

ATTACHMENT 2: Impact and Mitigation Checklists

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Alameda Flood Control Channel, Alameda County

TSN: ISP-2004-1

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide Application					
		Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		
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			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 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	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	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*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide Application					
		Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		
WQ-3: Degradation of water quality due to fuel or petroleum spills	A	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.	A	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

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		Herbicide Application					
		Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		
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.	A	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 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.	A	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	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				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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide Application					
		Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		
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.	A			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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide Application					
		Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		
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.	A	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.	A	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.	A	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	A					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	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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		Herbicide Application					
		Backpack Sprayer	Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		
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 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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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Alameda Flood Control Channel, Alameda County

TSN: ISP-2004-1

Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide Application Technique				Implementa-tion Timing	Verification Signatures	
		Backpack Sprayer	Tracked Amphibious Vehicle	Conven-tional Spray Truck	Aerial (Heli-copter)		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)		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)	X	X	X	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	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2;CM-17)	X	X	X	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	X	X	X	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)	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	X	X	X	X	During treatment		
	Place mats or other protectors beneath heavy equipment operating in sensitive high marsh vegetation, especially gumplant (BIO-1.2)	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2;CM-3,4)	X	X	X	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)	X	X	X	X	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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide Application Technique				Implementation Timing	Verification Signatures	
		Backpack Sprayer	Tracked Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		Implementing Entity	ISP Field Supervisor
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	X	X	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	X	X	X	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)	X	X	X		During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	X	X	X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	X	X	X		During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	X	X	X		Pre- and during treatment		
BIO-5.1: Effects on California clapper rail.	Perform work during Sept 1 thru Feb 1 to avoid CLRA breeding season (BIO-5.1;CM-18)	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)				X	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)	X	X	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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide Application Technique				Implementation Timing	Verification Signatures	
		Backpack Sprayer	Tracked Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		Implementing Entity	ISP Field Supervisor
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	X	X	X	X	During and post-treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Implement CLRA timing restriction (most restrictive). (BIO-5.2)	X	X	X		During treatment		
	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	X	X	X	X	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.	X	X	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)	X	X	X	X	Pre-treatment		
	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.4)	X	X	X	X	During and post-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)				X	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	X	X	X	During treatment		
	Avoid use of alyphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide Application Technique				Implementation Timing	Verification Signatures	
		Backpack Sprayer	Tracked Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		Implementing Entity	ISP Field Supervisor
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	X	X	X	X	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse effects on estuarine fish. (BIO-6.4)	X	X	X	X	During treatment		
AQ-3: Herbicide effects on air quality	Implement ISP Drift Management plan for aerial applications of herbicide (AQ-3;CM-3,4)				X	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with local noise ordinances (N-1)	X	X	X	X	During treatment		
	Avoid use of helicopters within 1,500 feet of hospitals, schools, or houses during times of occupancy (N-1)	X	X	X	X	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)	X	X	X	X	Pre- and during treatment		
	Implement site safety plan or ISP-approved equivalent (HS-1)	X	X	X	X	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	X	X	X	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)	X	X	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3;CM-3)	X	X	X	X	Pre-treatment		

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Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide Application Technique				Implementation Timing	Verification Signatures	
		Backpack Sprayer	Tracked Amphibious Vehicle	Conventional Spray Truck	Aerial (Helicopter)		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;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 equivalent Site Safety and Spill Prevention plan on site. (HS-4)	X	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	X	X	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)	X	X	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Bair/Greco Island, San Mateo County

TSN: ISP-2004-2

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	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.	A	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.	A	All sub-areas	None	None	None	None	None	NA/NE – No mitigation required for work near or in salt marsh pans.	None

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	A	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.	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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 2 of 7
 NA/NE - Not Applicable/No Effect
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 SU - Significant but unmitigable impact
 USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	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	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.	A	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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 3 of 7
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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	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).	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).	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.	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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 4 of 7
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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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 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	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.	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.	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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 5 of 7
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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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.	A	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.	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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 6 of 7
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 USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	A	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.	A	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	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

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SITE-SPECIFIC PROJECT MITIGATION

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

TSN: ISP-2004-2

Impact	Applicable Mitigation & Conservation Measures	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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)	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	X	X	X	X	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	X	X	X	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2;CM-17)	All sub-areas	X	X	X	X	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)	All sub-areas	X	X	X	X		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)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2;CM-3,4)	All sub-areas	X	X	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, 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	Implementation Timing	Verification Signatures	
									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	X	X	X	X	X	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	X	X	X	During treatment		
	Helicopters will not be operated within 1000 feet of active major foraging or roosting sites (BIO-3)	All sub-areas		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)	All sub-areas				X		During treatment		
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1;CM-15)	All sub-areas	X	X	X	X	X	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All sub-areas	X	X	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas	X	X	X	X	X	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)	2a, 2b, 2c, 2f, 2h, 2i		X	X			During treatment		

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Impact	Applicable Mitigation & Conservation Measures	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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		X	X			During treatment		
	Follow ISP spill prevention plan or equivalent BIO-4.2;CM-3,4)	2a, 2b, 2c, 2f, 2h, 2i		X	X			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)	All sub-areas	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)	All sub-areas	X		X	X	X	During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub-areas	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)	All sub-areas	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		X	X	X	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	X		X	X	X	During and post-treatment		
	Avoid spraying or removing Grindelia plants in the marsh	All sub-areas	X	X	X	X	X	During treatment		

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Impact	Applicable Mitigation & Conservation Measures	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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	X	X	X	X	X	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	X		X	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		X	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		X				Pre-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	All sub-areas		X				Pre-treatment and 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).	All sub-areas	X	X	X	X	X	During treatment		
	Avoid use of alyphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub-areas	X	X	X	X	X	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	X	X	X	During treatment		

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Impact	Applicable Mitigation & Conservation Measures	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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	X	X	X	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)	All sub-areas	X			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	X					During treatment		
AQ-3: Herbicide effects on air quality.	Implement ISP approved drift management plan (AQ-3;CM-3,4)	All sub-areas		X				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub-areas	X	X	X	X	X	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	X	X	X	X	X	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	X	X	X	X	X	During treatment		

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Impact	Applicable Mitigation & Conservation Measures	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									Implementing Entity	ISP Field Supervisor
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	X	X	X	X	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)	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	X	X	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)	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	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)	All sub-areas	X	X	X	X	X	Pre-treatment		

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<i>Impact</i>	<i>Applicable Mitigation & Conservation Measures</i>	<i>Sub Area Included</i>	<i>Truck</i>	<i>Aerial</i>	<i>Boat</i>	<i>Argo</i>	<i>Back-pack</i>	<i>Implementation Timing</i>	<i>Verification Signatures</i>	
									<i>Implementing Entity</i>	<i>ISP Field Supervisor</i>
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	X	X	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

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

TSN: ISP-2004-3

Impact*	Appli- cable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Covering	Digging		
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.	A	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 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. Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-2: Degradation of water quality due to herbicide spills	A	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

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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*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Covering	Digging		
WQ-3: Degradation of water quality due to fuel or petroleum spills	A	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.	A	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.	A	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

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*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Covering	Digging		
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.	A	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).	A	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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003
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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Covering	Digging		
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 effects 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	A	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.	A	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 numbering from ISP Control Program Programmatic EIS/R, August 2003

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Covering	Digging		
HS-2: Worker health effects from herbicide application.	A	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			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	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	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	A	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	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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Covering	Digging		
CUM-1: Effects of wetland restoration 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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SITE-SPECIFIC PROJECT MITIGATION

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

TSN: ISP-2004-3

Impact	Applicable Mitigation & Conservation Measures	Herbicide	Covering	Digging	Implementation Timing	Verification Signatures	
						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)	X			During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2;CM-3,17)	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 its hybrids.	Minimize entry and re-entry into marsh, define access points (BIO-1.2;CM-1)	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2;CM-3,4)	X			During treatment		
	Non-viable and viable excavated cordgrass shall be removed from marsh (BIO-1.2;CM-9)			X	During treatment		
	Geotextile mats shall be stabilized with stakes and weights (BIO-1.2;CM-11)			X	During treatment		
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	Follow protocols for mitigation BIO-1.2 above	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, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

Impact	Applicable Mitigation & Conservation Measures	Herbicide	Covering	Digging	Implementation Timing	Verification Signatures	
						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)	X	X	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	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)	X	X	X	During and post treatment		
	Avoid spraying or removing Grindelia plants in the marsh	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.	X	X	X	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			During treatment		
	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	X			During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near channels (BIO-6.4)	X			During treatment		
	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).

Impact	Applicable Mitigation & Conservation Measures	Herbicide	Covering	Digging	Implementation Timing	Verification Signatures	
						Implementing Entity	ISP Field Supervisor
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	X	X	X	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)		X	X	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			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)	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 equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,17)	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	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	X	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)	X	X	X	Post treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Corte Madera Creek Complex, Marin County

TSN: ISP-2004-4

Impact*	Applicable to Site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			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 – Vehicles will not be used in marshes for <i>Spartina</i> 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 turbulence of tidewaters impounded in salt marsh pans.	NA/NE					NA/NE – Without Mitigation.	None
WQ-1: Degradation of Water Quality due to Herbicide Application	A	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	A	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

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Impact*	Applicable to Site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
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.	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.	None
BIO-1.2: Effects on tidal marsh plant communities affected by Atlantic smooth cordgrass and its hybrids.	A	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.	None
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	A	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.	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		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*	Applicable to Site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	A	All Sub-Areas except 4f	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 California clapper rail.	A	All Sub-Areas except 4e and 4f	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	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 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.	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

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Impact*	Applicable to Site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	A	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.	A	Sub-Areas 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	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.	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

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Impact*	Applicable to Site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
N-1: Disturbance of sensitive receptors	A	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.	A	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.	A	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.	A	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.	A	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.	A	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	A	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 mechanical and burning treatment methods	NA/NE					NA/NE – Methods not proposed for site	None

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Impact*	Applicable to Site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	A	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 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
CUM-2- Cumulative damage to marsh plain vegetation	NA/NE					NA/NE – Without mitigation.	None

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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Corte Madera Creek Complex, Marin County

TSN: ISP-2004-4

Impact	Applicable Mitigation & Conservation Measures	Sub-Area Included	Herbicide	Digging	Implementation Timing	Verification Signatures	
						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	X		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	X		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	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)	All Sub-Areas	X		During treatment		
BIO-1.1: Effects on tidal marsh plant communities affected by salt-meadow cordgrass and English cordgrass.	Minimize entry and re-entry into marsh (BIO-1.1;CM-1)	Sub-Area 4g	X	X			
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.1;CM-3,4)	Sub-Area 4g	X				
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)	Sub-Area 4a	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2;CM-3,4)	Sub-Area 4a	X		During treatment		

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Impact	Applicable Mitigation & Conservation Measures	Sub-Area Included	Herbicide	Digging	Implementation Timing	Verification Signatures	
						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	X				
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	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All Sub-Areas	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All Sub-Areas	X	X	During treatment		
BIO-4.1: Effects on the Salt Marsh Harvest 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	X	X	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	X	X	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All Sub-areas except 4f	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All Sub-areas except 4f	X	X	Pre- and during treatment		

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Impact	Applicable Mitigation & Conservation Measures	Sub-Area Included	Herbicide	Digging	Implementation Timing	Verification Signatures	
						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 breeding season (BIO-5.1;CM-18)	All Sub-Areas except 4e and 4f	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)	All Sub-Areas except 4e and 4f	X	X	Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All Sub-Areas except 4e and 4f	X	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 except 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 except 4e and 4f	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	X	X	During and post-treatment		
	Avoid spraying or removing Grindelia plants in the marsh	All Sub-Areas	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.	All Sub-Areas	X	X	During treatment		

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Impact	Applicable Mitigation & Conservation Measures	Sub-Area Included	Herbicide	Digging	Implementation Timing	Verification Signatures	
						Implementing Entity	ISP Field Supervisor
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	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 populations of shallow submerged intertidal mudflats and channels.	Spray drift near channels shall be minimized and conform to ISP herbicide drift management 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	X	X	During treatment		
HS-1: Worker Injury from accidents Associated with manual and mechanical Cordgrass treatment	Follow ISP approved site safety protocols or equivalent (HS-1;CM-3)	All Sub-Areas		X	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 4a, 4b, 4e, 4f, 4g, 4h, 4i,4j, 4k	X		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	X		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	X		Pre-treatment		

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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	Herbicide	Digging	Implementation Timing	Verification Signatures	
						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 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	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)	All Sub-Areas	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	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	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

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

TSN: ISP-2004-5

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle	Aerial		
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.	A	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

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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

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle	Aerial		
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	A	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.	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle	Aerial		
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	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	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.	A	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle	Aerial		
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).	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	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle	Aerial		
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 – 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.	A	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle	Aerial		
AQ-2: Smoke Emissions.	NA/NE							NA/NE – no burning proposed.	None
AQ-3: Herbicide Effects on Air Quality.	A	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	A	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 proposed for site.	None
HS-2: Worker Health Effects from Herbicide Application.	A	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle	Aerial		
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 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	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	A	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 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				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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle	Aerial		
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 proposed on this site	None
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE							NA/NE – Without mitigation	None

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SITE-SPECIFIC PROJECT MITIGATION

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

TSN: ISP-2004-5

Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
									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	X	X	X	X	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	X	X	X	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-3, 17)	All sub-areas	X	X	X	X	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)	All sub-areas	X	X	X	X	X	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)	All Sub-areas	X	X	X	X		During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	All sub-areas	X	X	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*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
									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	X	X	X	X	X	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	X	X	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)	All sub-areas	X	X	X	X		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	X	X	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas	X	X	X	X	X	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	X	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*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
									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)	All sub-areas	X	X	X	X	X	During treatment		
	Follow ISP spill prevention plan or equivalent (BIO-4.2; CM-17)	All sub-areas	X	X	X	X	X	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)	All sub-areas	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)	All sub-areas					X	Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub-areas	X	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)	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	X	X	X	X	X	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)	All sub-areas	X	X	X	X	X	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	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
									Implementing Entity	ISP Field Supervisor
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All sub-areas	X	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 (BIO-5.3)	All sub-areas	X	X	X	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)	Sub-Areas 5c and 5d	X	X	X	X	X	Pre-treatment		
	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.4)	Sub-Areas 5c and 5d	X	X	X	X	X	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					X	Pre-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	Sub-Areas 5a, 5b, 5c, 5d, 5f					X	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	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
									Implementing Entity	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	X	X	X	X	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	X	X	X	X	X	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	X	X	X	X	X	During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	All Sub-areas	X	X	X	X	X	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					X	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Sub-Areas 5a, 5b, 5c, 5d, 5e, 5g	X	X	X	X		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	X	X	X	X	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	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
									Implementing Entity	ISP Field Supervisor
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	X	X	X	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	X	X	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)	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 pre-historic 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		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	X					Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Emeryville Crescent, Alameda County

TSN: ISP-2004-6

Impact*	Applicable Sub-site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Amphibious vehicle	Backpack sprayer	Conventional Spray Truck		
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*	Applicable Sub-site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Amphibious vehicle	Backpack sprayer	Conventional Spray Truck		
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*	Applicable Sub-site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Amphibious vehicle	Backpack sprayer	Conventional Spray Truck		
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*	Applicable Sub-site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Amphibious vehicle	Backpack sprayer	Conventional Spray Truck		
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 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

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Impact*	Applicable Sub-site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Amphibious vehicle	Backpack sprayer	Conventional Spray Truck		
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

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Impact*	Applicable Sub-site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Amphibious vehicle	Backpack sprayer	Conventional Spray Truck		
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 Receptors	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 Treatment 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 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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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Emeryville Crescent, Alameda County

TSN: ISP-2004-6

Impact	Applicable Mitigation & Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Implementation Timing	Verification Signatures	
							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	X			During treatment		
WQ-1: Degradation of Water Quality due to Herbicide Application	Apply herbicide directly to plant at low tide and according to I6a, 6bel (WQ-1;CM-3,4)	6a, 6b	X	X	X	During treatment		
WQ-2: Degradation of Water Quality due to Herbicide Spills	Apply under supervision of trained applicator (WQ-2;CM-3)	6a, 6b	X	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-3,17)	6a, 6b	X	X	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)	6a, 6b	X	X	X	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)	6a, 6b	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	6a, 6b	X	X	X	During treatment		
	Place mats or other protectors beneath heavy equipment operating in sensitive high-marsh vegetation, especially gumplant. (BIO-1.2;CM-1)	6a, 6b	X	X	X	During treatment		

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Impact	Applicable Mitigation & Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Implementation Timing	Verification Signatures	
							Implementing Entity	ISP Field Supervisor
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2;CM-3,4)	6a, 6b	X	X	X	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	X	X	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	6a, 6b	X	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	6a, 6b	X	X	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)	6a, 6b	X	X	X	During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	6a, 6b	X	X	X	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	6a, 6b	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	6a, 6b	X	X	X	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)	6a, 6b	X	X	X	During treatment		

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Impact	Applicable Mitigation & Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Implementation Timing	Verification Signatures	
							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	X	X	Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	6a, 6b	X	X	X	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	6a, 6b	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)	6a, 6b	X	X	X	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	X	X	X	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	X	X	Pre-treatment		
	Provide CABR Field Biologist Supervision (BIO-5.2)	6a, 6b	X	X	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)	6a, 6b	X	X	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	X	X	X	During treatment and Post-treatment		

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Impact	Applicable Mitigation & Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Implementation Timing	Verification Signatures	
							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	X	X	X	During treatment		
	Report any SMSS and SCYE activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.3)	6a, 6b	X	X	X	During and post-treatment		
	Avoid spraying or removing Grindelia plants in the marsh	6a,6b	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.	6a,6b	X	X	X	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).	6a,6b	X	X	X	During treatment		
	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	6a,6b	X	X	X	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Bio-6.4 – Minimize spraying near channels (BIO-6.4)	6a, 6b	X	X	X	During treatment		
	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (BIO-6.4)	6a, 6b	X	X	X	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	6a, 6b	X	X	X	During treatment		

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Impact	Applicable Mitigation & Conservation Measure	Applicable sub-site	Amphibious vehicle	Backpack sprayer	Conventional Spray Truck	Implementation Timing	Verification Signatures	
							Implementing Entity	ISP Field Supervisor
HS-2: Worker Health Effects from Herbicide Application.	Follow handling and application procedures as identified on product I6a, 6bel (HS-2;CM-3,4,17)	6a, 6b	X	X	X	During treatment		
HS-3: Health Effects to the Public from Herbicide Application.	Minimize drift according to ISP drift management plan (HS-3)	6a, 6b	X	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	6a, 6b	X	X	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)	6a, 6b	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)	6a, 6b	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)	6a, 6b	X	X	X	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).

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Oro Loma Marsh, Alameda County

TSN: ISP-2004-7

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Backpack	Truck	Amphibious Vehicle	Aerial		
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	A			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	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	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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 1 of 6
 A - Applicable
 NA/NE - Not Applicable/No Effect
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 USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Backpack	Truck	Amphibious Vehicle	Aerial		
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	A	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.	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 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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003 2 of 6
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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Backpack	Truck	Amphibious Vehicle	Aerial		
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.	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		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.	A	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	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.	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.	NA/NE					NA/NE-No California least terns or western snowy plovers within or adjacent to site.	None

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Backpack	Truck	Amphibious Vehicle	Aerial		
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 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	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 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-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.	A	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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Backpack	Truck	Amphibious Vehicle	Aerial		
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	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.	A	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.	A	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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Backpack	Truck	Amphibious Vehicle	Aerial		
VIS-1: Alteration of views from removal of non-native cordgrass Infestations.	A	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 between herbicide use and sensitive receptors	A	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.	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-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

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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Oro Loma Marsh, Alameda County

TSN: ISP-2004-7

Impact*	Applicable Mitigation & Conservation Measures*	Back-pack	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
							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)	X	X	X	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	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	X	X	X	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	X	X	X	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)	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	X	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*	Back-pack	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
							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)	X	X	X	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	X	X	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	X	X	X	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)	X	X	X		During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1; CM-15)	X	X	X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	X	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	X	X	X	X	Pre- and during treatment		
BIO-5.1: Effects on California Clapper Rail	Perform work only during Sept 1 thru Feb 1 to avoid CACR breeding season (BIO-5.1; CM-18)	X	X	X		During treatment		

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 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*	Back-pack	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
							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)	X	X	X	X	Pre-treatment		
	Provide CACR Field Biologist Supervision (BIO-5.1)	X	X	X	X	Pre-treatment and During treatment		
	Assure that field personnel are trained in general CACR biology and identification as well as call detection (BIO-5.1)	X	X	X	X	Pre-treatment and During treatment		
	Report any CACR activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	X	X	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)	X	X	X		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)	X	X	X	X	Pre-treatment		
	Provide CABR Field Biologist Supervision (BIO-5.2)	X	X	X	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)	X	X	X	X	Pre-treatment and During treatment		

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 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*	Back-pack	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
							Implementing Entity	ISP Field Supervisor
	Report any CABR activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.2)	X	X	X	X	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 report (BIO-5.3)	X	X	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	X	X	X	During treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	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 (BIO-5.3)	X	X	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)				X	Pre-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)				X	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	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*	Back-pack	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
							Implementing Entity	ISP Field Supervisor
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	X	X	X	X	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near channels (BIO-6.4)	X	X	X	X	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	X	X	X	X	During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	X	X	X	X	During treatment		
AQ-3: Herbicide Effects on Air Quality.	Implement ISP herbicide drift management plan for aerial applications of herbicide (AQ-3; CM-3, 4)				X	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	X	X	X	X	During treatment		
	Avoid use of helicopters within 1,500 ft of hospitals, schools, or houses during times of occupancy (N-1)				X	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	X	X	X	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)	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Back-pack	Truck	Amphibious Vehicle	Aerial	Implementation Timing	Verification Signatures	
							Implementing Entity	ISP Field Supervisor
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	X	X	X	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	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	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.	Conduct Phase 1 records search for cultural resources on site before work (CUL-1)			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)	X	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, 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

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Dig	Cover		
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	A	WQ-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*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Dig	Cover		
WQ-2: Degradation of Water Quality due to Herbicide Spills	A	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			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

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 USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Dig	Cover		
BIO-3: Effects on shorebirds and waterfowl.	A	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	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.	A	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	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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003
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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Dig	Cover		
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	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 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	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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Dig	Cover		
N-1: Disturbance of Sensitive Receptors	A	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.	A		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.	A	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			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	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	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	A				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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003
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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Dig	Cover		
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
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 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

Key: * Impact and mitigation numbering from ISP Control Program Programmatic EIS/R, August 2003
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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Palo Alto Baylands, Santa Clara County

TSN: ISP-2004-8

Impact	Applicable Mitigation & Conservation Measures	Herbicide	Dig	Covering	Implementation Timing	Verification Signatures	
						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)	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 its hybrids.	Minimize entry and re-entry into marsh , define access points (BIO-1.2;CM-1)	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2;CM-4)	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)	X	X	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	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, Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

Impact	Applicable Mitigation & Conservation Measures	Herbicide	Dig	Covering	Implementation Timing	Verification Signatures	
						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)	X	X	X	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	X	X	X	Pre- and 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)	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)	X	X	X	Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	X	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	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	X	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)	X	X	X	During and post treatment		
	Avoid spraying or removing Grindelia plants in the marsh	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,

Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

Impact	Applicable Mitigation & Conservation Measures	Herbicide	Dig	Covering	Implementation Timing	Verification Signatures	
						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.	X	X	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)	X			During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near channels (BIO-6.4)	X			During treatment		
	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	X			During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	X			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)		X	X	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)	X			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 equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,4,17)	X	X	X	During treatment		

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<i>Impact</i>	<i>Applicable Mitigation & Conservation Measures</i>	<i>Herbicide</i>	<i>Dig</i>	<i>Covering</i>	<i>Implementation Timing</i>	<i>Verification Signatures</i>	
						<i>Implementing Entity</i>	<i>ISP Field Supervisor</i>
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	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	X	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)	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).

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Pickleweed Park, San Rafael, Marin County

TSN: ISP-2004-9

Impact*	Appli- cable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
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.	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	A	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			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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SU - Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
WQ-3: Degradation of Water Quality due to Fuel or Petroleum Spills	A	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		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	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	A	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	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	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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
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.	A	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	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	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).	A	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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
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 effects 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	A	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.	A		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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
HS-2: Worker health effects from herbicide application.	A	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			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	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	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	A				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	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 proposed on this site	None

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<i>Impact*</i>	<i>Appli- cable to Site</i>	<i>Applicable Mitigations* (by Treatment Method used at Site)</i>			<i>Comments/Analysis of Residual Impact at Site</i>	<i>Additional Mitigation Required</i>
		<i>Herbicide</i>	<i>Digging</i>			
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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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Pickleweed Park, San Rafael, Marin County

TSN: ISP-2004-9

Impact	Applicable Mitigation & Conservation Measures	Herbicide	Digging		Implementation Timing	Verification Signatures	
						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 its hybrids.	Minimize entry and re-entry into marsh , define access points (BIO-1.3;CM-1)						
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.3;CM-3,4)						
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass and its hybrids.	Minimize entry and re-entry into marsh , define access points (BIO-1.3;CM-1)	X	X		During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment 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 <i>Cirsium hydrophilum hydrophilum</i> (BIO-2;CM-22)	X	X		Pre-treatment		
	Field crews will be instructed on ID and avoidance of <i>Cirsium hydrophilum hydrophilum</i> (BIO-2)	X	X		Pre-treatment		

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Impact	Applicable Mitigation & Conservation Measures	Herbicide	Digging		Implementation Timing	Verification Signatures	
						Implementing Entity	ISP Field Supervisor
	On site qualified botanical supervision (BIO-2;CM-23)	X	X		During treatment		
	Cover non-target <i>Circium hydrophilum hydrophilum</i> 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)	X	X		During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	X	X		During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	X	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)	X	X		During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	X	X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	X	X		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 breeding season.(BIO-5.1;CM-18)	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)	X	X		Pre-treatment		

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Impact	Applicable Mitigation & Conservation Measures	Herbicide	Digging		Implementation Timing	Verification Signatures	
						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	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)	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	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)	X			During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near channels (BIO-6.4)	X			During treatment		
	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	X			During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	X			During treatment		

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 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	Herbicide	Digging		Implementation Timing	Verification Signatures	
						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)		X		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)	X			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 equivalent Site Safety and Spill Prevention plan on site (HS-4;Cm-3,4,17)	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		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		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)	X	X		Post treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Point Pinole Regional Shoreline, Contra Costa County

TSN: ISP-2004-10

Impact*	Applicable to Site	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			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

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 NA/NE - Not Applicable/No Effect
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 USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
WQ-1: Degradation of water quality due to herbicide application	A	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	A	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	A	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.	A	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

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Impact*	Applicable to Site	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	A	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 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 range of southern sea otters	None

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Impact*	Applicable to Site	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
BIO-5.1: Effects on the California clapper rail.	A	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.	A	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

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Impact*	Applicable to Site	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			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 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 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

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Impact*	Applicable to Site	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
N-1: Disturbance of sensitive receptors	A	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.	A	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.	A	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

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Impact*	Applicable to Site	Sub-areas included	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Herbicide	Digging			
LU-1: Land use conflicts between herbicide use and sensitive receptors	A	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 restoration 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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Date ___/___/___

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Point Pinole Regional Shoreline

TSN: ISP-2004-10

<i>Impact</i>	<i>Applicable Mitigation</i>	<i>Applicable to Sub-Area</i>	<i>Herbicide</i>	<i>Digging</i>	<i>Implementation Timing</i>	<i>Verification Signatures</i>		<i>Notes</i>
						<i>Implementing Entity</i>	<i>ISP Field Supervisor</i>	
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	X		During treatment			
	Implement spill and containment plan provided or approved by ISP (WQ-2;CM-17)	10a, 10c	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)	10a, 10c	X		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)	All sub-areas	X		During treatment			
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X		During treatment			
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2;CM-3,4)	All sub-areas	X		During treatment			

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 Also included are the USFWS general and site-specific biological opinions Conservation Measures (CM).

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

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Impact	Applicable Mitigation	Applicable to Sub-Area	Herbicide	Digging	Implementation Timing	Verification Signatures		Notes
						Implementing Entity	ISP Field Supervisor	
	Cover non-target <i>Cordylanthus mollis mollis</i> and <i>Circium hydrophilum hydrophilum</i> with fabric during spray work (BIO-2)	10a	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	X	During treatment			
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All sub-areas	X	X	During treatment			
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All sub-areas	X	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)	All sub-areas	X	X	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	During treatment			
	Assume presence of SMHM on all suitable sites (CM 14)	All sub-areas	X	X	During treatment			

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Impact	Applicable Mitigation	Applicable to Sub-Area	Herbicide	Digging	Implementation Timing	Verification Signatures		Notes
						Implementing Entity	ISP Field Supervisor	
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas	X	X	Pre-treatment			
BIO-5.1: Effects on the 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	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	X	X	Pre treatment			
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub-areas	X	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	X	X	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	X	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	X	X	During treatment			

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Impact	Applicable Mitigation	Applicable to Sub-Area	Herbicide	Digging	Implementation Timing	Verification Signatures		Notes
						Implementing Entity	ISP Field Supervisor	
	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	X	X	Pre-treatment			
	Provide CABR Field Biologist Supervision (BIO-5.2)	All Sub-areas	X	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	X	X	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	X	X	During treatment and Post-treatment			
	Implement CLRA timing restriction (most restrictive)	All Sub-areas	X	X	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	X	During and post treatment			
	Avoid spraying or removing Grindelia plants in the marsh	All Sub-areas	X	X	During treatment			

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 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	Applicable to Sub-Area	Herbicide	Digging	Implementation Timing	Verification Signatures		Notes
						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	X	X	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 alyphenol 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 intertidal mudflats and channels.	Bio-6.4 – minimize spraying near channels (BIO-6.4)	Sub-area 10a, 10c	X		During treatment			
	Avoid use of alyphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish.	Sub-area 10a, 10c	X		During treatment			
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	All sub-areas	X	X	During treatment			
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	Sub-areas 10a, 10c	X		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	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).

Impact	Applicable Mitigation	Applicable to Sub-Area	Herbicide	Digging	Implementation Timing	Verification Signatures		Notes
						Implementing Entity	ISP Field Supervisor	
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	X		During treatment			
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	Sub-areas 10a, 10c	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)	Sub-areas 10a, 10c	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)	Sub-areas 10a, 10c	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)	Sub-areas 10a, 10c	X	X	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)	All sub -areas	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).

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Southampton Marsh, Solano County

TSN: ISP-2004-11

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
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

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*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
WQ-2: Degradation of Water Quality due to Herbicide Spills	A	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			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	A	BIO-2	BIO-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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
BIO-3: Effects on shorebirds and waterfowl.	A	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.	A	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.	A	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	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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	A	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.	A	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.	A	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 effects 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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
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.	A	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			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	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	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	A	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

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USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)			Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Herbicide	Digging			
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 restoration 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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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Southampton Marsh, Solano County

TSN: ISP-2004-11

Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide	Digging	Implementation Timing	Verification Signatures	
					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)	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-1.1: Effects on tidal marsh plant communities affected by Salt meadow cordgrass and its hybrids.	Minimize entry and re-entry into marsh (BIO-1.1;CM-1)	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.1;CM-3,4)	X	X	During treatment		
	Use geotextile fabric to prevent treatment of non-target <i>Cordylanthus mollis</i> vegetation (BIO-1.1)	X	X	During treatment		
BIO-2: Effects on special-status plants (Soft bird's beak and/or Suisun thistle) in tidal marshes	Pre-project surveys for <i>Cordylanthus mollis mollis</i> and <i>Cir-cium hydrophilum hydrophi-lum</i> (BIO-2;CM-22)	X	X	Pre-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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide	Digging	Implementation Timing	Verification Signatures	
					Implementing Entity	ISP Field Supervisor
	Field crews will be instructed on ID and avoidance of <i>Cordylanthus mollis mollis</i> and <i>Circium hydrophilum hydrophilum</i> (BIO-2)	X	X	Pre- and during treatment		
	On site qualified botanical supervision (BIO-2;CM-23)	X	X	During treatment		
	Cover non-target <i>Cordylanthus mollis mollis</i> and <i>Circium hydrophilum hydrophilum</i> 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)	X	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	X	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)	X	X	During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1;CM-15)	X	X	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	X	X	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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide	Digging	Implementation Timing	Verification Signatures	
					Implementing Entity	ISP Field Supervisor
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	X	X	Pre-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)	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)	X	X	Pre-treatment		
	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 California Black Rail	Conform with BIO-5.1	X	X	During treatment		
BIO-5.3: Effects on tidal marsh song sparrow subspecies and the salt marsh common yellowthroat.	Implement CLRA timing restriction (most restrictive).	X	X	During treatment		
	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		

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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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide	Digging	Implementation Timing	Verification Signatures	
					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.	X	X	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		During treatment		
	Avoid use of alylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning.	X		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 management plan or equivalent (BIO-6.2;CM-13)	X		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)	X		During treatment		
	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish.	X		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		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)	X		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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Herbicide	Digging	Implementation Timing	Verification Signatures	
					Implementing 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)	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		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	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	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)	X		Post-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).

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Southeast San Francisco Complex, San Francisco County

TSN: ISP-2004-12

Impact*	Applicable to site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at site)						Comments/Analysis of Residual Impact at site	Additional Mitigation Required
			Back-pack	Truck	Boat	Mowing	Covering	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 - 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.	A	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

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 NA/NE - Not Applicable/No Effect
 USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at site)						Comments/Analysis of Residual Impact at site	Additional Mitigation Required
			Back-pack	Truck	Boat	Mowing	Covering	Digging		
WQ-1: Degradation of Water Quality due to Herbicide Application	A	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	A	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	A	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	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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Impact*	Applicable to site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at site)						Comments/Analysis of Residual Impact at site	Additional Mitigation Required
			Back-pack	Truck	Boat	Mowing	Covering	Digging		
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	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 occur within Salt marsh harvest mouse habitat	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.	NA/NE								NA/NE - Sites within SE SF Complex not known to contain California Clapper Rail	None

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Impact*	Applicable to site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at site)						Comments/Analysis of Residual Impact at site	Additional Mitigation Required
			Back-pack	Truck	Boat	Mowing	Covering	Digging		
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-5.2 as modified by UFSWS BO	BIO-5.2 as modified by UFSWS BO	BIO-5.2 as modified by UFSWS BO	BIO-5.2 as modified by UFSWS BO	BIO-5.2 as modified by UFSWS BO	BIO-5.2 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 - 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).	A	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.	A	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 affects on estuarine fish.

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Impact*	Applicable to site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at site)						Comments/Analysis of Residual Impact at site	Additional Mitigation Required
			Back-pack	Truck	Boat	Mowing	Covering	Digging		
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.	A	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	A	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 Associated with Manual and Mechanical Cordgrass Treatment.	A	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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Impact*	Applicable to site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at site)						Comments/Analysis of Residual Impact at site	Additional Mitigation Required
			Back-pack	Truck	Boat	Mowing	Covering	Digging		
HS-2: Worker Health Effects from Herbicide Application.	A	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.	A	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.	A	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.	A	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 Conflicts Between Herbicide Use and Sensitive Receptors	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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Impact*	Applicable to site	Sub Area Included	Applicable Mitigations* (by Treatment Method used at site)						Comments/Analysis of Residual Impact at site	Additional Mitigation Required
			Back-pack	Truck	Boat	Mowing	Covering	Digging		
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-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	NA/NE								NA/NE - No Mosquito Abatement Districts working on this site	None

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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Southeast San Francisco Complex

TSN: ISP-2004-12

Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Back-pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Verification Signatures	
										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	X	X	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	X	X	X				During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub-areas	X	X	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)	All sub-areas	X	X	X	X			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)	All Sub-Areas	X	X	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All Sub-Areas	X	X	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 12c, 12d, 12e, 12f	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	Back-pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Verification Signatures	
										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	X	X	X	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All Sub-Areas	X	X	X	X	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All Sub-Areas	X	X	X	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	X	X	X	X	X	X	During and post-treatment		
	Avoid spraying or removing Grindelia plants in the marsh (BIO-5.3)	All Sub-Areas	X	X	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 (BIO-5.3)	All Sub-Areas	X	X	X	X	X	X	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).	All sub-areas	X	X	X				During treatment		

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 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	Back-pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Verification Signatures	
										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 submerged intertidal mudflats and channels.	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub-areas	X	X	X				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	X	X	X				During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	All sub-areas	X	X	X	X	X	X	During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub-areas	X	X	X	X			During treatment		
HS-1: Worker Injury from accidents Associated with manual and mechanical Cordgrass treatment	Follow ISP approved site safety protocols or equivalent (HS-1; CM-3)	Sub-Areas 12a, 12b, 12f				X	X	X	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	X	X	X				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	X	X	X				During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Back-pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Verification Signatures	
										Implementing Entity	ISP Field Supervisor
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	X	X	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)	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	X	X	X	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)	All Sub-Areas	X	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 archeological mitigation has taken place (CUL-1)	All Sub-Areas	X			X	X	X	Pre-treatment and during treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Back-pack	Truck	Boat	Mowing	Covering	Digging	Implementation Timing	Verification Signatures	
										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)	All sub-areas	X	X	X	X	X	X	Post-treatment		

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 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

Impact*	Applicable to Site	Applicable Sub-Site	Applicable Mitigations* (by Treatment Method used at Site)					Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
			Back-pack	Truck	Amphibious Vehicle	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.	A	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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Impact*	Applicable to Site	Applicable Sub-Site	Applicable Mitigations* (by Treatment Method used at Site)					Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
			Back-pack	Truck	Amphibious Vehicle	Aerial	Boat		
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	A	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	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	A	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 effects resulting from sediment accretion	NA/NE							NA/NE – This impact only applies to EIS/R Alternative 3.	None

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Impact*	Applicable to Site	Applicable Sub-Site	Applicable Mitigations* (by Treatment Method used at Site)					Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
			Back-pack	Truck	Amphibious Vehicle	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 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.	A	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

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Impact*	Applicable to Site	Applicable Sub-Site	Applicable Mitigations* (by Treatment Method used at Site)					Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
			Back-pack	Truck	Amphibious Vehicle	Aerial	Boat		
BIO-4.1: Effects on the salt marsh harvest mouse and tidal marsh shrew species.	A	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.	A	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.	A	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.	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	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

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Impact*	Applicable to Site	Applicable Sub-Site	Applicable Mitigations* (by Treatment Method used at Site)					Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
			Back-pack	Truck	Amphibious Vehicle	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).	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.	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 – 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 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

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

Impact*	Applicable to Site	Applicable Sub-Site	Applicable Mitigations* (by Treatment Method used at Site)					Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
			Back-pack	Truck	Amphibious Vehicle	Aerial	Boat		
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	A	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.	A	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	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

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

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Impact*	Applicable to Site	Applicable Sub-Site	Applicable Mitigations* (by Treatment Method used at Site)					Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
			Back-pack	Truck	Amphibious Vehicle	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.	A	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 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	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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Impact*	Applicable to Site	Applicable Sub-Site	Applicable Mitigations* (by Treatment Method used at Site)					Applicable Mitigations* (by Treatment Method used at Site)	Additional Mitigation Required
			Back-pack	Truck	Amphibious Vehicle	Aerial	Boat		
LU-1: Land use conflicts between herbicide use and sensitive receptors	A	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							LTS/NLTAE - Limited to less than significant AQ mitigations.	None
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	A	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 proposed	None
CUM-1: Effects of wetland restoration projects on spread of non-native cordgrass	A	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	A	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	A	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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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Whale's Tail Complex, Alameda County

TSN: ISP-2004-13

Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Amphibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								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)	X	X	X	X	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	X	X	X	During treatment		
	Implement spill and containment plan provided by contractor and approved by WRA (WQ-2;CM-17)	X	X	X	X	X	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).	X	X	X	X	X	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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Amphibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								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 by Atlantic smooth cordgrass and its hybrids.	Minimize entry and re-entry into marsh (BIO-1.2;CM-1)	X	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	X	X	X	X	X	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)	X	X	X	X	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)	X	X	X	X	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Amphibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field Supervisor
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	X	X	X	X	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)	X	X	X	X				
	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)	X	X	X	X	X			
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	X	X	X	X	X			
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 protocols (CM-18)					X	Pre-treatment		
	Provide CLRA Field biologist supervision. (BIO-5.1)	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Amphibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								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	X	X	X	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	X	X	X	X	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)	X	X	X	X	X	During treatment		
	Avoid spraying or removing Grindelia plants in the marsh	X	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.	X	X	X	X	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)	X	X	X	X	X	Pre-treatment		

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Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Amphibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field Supervisor
	Report any CALT and WSPL activity immediately to on-site field biologist and in post-treatment report (BIO-5.4)	X	X	X	X	X	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 operations. (BIO-5.5)					X	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	X	X	X	X	During treatment		
	Avoid use of alyphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	X	X	X	X	X	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)	X	X	X	X	X	During treatment		
	Avoid use of alyphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish. (BIO-6.4)	X	X	X	X	X	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)			X			During treatment		

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Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Amphibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field 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	X	X	X	During treatment		
	Limit traffic speeds on any dirt access roads to 15 miles per hour. (AQ-1)	X	X	X	X	X	During treatment		
AQ-3: Herbicide effects on air quality	Implement ISP Drift Management plan for aerial applications of herbicide (AQ-3;CM-3,4)					X	During treatment		
N-1: Disturbance of sensitive receptors	Comply with local noise ordinances (N-1)	X	X	X	X	X	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)	X	X	X	X	X	During treatment		
HS-3: Health effects to the public from herbicide application.	Minimize drift according to drift management plan provided by contractor and approved by WRA. (HS-3;CM-3,4)	X	X	X	X	X	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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Amphibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field Supervisor
	Post appropriate signage within 24 hours of a treatment (HS-3;CM-3)	X	X	X	X	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;CM-3)	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 Site Safety and Spill Prevention plan on site. (HS-4)	X	X	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	X	Pre-treatment, during treatment, post-treatment		
CUL-1: Disturbance or destruction of cultural resources from access and treatment.	Conduct Phase 1 records search of historic resources on site (CUL-1)			X			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.	X	X	X	X	X	Pre-treatment and during treatment		

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<i>Impact*</i>	<i>Applicable Mitigation & Conservation Measures (source**)</i>	<i>Back-pack</i>	<i>Truck</i>	<i>Amphibious Vehicle</i>	<i>Boat</i>	<i>Aerial</i>	<i>Implementation Timing</i>	<i>Verification Signatures</i>	
								<i>Implementing Entity</i>	<i>ISP Field Supervisor</i>
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	X	X	X	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

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

TSN: ISP-2004-15

Impact*	Applicable to Site	Applicable to sub-areas	Applicable Mitigations* (by treatment method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Boat	Amphibious vehicles	Aerial		
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.	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 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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Impact*	Applicable to Site	Applicable to sub-areas	Applicable Mitigations* (by treatment method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Boat	Amphibious vehicles	Aerial		
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

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Impact*	Applicable to Site	Applicable to sub-areas	Applicable Mitigations* (by treatment method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Boat	Amphibious vehicles	Aerial		
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 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	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	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

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Impact*	Applicable to Site	Applicable to sub-areas	Applicable Mitigations* (by treatment method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Boat	Amphibious vehicles	Aerial		
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.	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 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

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Impact*	Applicable to Site	Applicable to sub-areas	Applicable Mitigations* (by treatment method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Boat	Amphibious vehicles	Aerial		
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	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 – Outside of known range of California red-legged frog and San Francisco garter snake.	None

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Impact*	Applicable to Site	Applicable to sub-areas	Applicable Mitigations* (by treatment method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Boat	Amphibious vehicles	Aerial		
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.	A	Sub areas 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	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 – No manual or mechanical removal proposed.	None

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Impact*	Applicable to Site	Applicable to sub-areas	Applicable Mitigations* (by treatment method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Boat	Amphibious vehicles	Aerial		
HS-2: Worker Health Effects from Herbicide Application.	A	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 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 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	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	A	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*	Applicable to Site	Applicable to sub-areas	Applicable Mitigations* (by treatment method used at Site)					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Boat	Amphibious vehicles	Aerial		
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		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.	A		CUM-1					Potentially Significant – ISP and SCVWD will coordinate 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 working on this site	None

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SITE-SPECIFIC PROJECT MITIGATION

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

TSN: ISP-2004-15

Impact*	Applicable Mitigation & Conservation Measures	Herbicide	Implementation Timing	Verification Signatures	
				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)	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 its hybrids.	Minimize entry and re-entry into marsh, define access points (BIO-1.2;CM-1)	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2;CM-4)	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)	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	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)	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).

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Impact*	Applicable Mitigation & Conservation Measures	Herbicide	Implementation Timing	Verification Signatures	
				Implementing Entity	ISP Field Supervisor
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1;CM-15)	X	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	X	Pre-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)	X	During treatment		
	Avoid approaching haul out sites within 2000 feet (or any distance that elicits vigilance behavior) when pups are present. (BIO-4.2)	X	During treatment		
	Follow ISP spill prevention plan or equivalent (BIO-4.2;CM-3,4)	X	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)	X	During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	X	During treatment		
	Assure that field personnel are trained in general CLRA biology and CLRA identification and call detection (BIO-5.1)	X	Pre-treatment and during treatment		
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	X	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)	X	During and post-treatment		
	Avoid spraying or removing Grindelia plants in the marsh	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures	Herbicide	Implementation Timing	Verification Signatures	
				Implementing 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)	X	Pre-treatment		
	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.4)	X	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)	X	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near channels (BIO-6.4)	X	During treatment		
	Avoid use of alyphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse affects on estuarine fish (FWS BO)	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)	X	During treatment		
	Limit traffic speeds on any dirt access roads to 15 miles per hour. (AQ-1)	X	During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	X	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)	X	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 equivalent Site Safety and Spill Prevention plan on site (HS-4;CM-3,4,17)	X	During treatment		

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<i>Impact*</i>	<i>Applicable Mitigation & Conservation Measures</i>	<i>Herbicide</i>	<i>Implementation Timing</i>	<i>Verification Signatures</i>	
				<i>Implementing Entity</i>	<i>ISP Field Supervisor</i>
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, 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	Pre-treatment and during treatment		
CUM-1: Effects of wetland restoration projects on spread of non-native cordgrass.	Potentially Significant-ISP and SCVWD will coordinate control work at site with the South Bay Salt Ponds Restoration Project.	X	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)	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Cooley Landing

TSN: ISP-2004-16

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)						Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Amphibious vehicle	Boat	Aerial			
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 dredging/sediment disposal proposed	None
GEO-5: Increased volume and velocity of tidal currents in channels due to the removal of invasive cordgrass.	A	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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)						Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Amphibious vehicle	Boat	Aerial			
GEO-6: Increased depth and turbulence of tidewaters impounded in salt marsh pans.	A	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	A	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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)						Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Amphibious vehicle	Boat	Aerial			
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	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.	A	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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)						Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Amphibious vehicle	Boat	Aerial			
BIO-5.1: Effects on California clapper rail.	A	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 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	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	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).	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	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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)						Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Amphibious vehicle	Boat	Aerial			
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	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)	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 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.	A	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

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		Back-pack	Truck	Amphibious vehicle	Boat	Aerial			
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	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.	A							LTS/NLTAE – Potential impacts mitigated to less than significant per EIS/R Impact/Mitigation HS-1.	None
HS-2: Worker health effects from herbicide application.	A	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	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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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)						Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Amphibious vehicle	Boat	Aerial			
HS-4: Health effects to workers or the public from accidents associated with treatment.	A	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.	A	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 between herbicide use and sensitive receptors	A	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	A							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 proposed	None

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)						Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Amphibious vehicle	Boat	Aerial			
CUM-1- Effects of wetland restoration projects on spread of non-native cordgrass	A	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	A			CUM-2				NA/NE – No Mosquito Abatement Districts working on this site	None
CM-7- Post-treatment invasion by invasive species	A	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

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

SITE-SPECIFIC PROJECT MITIGATION

Site Name: Cooley Landing, San Mateo County

TSN: ISP-2004-16

Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Am- phibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								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)	X	X	X	X	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	X	X	X	During treatment		
	Implement spill and containment plan provided by contractor and approved by WRA (WQ-2;CM-17)	X	X	X	X	X	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).	X	X	X	X	X	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)	X	X	X	X	X	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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Am- phibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field Supervisor
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	X	X	X	X	X	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)	X	X	X	X	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)	X	X	X	X	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	X	X	X	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	X	X	X	X	X	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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Am-phibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								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 protocols (CM-18)	X	X	X	X	X	Pre-treatment		
	Provide CLRA Field biologist supervision. (BIO-5.1)	X	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)	X	X	X	X	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	X	X	X	X	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)	X	X	X	X	X	During treatment		
	Avoid spraying or removing Grindelia plants in the marsh	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Am-phibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								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.	X	X	X	X	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)	X	X	X	X	X	Pre-treatment		
	Report any CALT and WSPL activity immediately to on-site field biologist and in post-treatment report (BIO-5.4)	X	X	X	X	X	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 operations. (BIO-5.5)					X	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	X	X	X	X	During treatment		
	Avoid use of alyphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	X	X	X	X	X	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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Am- phibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field Supervisor
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)	X	X	X	X	X	During treatment		
	Avoid use of alylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse effects on estuarine fish. (BIO-6.4)	X	X	X	X	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)	X	X	X	X	X	During treatment		
	Limit traffic speeds on any dirt access roads to 15 miles per hour. (AQ-1)	X	X	X	X	X	During treatment		
AQ-3: Herbicide effects on air quality	Implement ISP Drift Management plan for aerial applications of herbicide (AQ-3;CM-3,4)					X	During treatment		
N-1: Disturbance of sensitive receptors	Comply with local noise ordinances (N-1)	X	X	X	X	X	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	X	X	X	X	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).

Impact*	Applicable Mitigation & Conservation Measures (source**)	Back-pack	Truck	Am- phibious Vehicle	Boat	Aerial	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field Supervisor
HS-3: Health effects to the public from herbicide application.	Minimize drift according to drift management plan provided by contractor and approved by WRA. (HS-3;CM-3,4)	X	X	X	X	X	During treatment		
	Post appropriate signage within 24 hours of a treatment (HS-3;CM-3)	X	X	X	X	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;CM-3)	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 Site Safety and Spill Prevention plan on site. (HS-4)	X	X	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	X	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	X	X	X	X	Pre-treatment and during treatment		

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<i>Impact*</i>	<i>Applicable Mitigation & Conservation Measures (source**)</i>	<i>Back-pack</i>	<i>Truck</i>	<i>Am- phibious Vehicle</i>	<i>Boat</i>	<i>Aerial</i>	<i>Implementation Timing</i>	<i>Verification Signatures</i>	
								<i>Implementing Entity</i>	<i>ISP Field Supervisor</i>
CM-7: Invasive species	Monitor cleared patches for recruitment of invasive plant species including perennial pepperweed until native vegetation has become dominant (CM-7)	X	X	X	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Alameda and San Leandro Bay, Alameda County

TSN: ISP-2005-17

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Amph	Back-pack		
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	All sub-areas except 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.	A	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.	A	All Sub-Areas						NA/NE – No mitigation required for work near or in salt marsh pans.	None

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Amph	Back-pack		
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	A	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.	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 within this site.	None

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Amph	Back-pack		
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.	A	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	All sub-areas except 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 modified by USFWS BO	BIO-5.1 as modified by USFWS BO	BIO-5.1 as modified by USFWS BO	BIO-5.1 as modified by USFWS BO	BIO-5.1 as modified by USFWS BO	LTS/NLTAE – Potential impacts mitigated to less than significant. Site conditions consistent with those anticipated in the PEIS/R. 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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Amph	Back-pack		
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.	A	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.	A	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).	A	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).	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.	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Amph	Back-pack		
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)	BIO-6.4(b) - R-11 will not be used adjacent to channel 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. Salinities of areas slated for treatment are too high.	None
BIO-8: Effects of regional invasive cordgrass eradication on mosquito production.	A	All Sub-areas except 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.	A	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	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Amph	Back-pack		
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.	A	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.	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	A	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact of Treatment Methods at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Amph	Back-pack		
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-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	A	All Sub-areas except 17f & 17g				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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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Alameda and San Leandro Bay, Alameda County

TSN: ISP-2005-17

Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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)	All sub-areas except 17f & 17g				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	X	X	X	X	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	X	X	X	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub-areas	X	X	X	X	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)	All sub-areas	X	X	X	X	X	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)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X	X	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	Implementation Timing	Verification Signatures	
									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	X	X	X	X	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	X	X	X	X	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	X	X	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		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)	All sub-areas except 17f & 17g				X		During treatment		
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1; CM-15)	All sub-areas except 17f & 17g				X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All Sub-Areas except 17f	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									Implementing Entity	ISP Field Supervisor
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas except 17f & 17g				X		Pre- and 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)	17a, 17b, 17c, 17d, 17e, 17g, 17h, 17j, 17k, 17l, 17m	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 17c, 17d, 17h, 17k, 17l & 17j		X				During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	17a, 17b, 17c, 17d, 17e, 17g, 17h, 17j, 17k, 17l, 17m	X	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)	17a, 17b, 17c, 17d, 17e, 17g, 17h, 17j, 17k, 17l, 17m	X	X	X	X	X	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	X	X	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	Implementation Timing	Verification Signatures	
									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	X	X	X	X	X	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 except 17f	X		X	X	X	During and post-treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All Sub-Areas except 17f	X	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 (BIO-5.3)	All Sub-Areas except 17f	X	X	X	X	X	During treatment		
BIO-5.4: Effects on California least terns and western snowy plovers.	Survey levees for terns and plovers prior to treatment (BIO-5.4)	17a, 17b, 17c, 17h, 17j	X	X	X	X	X	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		X				Pre-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	Sub-areas 17c, 17d, 17h, 17k, 17l & 17j		X				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	X	X	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	Implementation Timing	Verification Signatures	
									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	X	X	X	X	X	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub-areas	X	X	X	X	X	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	X	X	X	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)	All Sub-areas except 17f & 17g				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 except 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		X				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub-areas	X	X	X	X	X	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	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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	X	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	X	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	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	X	X	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)	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 pre-historic 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		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									Implementing Entity	ISP Field Supervisor
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 except 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	X	X	X	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

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

TSN: ISP-2004-18

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	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.	A	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.	A	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	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

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

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
WQ-3: Degradation of water quality due to fuel or petroleum spills	A	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.	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 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	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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 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.	A	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.	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.	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).	A	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).	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.	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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 adjacent to channel to minimize any potential adverse effects 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.	A	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.	A	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.	A	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	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
HS-2: Worker health effects from herbicide application.	A	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.	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	A	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.	A	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 <i>Spartina</i> proposed within this Complex during the proposed treatment schedule	None
CUM-2- Cumulative damage to marsh plain vegetation	A	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

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SITE-SPECIFIC PROJECT MITIGATION

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

TSN: ISP-2005-18

Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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				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	X	X	X	X	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	X	X	X	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub-areas	X	X	X	X	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)	All sub-areas	X	X	X	X	X	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)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	All sub-areas	X	X	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	Implementation Timing	Verification Signatures	
									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	X	X	X	X	X	During treatment		
	Occupy treatment area soon after high tide, before mud-flats 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	X	X	X	During treatment		
	Helicopters will not be operated within 1000 feet of active major foraging or roosting sites (BIO-3)	18d, 18e, 18f, 18g			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)	18a, 18b, 18d, 18e, 18f, 18g				X		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				X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All Sub-Areas	X	X	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	18a, 18b, 18d, 18e, 18f, 18g				X		Pre- and 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)	All Sub-areas	X		X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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		X				During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All Sub-areas	X	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)	All Sub-areas	X	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	X	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	X	X	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	X		X	X	X	During and post-treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All Sub-Areas	X	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 (BIO-5.3)	All Sub-Areas	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									Implementing Entity	ISP Field 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		X				Pre-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	18d, 18e, 18f, 18g		X				Pre-treatment and 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).	All Sub-Areas	X	X	X	X	X	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub-areas	X	X	X	X	X	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub-areas	X	X	X	X	X	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	X	X	X	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)	18a, 18b, 18d, 18e, 18f, 18g, 18h				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)	18a, 18b, 18d, 18e, 18f, 18g, 18h				X		Post-treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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	X	X	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)	18d, 18e, 18f, 18g		X				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub-areas	X	X	X	X	X	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	X	X	X	X	X	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	X	X	X	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	X	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	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	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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	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	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				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	X	X	X	X	X	Post-treatment		

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Mitigations are from corresponding numbered mitigation in the same document,
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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: West San Francisco Bay, San Mateo County

TSN: ISP-2004-19

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	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.	A	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.	A	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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SU - Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	A	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.	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
BIO-1.3: Effects on tidal marsh plant communities affected by Chilean cordgrass.	A	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 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.	A	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	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	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).	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.	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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 adjacent to channel to minimize any potential adverse effects 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.	A	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.	A	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.	A	19p		AQ-3				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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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.	A	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.	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	A	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.	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 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	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

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SITE-SPECIFIC PROJECT MITIGATION

Site Name: West San Francisco Bay, San Mateo County

TSN: ISP-2005-19

Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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)	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	X	X	X	X	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	X	X	X	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub-areas	X	X	X	X	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)	All sub-areas	X	X	X	X		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)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	All sub-areas	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									Implementing 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)	19k	X			X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3,4)	19k	X			X	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	X	X	X	X	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	X	X	X	During treatment		
	Helicopters will not be operated within 1000 feet of active major foraging or roosting sites (BIO-3)	19p		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)	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				X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	19a, 19i, 19l, 19n, 19p	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									Implementing Entity	ISP Field Supervisor
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas				X	X	Pre- and 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)	All Sub-areas	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)	19p		X				During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub-areas	X	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)	All sub-areas	X	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	X	X	X	X	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		X	X	X	During and post-treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All sub-areas	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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 (BIO-5.3)	All sub-areas	X	X	X	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)	19p		X				Pre-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	19p		X				Pre-treatment and 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).	All sub-areas	X	X	X	X	X	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub-areas	X	X	X	X	X	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub-areas	X	X	X	X	X	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	X	X	X	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)	19e, 19h, 19i, 19j, 19k, 19l 19n, 19o, 19p, 19q				X		During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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		X				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub-areas	X	X	X	X	X	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	X	X	X	X	X	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	X	X	X	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	X	X	X	X	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)	All sub-areas	X	X	X	X	X	Pre-treatment and during treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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	X	X	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)	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	X	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)	All sub-areas	X	X	X	X	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	X	X	X	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: San Leandro and Hayward Shoreline, Alameda County

TSN: ISP-2005-20

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	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.	A	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.	A	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

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SU - Significant but unmitigable impact

USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	A	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.	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 within this 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 within site.	None

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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.	A	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	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.	A	20d, 20e, 20f, 20g, 20h, 20l, 20i, 20m, 20n, 20o	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 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.	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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	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).	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.	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 – 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 adjacent to channel to minimize any potential adverse effects 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.	A	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
BIO-9: Effects on tiger beetle species.	NA/NE							LTS/NLTAE without mitigation.	None
AQ-1: Dust emissions.	A	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	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	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.	A	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
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.	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	A	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.	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 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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site) Various herbicide Treatment methods					Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Aerial	Boat	Argo	Back-pack		
CUM-2- Cumulative damage to marsh plain vegetation	A	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

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SITE-SPECIFIC PROJECT MITIGATION

Site Name: San Leandro and Hayward Shoreline, Alameda County

TSN: ISP-2005-20

Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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)	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	X	X	X	X	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	X	X	X	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub-areas	X	X	X	X	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)	All sub-areas	X	X	X	X	X	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)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	All sub-areas	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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	X	X	X	X	X	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	X	X	X	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		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)	Sub-areas 20c-t				X		During treatment		
	Use protective mats or other covering over pickleweed in areas of repeated access (BIO-4.1; CM-15)	Sub-areas 20c-t				X		During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All Sub-Areas	X	X	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	20f, 20h, Sub-areas 20c-t				X		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, 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	Implementation Timing	Verification Signatures	
									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 breeding 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		X				During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	20d, 20e, 20f, 20g, 20h, 20l, 20i, 20m, 20n, 20o	X	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)	20d, 20e, 20f, 20g, 20h, 20l, 20i, 20m, 20n, 20o	X	X	X	X	X	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	X	X	X	X	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	X	X	X	X	During and post-treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All Sub-Areas	X	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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 (BIO-5.3)	All Sub-Areas	X	X	X	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)	Sub-areas, 20b, 20c-h, 20k-t		X				Pre-treatment		
	Ensure 500 foot buffer around nests for any helicopter activity (BIO-5.5)	Sub-areas, 20b, 20c-h, 20k-t		X				Pre-treatment and 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).	All Sub-Areas	X	X	X	X	X	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub-areas	X	X	X	X	X	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub-areas	X	X	X	X	X	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	X	X	X	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)	Sub-areas 20c-t				X		During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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	X	X	X	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	X	X	X	X	X	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	X	X	X	X	X	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	X	X	X	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	X	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	X	X	X	X	X	Pre-treatment and during treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Aerial	Boat	Argo	Back-pack	Implementation Timing	Verification Signatures	
									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	X	X	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)	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	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)	Sub-areas 20c-t				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	X	X	X	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Ideal Marsh, Alameda County

TSN: ISP-2005-21

Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Aerial	Amphibious Vehicle		
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	A				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	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

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*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Aerial	Amphibious Vehicle		
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	A	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.	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 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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Aerial	Amphibious Vehicle		
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.	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.	A	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	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.	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.	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).	A			BIO-5.5		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*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Aerial	Amphibious Vehicle		
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 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	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 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.	A				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.	A	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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Aerial	Amphibious Vehicle		
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	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.	A	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.	A	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.	A	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

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Impact*	Applicable to Site	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
		Back-pack	Truck	Aerial	Amphibious Vehicle		
LU-1: Land use conflicts between herbicide use and sensitive receptors	A	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	A					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-Methods not proposed 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	A				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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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Ideal Marsh, Alameda County

TSN: ISP-2005-21

Impact*	Applicable Mitigation & Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Verification Signatures	
						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)	X	X	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	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	X	X	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	X	X	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)	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Verification Signatures	
						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)	X	X	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	X	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)	X	X	X	During treatment		
	Use protective mats or other covering over pickleweed in areas or repeated access (BIO-4.1; CM-15)	X	X	X	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	X	X	X	Pre- and 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)	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Verification Signatures	
						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 Biologist Supervision (BIO-5.1)	X	X	X	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)	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)	X	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)	X	X	X	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 Biologist Supervision (BIO-5.2)	X	X	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)	X	X	X	Pre-treatment and During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Verification Signatures	
						Implementing Entity	ISP Field Supervisor
	Report any CABR activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.2)	X	X	X	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 report (BIO-5.3)	X	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	X	X	During treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	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 (BIO-5.3)	X	X	X	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	X	X	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	X	X	X	During treatment		
BIO-6.4: Effects on estuarine fish populations of shal-	Minimize spraying near channels (BIO-6.4)	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Verification Signatures	
						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)	X	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)			X	During treatment and post-treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	X	X	X	During treatment		
AQ-3: Herbicide Effects on Air Quality.	Implement ISP herbicide drift management plan for aerial applications of herbicide (AQ-3; CM-3, 4)				During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	X	X	X	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	X	X	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)	X	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	X	X	X	Pre-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*	Backpack	Truck	Amphibious vehicle	Implementation Timing	Verification Signatures	
						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	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	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 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	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)			X	During and 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)	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: Two Points Complex, Contra Costa County

TSN: ISP-2005-22

Impact*	Applicable to Site	Applicable to Sub-area	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Aerial	Digging		
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	A	Sub-areas 22d & 22e				GEO-2	NA/NE- No vehicles proposed 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 proposed	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

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

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A - Applicable

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USFWS BO - US Fish & Wildlife Service Biological Opinion

Impact*	Applicable to Site	Applicable to Sub-area	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Aerial	Digging		
WQ-1: Degradation of water quality due to herbicide application	A	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	A	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 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

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Impact*	Applicable to Site	Applicable to Sub-area	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Aerial	Digging		
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
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.	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 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

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

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Impact*	Applicable to Site	Applicable to Sub-area	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Aerial	Digging		
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.	A	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.	A	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*	Applicable to Site	Applicable to Sub-area	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Aerial	Digging		
BIO-6.1: Effects on anadromous salmonids (winter-run and spring-run Chinook salmon, steelhead).	A	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 adverse effects 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 proposed for use in marsh within this site.	None

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Impact*	Applicable to Site	Applicable to Sub-area	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Aerial	Digging		
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.	A	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						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 mechanical treatments proposed for this site.	None

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Impact*	Applicable to Site	Applicable to Sub-area	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Aerial	Digging		
HS-2: Worker health effects from herbicide application.	A	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 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 between herbicide use and sensitive receptors	A	Sub-areas 22a-d, 22f	LU-1	LU-1	LU-1		LTS/NLTAE-Limited to less than significant by HS,N & AQ mitigations	None

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

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Impact*	Applicable to Site	Applicable to Sub-area	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Truck	Aerial	Digging		
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-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 proposed 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 proposed for use in marsh within this site.	None

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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Two Points Complex, Contra Costa County

TSN: ISP-2005-22

Impact*	Applicable Mitigation & Conservation Measures*	Applicable sub-areas	Backpack	Truck	Aerial	Digging	Implementation Timing	Verification Signatures	
								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 22a-d, 22f	X	X	X		During treatment		
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	X	X	X		During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	Sub-areas 22a-d, 22f	X	X	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)	Sub-areas 22a-d, 22f	X	X	X		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)	Sub-areas 22a-d, 22f	X	X			During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	Sub-areas 22a-d, 22f	X	X	X		During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	Sub-areas 22a-d, 22f	X	X	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)	Sub-areas 22a-d, 22f	X	X	X		During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	Sub-areas 22a-d, 22f	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*	Applicable sub-areas	Backpack	Truck	Aerial	Digging	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field Supervisor
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	Sub-areas 22a-d, 22f	X	X	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)	All sub-areas	X	X	X	X	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	X	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas	X	X	X	X	Pre- and 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)	All sub-areas	X	X	X	X	During treatment		
	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	X	X	X	X	Pre-treatment		
	Provide CLRA Field Biologist Supervision (BIO-5.1)	All sub-areas	X	X	X	X	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	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)

Impact*	Applicable Mitigation & Conservation Measures*	Applicable sub-areas	Backpack	Truck	Aerial	Digging	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field Supervisor
	Report any CLRA activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.1)	All sub-areas	X	X	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)	All sub-areas	X	X	X	X	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)	All sub-areas	X	X	X	X	Pre-treatment		
	Provide CABR Field Biologist Supervision (BIO-5.2)	All sub-areas	X	X	X	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	X	X	X	X	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	X	X	X	X	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 report (BIO-5.3)	All sub-areas	X	X	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)	All sub-areas	X	X	X	X	During treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All sub-areas	X	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*	Applicable sub-areas	Backpack	Truck	Aerial	Digging	Implementation Timing	Verification Signatures	
								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 (BIO-5.3)	All sub-areas	X	X	X	X	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-areas 22a-d, 22f	X	X	X		During treatment		
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	Sub-areas 22a-d, 22f	X	X	X		During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near channels (BIO-6.4)	Sub-areas 22a-d, 22f	X	X	X		During treatment		
	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	X	X	X		During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)		X	X	X	X	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Sub-areas 22a-d, 22f	X	X	X		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 22a-d, 22f	X	X	X		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)	Sub-areas 22a-d, 22f	X	X	X		During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	Sub-areas 22a-d, 22f	X	X	X		Pre-treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable sub-areas	Backpack	Truck	Aerial	Digging	Implementation Timing	Verification Signatures	
								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 22a-d, 22f	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	X	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)	All Sub-areas	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	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	X	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, CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Marin Outliers, Marin County

TSN: ISP-2004-23

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Back-pack	Boat	Digging		
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.	A	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Back-pack	Boat	Digging		
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	A	All sub-areas except 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 except 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 except 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 Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Back-pack	Boat	Digging		
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
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.	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	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 harbor seal colonies of San Francisco Bay.	NA/NE						LTS/NLTAE – No sub-areas within site contain harbor seal colonies.	None

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Back-pack	Boat	Digging		
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	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.	A	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 sub-areas 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 Sacramento splittail range.	None

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Back-pack	Boat	Digging		
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 sub-merged intertidal mudflats and channels.	A	All sub-areas except 23a & 23l	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 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. Salinities 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.	A	Sub-Area 23b	X				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*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Back-pack	Boat	Digging		
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.	A	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.	A	All sub-areas except 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.	A	All sub-areas except 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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Back-pack	Boat	Digging		
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	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	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	A	All sub-areas except 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 proposed	None

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Truck	Back-pack	Boat	Digging		
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
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 Signatures	
								Implementing Entity	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				X			
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	X	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	X	X	X		During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-17)	All sub-areas	X	X	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)	All sub-areas	X	X	X		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)	All sub-areas	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area. (BIO-1.2; CM-3, 4)	All sub-areas	X	X	XX		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	Verification Signatures	
								Implementing 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	X	X	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	X	X	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge. (BIO-3)	All sub-areas	X	X	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift. (BIO-3)	All sub-areas	X	X	X	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)	Sub-Areas 23b, 23d, 23e, 23g, 23j	X	X		X	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	X	X		X	During treatment		
	Assume presence of SMHM on all suitable sites (CM-14)	Sub-Areas 23b, 23d, 23e, 23g, 23j	X	X		X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM-16).	Sub-Areas 23b, 23d, 23e, 23g, 23j	X	X		X	Pre- and during treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Backpack	Boat	Digging	Implementation Timing	Verification Signatures	
								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 breeding season (BIO-5.1; CM-18)	Sub-Areas 23e, 23j	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 23e, 23j	X	X		X	During treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	Sub-Areas 23e, 23j	X	X		X	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	X	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	X	X		X	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	X		X		During and post-treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	Sub-Area 23e	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 (BIO-5.3)	Sub-Area 23e	X		X		During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Backpack	Boat	Digging	Implementation Timing	Verification Signatures	
								Implementing Entity	ISP Field Supervisor
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).	All sub-areas	X	X	X	X	During treatment		
	Avoid use of alkylphenol ethoxylate surfactants Dec 1 thru April 1 to avoid steelhead spawning. (BIO-6.1)	All sub-areas	X	X	X	X	During treatment		
BIO-6.4: Effects on estuarine fish populations of shallow submerged intertidal mudflats and channels.	Minimize spraying near intertidal mudflats and channels (BIO-6.4)	All sub-areas	X	X	X		During treatment		
	Avoid use of alkylphenol ethoxylate surfactants adjacent to channel to minimize any potential adverse effects 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	X				During treatment		
N-1: Disturbance of sensitive receptors	Comply with all local noise ordinances (N-1)	All sub-areas	X	X	X		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				X			
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	X		During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Sub Area Included	Truck	Backpack	Boat	Digging	Implementation Timing	Verification Signatures	
								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	X		During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	X	X	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)	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, 17)	All sub-areas	X	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)	All sub-areas	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		

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<i>Impact*</i>	<i>Applicable Mitigation & Conservation Measures*</i>	<i>Sub Area Included</i>	<i>Truck</i>	<i>Backpack</i>	<i>Boat</i>	<i>Digging</i>	<i>Implementation Timing</i>	<i>Verification Signatures</i>	
								<i>Implementing Entity</i>	<i>ISP Field Supervisor</i>
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	X	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: Petaluma River Complex, Sonoma County

TSN: ISP-2007-24

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle		
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.	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle		
WQ-1: Degradation of Water Quality due to herbicide application	A	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	A	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	A	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

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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle		
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 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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle		
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	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	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	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	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	All Sub-Areas					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*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle		
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.	A	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 – 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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle		
AQ-1: Dust Emissions.	A	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	A	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle		
HS-3: Health Effects to the Public from Herbicide Application.	A	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 associated 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.	A	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	A	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 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				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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)				Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat	Truck	Amphibious Vehicle		
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	A	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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SITE-SPECIFIC PROJECT MITIGATION

Site Name: Petaluma River Complex, Sonoma County

TSN: ISP-2007-24

Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Implementation Timing	Verification Signatures	
								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	X	X	X	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	X	X	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-3, 17)	All sub-areas	X	X	X	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)	All sub-areas	X	X	X	X	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)	All Sub-areas	X	X	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X	X	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	All sub-areas	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Implementation Timing	Verification Signatures	
								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	X	X	X	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All sub-areas	X	X	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All sub-areas	X	X	X	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)	All sub-areas	X	X	X	X	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	X	X	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas	X	X	X	X	Pre- and 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)	All sub-areas	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Implementation Timing	Verification Signatures	
								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)	All sub-areas					Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub-areas	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)	All sub-areas	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	X	X	X	X	During and post-treatment		
BIO-5.2: Effects on California Black Rail	Conform with BIO-5.1	All sub-areas	X	X	X	X	Pre-, 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)	All sub-areas	X	X	X	X	During and post-treatment		
	Avoid spraying or removing <i>Grindelia</i> plants in the marsh (BIO-5.3)	All sub-areas	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 (BIO-5.3)	All sub-areas	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Implementation Timing	Verification Signatures	
								Implementing 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	X	X	X	X	Pre-treatment		
	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.4)	All sub-areas	X	X	X	X	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	X	X	X	X	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	X	X	X	X	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	X	X	X	X	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	X	X	X	X	During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	All sub-areas	X	X	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Backpack	Boat	Truck	Amphibious Vehicle	Implementation Timing	Verification Signatures	
								Implementing 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	X	X	X	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Sub-Area 24a	X	X	X	X	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	X	X	X	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	X	X	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	X	X	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	X	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)	All sub-areas	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 pre-historic 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	Pre-treatment and during treatment		

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<i>Impact*</i>	<i>Applicable Mitigation & Conservation Measures*</i>	<i>Applicable Sub-area</i>	<i>Backpack</i>	<i>Boat</i>	<i>Truck</i>	<i>Amphibious Vehicle</i>	<i>Implementation Timing</i>	<i>Verification Signatures</i>	
								<i>Implementing Entity</i>	<i>ISP Field Supervisor</i>
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	X	X	X	Post-treatment		

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 CM - Conservation Measures as defined by USFWS Biological Opinions (general and site-specific)

SITE-SPECIFIC PROJECT MITIGATION

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

TSN: ISP-2008-26

Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Back-pack	Boat	Implementation Timing	Verification Signatures	
						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	X	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	X	X	During treatment		
	Implement spill and containment plan provided or approved by ISP (WQ-2; CM-3, 17)	All sub-areas	X	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)	All sub-areas	X	X	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)	All Sub-areas	X	X	During treatment		
	Avoid staging in high, dense vegetation such as gumplant or pickleweed (FWS GL)	All sub-areas	X	X	During treatment		
	Avoid herbicide application to non-target vegetation adjacent to treatment area (BIO-1.2; CM-3, 4)	All sub-areas	X	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	X	During treatment		
	Occupy treatment area soon after high tide, before mudflats emerge (BIO-3)	All sub-areas	X	X	During treatment		
	Haze shorebirds to minimize potential direct contact with herbicide drift (BIO-3)	All sub-areas	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Back-pack	Boat	Implementation Timing	Verification Signatures	
						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)	All sub-areas	X	X	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	During treatment		
	Assume presence of SMHM on all suitable sites (CM 14)	All sub-areas	X	X	During treatment		
	Whenever possible, schedule work after mass mortality events caused by extreme high tides (CM 16).	All sub-areas	X	X	Pre- and 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)	All sub-areas	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)	All sub-areas			Pre-treatment		
	Provide CLRA Field biologist supervision (BIO-5.1)	All sub-areas	X	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	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	X	X	During and post-treatment		
BIO-5.2: Effects on California Black Rail	Conform with BIO-5.1	All sub-areas	X	X	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	X	X	During and post-treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Back-pack	Boat	Implementation Timing	Verification Signatures	
						Implementing 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	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 (BIO-5.3)	All sub-areas	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)	All sub-areas	X	X	Pre-treatment		
	Report any CALT and WSPL activity immediately to ISP Field Supervisor and in post-treatment report (BIO-5.4)	All sub-areas	X	X	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	X	X	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	X	X	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	X	X	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	X	X	During treatment		
AQ-1: Dust emissions	Limit speeds on dirt roads to 15 miles per hour (AQ-1)	All sub-areas	X	X	During treatment		

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Impact*	Applicable Mitigation & Conservation Measures*	Applicable Sub-area	Back-pack	Boat	Implementation Timing	Verification Signatures	
						Implementing 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	X	During treatment		
N-1: Disturbance of Sensitive Receptors	Comply with all local noise ordinances (N-1)	Sub-Area 24a	X	X	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	X	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	X	X	During treatment		
	Post appropriate signage (see attached signage requirements) a minimum of 24 hours pre-treatment (HS-3)	All sub-areas	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	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)	All sub-areas	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			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	X	X	Post-treatment		

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

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

TSN: ISP-2008-26

Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat		
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.	A	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	A	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

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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat		
WQ-2: Degradation of Water Quality due to herbicide spills	A	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.	A	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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			Backpack	Boat		
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	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*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat		
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	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	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.	A	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.	A	All Sub-Areas	BIO-6.4 – minimize spraying	BIO-6.4 – minimize spraying	LTS/NLTAE with additional mitigation BIO-6.4(b) (Note: no mowing proposed except 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 effects 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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			Backpack	Boat		
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	A	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.	A	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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Impact*	Applicable to Site	Sub-Area Included	Applicable Mitigations* (by Treatment Method used at Site)		Comments/Analysis of Residual Impact at Site	Additional Mitigation Required
			Backpack	Boat		
HS-3: Health Effects to the Public from Herbicide Application.	A	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.	A	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.	A	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	A	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 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			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	A	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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<i>Impact*</i>	<i>Applicable to Site</i>	<i>Sub-Area Included</i>	<i>Applicable Mitigations* (by Treatment Method used at Site)</i>		<i>Comments/Analysis of Residual Impact at Site</i>	<i>Additional Mitigation Required</i>
			<i>Backpack</i>	<i>Boat</i>		
CUM-2: Cumulative damage to marsh plain vegetation	NA/NE				NA/NE – Without mitigation	None

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