Exhibit 6. CEQA Checklist for the Marsh Restoration Project Component

CEQA Checklist for Spartina Removal at City of Arcata Marshes
2015

Introduction
This document analyzes the environmental impact of invasive Spartina removal from the City of Arcata's marshes)the Project), using the analysis provided in the Final Programmatic Environmental Impact Report (FEIR) for the Humboldt Bay Regional Spartina Eradication Plan as a basis. The California State Coastal Conservancy (Conservancy) has prepared this checklist for the Spartina removal activities proposed at the City of Arcata's marshes. This checklist identifies the Project activities, assesses the Project's potential impacts, and identifies the required mitigations described in the FEIR. This checklist also evaluates whether the proposed Project will involve any additional impacts or more severe impacts than were identified by the FEIR and if any additional mitigation measures are needed to avoid or reduce those impacts.

Site Description

Spartina occurs in Arcata's marshes in three areas: Gannon Slough/Arcata Baylands/Jacoby Creek Estuary, Arcata Marsh/Butcher Slough, and McDaniel Slough. Mapping conducted in 2010 and 2011 delineated infested marshes owned by the City in these areas with a total area of approximately 32 acres. Relative cover of Spartina in these marshes varies from low density to high density, as shown in Table 1.

Spartina Cover	1-25%	26-60%	61-100%	Unknown
Acreage	12.9	4.7	12.6	1.8

Gannon Slough/Arcata Baylands/Jacoby Creek Estuary

Spartina occurs in a ~10 ft band along Gannon Slough on the east side of Hwy 101, and in a small marsh area between Gannon Slough and the highway. Spartina is primarily low density (<25% cover) in this area and occupies approximately 1.2 acres. Native salt and brackish marsh plants are the same for all sites and are listed below. Riparian woodland, freshwater wetlands, pasture, and the highway are located adjacent to the site.
Spartina occurs on the south side of South G St just north of the Humboldt Bay National Wildlife Refuge and east of the oxidation ponds. 14.5 acres of infested marsh is mapped in this area, about half of it at >60% cover and half at <25% cover. Some Spartina occurs on the top and front of the Bayside of the oxidation pond levee.

Access: Easy access, primarily via Hwy 101 but also possible via South G St and the WTP

Wildlife: Similar at all three sites. See below.

Arcata Marsh

Spartina occurs on the perimeter of Klopp Lake and No Name Pond, as well as along Butcher Slough around the Log Pond. Most of these occurrences are narrow and linear, with 3 acres of infested marsh mapped in this area. 1.2 acres was mapped as having 26-60% cover, while 1.8 acres was mapped as having unknown cover.

Riparian woodland, treatment wetlands, and South G St are located near the site.

Access: Via the WTP, South I St and trails

McDaniel Slough

Spartina occurs west of South I St and east of McDaniel Slough. 12.3 acres of infested marsh was mapped in this area, 5.1 ac at >60% cover, 3.5 acres at 26-60% cover, and 3.7 acres at <25% cover. Infested marsh is present on adjacent property owned by CDFW. Some (~3 ac) of the mapped Spartina at this site has died due to inundation resulting from the McDaniel Slough Restoration. New areas within the McDaniel Slough Restoration Project Boundary are now suitable for Spartina and should be monitored and treated as necessary to prevent Spartina establishment.

Riparian woodland, pasture, treatment wetlands, and South I St are located near the site.

Access: Via South I St, levee road, and trails

Plant species: Native salt and brackish marsh plants at all three sites include seaside arrow-grass (*Triglochin maritimum*), salt marsh dodder (*Cuscuta salina*), tufted hairgrass (*Deschampsia cespitosa*), marsh jaumea (*Jaumea carnosa*), Humboldt Bayowl's-clover (*Castilleja ambigua* ssp. *humboldtiensis*), Slender pickleweed (*Salicornia pacifica*), gumplant (*Grindelia stricta*), and spear saltbush (*Atriplex patula*). No habitat is present at these sites for Humboldt Bay wallflower or beach layia.

Wildlife species at all three sites: Steelhead, coho, and Chinook salmon spawn upstream in Jacoby Creek, upstream of Gannon Slough. Coho and steelhead spawn in Janes Creek, upstream of McDaniel Slough. Butcher Slough supports coastal cutthroat trout, but does not support steelhead, coho, or Chinook. Tidewater goby has been documented in Gannon Slough and McDaniel Slough, but has not been documented in Butcher Slough. Riparian woodland supports wood ducks. Pasture supports ACG, and provides foraging for raptors. Six species of herons and egrets are common to the site vicinity, including large numbers of Great Blue Herons and Great Egrets. In addition many species of Neotropical migrants and other passerines use the Jacoby Creek riparian area adjacent to the marsh area. The adjacent riparian habitat also supports raptors, wood ducks, woodpeckers, herons, egrets, fox, deer, and other species.

Methods: Mechanical methods will be used to remove Spartina, in keeping with Arcata's policy of avoiding herbicide use whenever possible. The following primary removal methods are planned:

<u>Gannon Slough and Arcata Baylands</u>- Use handheld mechanical tools (primarily brushcutters) to treat this low density infestation along the channel.

<u>Jacoby Creek Estuary</u>- Spot treatment with handheld brushcutters would be suitable for low density portions of this area. Medium and high density areas would be suited for rototilling treatment by the Marshmaster. Manual removal would be employed on the riprapped levee along the oxidation pond.

Arcata Marsh- Handheld brushcutters or rototillers would be used in these areas, which are small and low or medium density.

McDaniel Slough- The Marshmaster would be used on the large infested marsh on the Bayside of the levees, if it is available. If the Marshmaster is not available, handheld brushcutters will be utilized. Access is available from South I St. New tidal marsh opened up by the restoration project will be monitored and new Spartina growth will be treated with propane torches and handheld brushcutters.

Resprout treatments will be conducted with brushcutters. Seedlings will be treated with propane torches. If seedlings are not treated with propane torches within the narrow window in which this method is effective, they will be treated with handheld brushcutters.

Significant populations of invasive Spartina will still be present in North Bay after Spartina is removed from these sites, so it is anticipated that maintenance treatments will be required until propagule sources are treated. Populations of native salt marsh plants are also present nearby (e.g. Jacoby Creek unit of Humboldt Bay National Wildlife Refuge), so it is not anticipated that active planting of native marsh vegetation will be necessary.

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SITE-SPECIFIC PROJECT IMPACT EVALUATION

Site Name: City of Arcata Tidal Marshes, Humboldt County

*Impact**	*Applicable to site*	*Applicable Mitigations* (by Treatment Method used at site)*			*Comments/Analysis of Residual Impact at site*	*Additional Mitigation Required*
		Herbicide	*Manual*	*Mechanical*		
AV-1: Potentially Significant Effect on Scenic Vistas	A	NA	***MITIGATION AV-1: Post educational signs***.		Arcata marshes receive significant public use and signage will reduce negative reactions to temporary adverse aesthetic impact	None
AV-2: Potentially Significant Effect on Visual Continuity	A	NA	***MITIGATION AV-1: Post educational signs***.		As above	None
AV-3: Potentially Significant Effect due to Vegetation Clearing	A	NA	***MITIGATION AV-1: Post educational signs***.		As above	None
AQ-3: Herbicide Effects on Air Quality	NA	NA	NA	NA	NA- No herbicide use proposed	None

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BIO-1: Effects on Special Status Fish Species and their Critical Habitat and Essential Fish Habitat from Mechanical *Spartina* Removal Methods	A	NA	***MITIGATION BIO-1: Minimize effects on special status fish***.		Potential fish habitat is present. Given the low density of Spartina along the channel, the following BMPs are deemed to be adequate to reduce turbidity impacts to less than significant: 1) Timing - work at low tide. 2) When brushcutting, working from outer edge of Spartina and eject sediment away from the channel. 3) Cover treated floodplain with mulched spartina (equivalent to hydromulching.) 4) Hand excavate from top of bank rather than standing in channel. A minimal amount of sediment topples onto the mudflat and is later mobilized by high tides as opposed to sediment cleaving off into open water channels.	None
BIO-2: Effects on Special Status Birds	A	NA	NA		Habitat is not suitable for special status bird nesting in removal areas.	None
BIO-3: Direct and Indirect Effects to Special Status Plant Species from Mechanical or Chemical *Spartina* Removal Methods	A	NA	***MITIGATION BIO-4: Minimize Impacts to Special Status Plant Species.***		No habitat for beach layia and Humboldt Bay wallflower present. No western sand spurrey present. Lyngbye's sedge has been identified, and will be flagged and avoided.	None
BIO-4: Effects to Animal Species from Chemical *Spartina* Removal Methods	NA	NA	NA	NA	Chemical methods will not be used in Arcata.	None

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BIO-6: Potential Impacts of Mechanical and Chemical Methods to Eelgrass	NA	NA	NA	NA	No eelgrass habitat (mudflats and channels) adjacent to Spartina in this area.	None
BIO-7: Potential Effects on Marine Mammals	NA	NA	NA	NA	No marine mammals within 200 ft of Arcata marsh removal areas.	None
Bio-8: Direct Impacts to Nesting Northern Harrier and Short-Eared Owl	A	NA	***MITIGATION BIO-3: Avoid Northern Harrier and Short-Eared Owl Nests.***		Northern harriers and short-eared owls may nest from March-August adjacent to removal areas. Survey will be conducted and crews will buffer any nesting areas by 300 ft.	None
CR-1: Mechanical Treatments having Potentially Significant Impacts on Archeological Resources	NA	NA	NA	NA	Surveys have indicated that cultural resources are very unlikely to be present in the tidal marsh areas where Spartina removal will occur. Areas of concern are limited to freshwater wetlands, where Spartina is not present.	None
CR-2: Mechanical Treatments having Potentially Significant Impacts on Human Remains	NA	NA	NA	NA	See above.	None
GS-1: Potentially Significant Loss of Soil from Mechanical Methods	NA	NA	NA	NA	Removal areas are not exposed to direct wave action, with the exception of rocked levees where soil is not exposed. Erosion potential is low.	None
HHM-1: Safety Concerns for Workers	NA	NA	***MITIGATION HHM-1: Avoid Worker Injuries Associated with Manual and Mechanical Treatment.***		Safety plan will be followed and workers will receive training and utilize protective gear appropriate to the removal techniques employed.	None
HHM-2: Accidental Spills	A	NA	***MITIGATION HHM-2: Avoid Accidents Associated with Release of Chemicals and Motor Fuel.***		Crews will have spill containment and cleanup kits immediately accessible.	None

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HHM-4: Existing Hazardous Waste Sites Near Potential *Spartina* Control Sites	NA	NA	NA	NA	No hazardous waste at removal sites in this area.	None
WQ-1: Degradation of Water Quality Due to Herbicide Application	NA	NA	NA	NA	Chemical treatment methods will not be used at this site.	None
WQ-2: Herbicide Spills	NA	NA	NA	NA	Chemical treatment methods will not be used at this site.	None
WQ-3: Fuel or Petroleum Spills	A	NA	***MITIGATION HHM-2: Avoid Accidents Associated with Release of Chemicals and Motor Fuel.*** ***MITIGATION WQ-3: Minimize Fuel and Petroleum Spill Risks.***		Crews will have spill containment and cleanup kits immediately accessible. Prepare Spill Prevention and Management Plan.	None
WQ-4: Pollutant/Contaminant Remobilization	NA	NA	NA	NA	No hazardous waste or contaminated sediments at removal sites in this area.	None
WQ-5: Potentially Significant Loss of Soil from Mechanical Methods	NA	NA	NA	NA	Removal areas are not exposed to direct wave action, with the exception of rocked levees where soil is not exposed. Erosion potential is low.	None
WQ-6: Erosion/Sediment Control at Staging and Access Areas	NA	NA	***MITIGATION WQ-6: Designate Ingress/Egress Routes.***		LTS – Potential impacts mitigated to less than significant (per EIS/R, Impact/Mitigation WQ-6). Site conditions consistent with those anticipated in the PEIS/R.	None
WQ-7: Decreased Oxygen in Receiving Waters	NA	NA	NA	NA	Sufficient tidal influence and circulation is present in removal areas to greatly reduce the risk of low dissolved oxygen .	None
WQ-8: Placement of Temporary Structures in a FEMA Flood Zone	NA	NA	NA	NA	Covering and flooding will not be used in this area. No structures will be placed in flood zone.	None

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		Herbicide	*Manual*	*Mechanical*		
WQ-9: Alteration of Drainage Patterns due to Placement of Temporary Dikes or Structures to Impound Waters	NA	NA	NA	NA	Covering and flooding will not be used in this area. No structures will be placed in flood zone.	None
LU-1: Herbicide Overuse or Overspray	NA	NA	NA	NA	No chemical treatment methods at this site.	None
LU-2: Public Access	NA	NA	NA	NA	No public access occurs in treatment areas. Access can continue in adjacent areas.	None
N-1: Noise Impacts to Residential Areas	A	NA	***MITIGATIONS N-1, N-2, and N-3.***		Use Relatively Quiet Brushcutters (<90 db), Limit work hours to 8 AM-5PM. Marshmaster will not be used within 800 ft of homes.	None