
HS-4: Health effects to workers or the public from accidents associated with treatment.	А	All Sub- Areas	HS-4	HS-4	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-1: Alteration of Views from Removal of Non-native Cordgrass Infestations.	А	All Sub- Areas	VIS-1	VIS-1	SU – impacts addressed in EIS/R and CEQA findings. Site conditions consistent with those anticipated in the PEIS/R.	None
VIS-2: Change in Views from Native Marsh, Mudflat, and Open Water to Non-native Cordgrass Meadows and Monocultures.	NA/NE				NA/NE – Applies only to PEIS/R Alternative 3 (No Action)	None
LU-1: Land Use Conflicts Between Herbicide Use and Sensitive Re- ceptors	А	All Sub Areas			LTS/NLTAE – Limited to less than significant by HS, N and AQ mitigations.	None
LU-2: Land Use Conflicts from Mechanical and Burning Treat- ment Methods	NA/NE				NA/NE – Methods not proposed for site	None
CUL-1: Disturbance or Destruction of Cultural Resources from Access and Treatment.	А	All Sub- Areas			LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None
CUL-2: Loss of Cultural Resources from Erosion.	NA/NE				NA/NE – No erosion-producing activities proposed	None
CUM-1: Effects of wetland restora- tion projects on spread of non- native cordgrass	А	All Sub- areas	CUM-1	CUM-1	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R.	None

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IMPACT	CHECKLIST

	Appli- cable to	Sub-Area Included	Applicable tion (by Trea Method use	s* atment	Comments/Analysis of Residual Impact	Additional Mitigation
Impact*	Site		Backpack	Boat	at Site	Required
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE				NA/NE – Without mitigation	None

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