East Bay Regional Park District

Regional Maintenance Activities Alameda and Contra Costa Counties

ATTACHMENT D

Mitigation Ratios for East Bay Regional Park District Regional Maintenance Activities

ATTACHMENT D MITIGATION RATIOS FOR EBRPD ROUTINE MAINTENANCE ACTIVITIES

ACTIVITY	IMPACT TYPE	MITIGATION	RATIO (LF or Acre basis, as appropriate for the impacted water body)		
Culverts					
Replacement of Existing Culverts (replacement culverts with same length as prior culvert and equal or larger diameter).	Temporary	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees.	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas.		
Constructing new Head & Tail Walls for culverts (may include replacement culvert with same	Temporary and Permanent	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees.	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas.		
length as prior culvert and equal or larger diameter).		Permanent Impacts: Restoration: Restore lentic, lotic or tidal waters Enhancement: removal of nonnative vegetation from lentic, lotic or tidal waters, and successful revegetation with appropriate native species.	Permanent Impacts: 1.5:1 to 2.5:1 for Restoration 4:1 to 7:1 for Enhancement		
Routine Maintenance of Existing Culvert (sediment and debris removal)	Temporary	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas		

ACTIVITY	IMPACT	MITIGATION	RATIO
/(0114111	TYPE		(LF or Acre basis, as appropriate
Installation of	T	Tarana ana malana antar	for the impacted water body)
Installation of	Temporary and	Temporary Impacts: Revegetation of disturbed	Temporary Impacts: 1:1 for restoration of vegetation in
Energy Dissipaters (Rock Riprap	Permanent	surfaces with appropriate native	temporary impact areas.
Armoring at	remanent	seed mixes, shrubs, and/or	temporary impact areas.
Culvert Inlets or		trees.	
Outlets)			
,		Permanent Impacts:	Permanent Impacts:
		Restoration: Restore lentic, lotic	1.5:1 to 2.5:1 for Restoration
		or tidal waters	
		Enhancement: removal of non-	4:1 to 7:1 for Enhancement
		native vegetation from lentic,	
		lotic or tidal waters and	
		successful revegetation with	
D. I.I.		appropriate native species.	
Dredging			
Routine	Temporary	Temporary Impacts:	NA
Maintenance		No mitigation necessary for	
Dredging of silt basins and ponds		dredging of silt basins and ponds that provide habitat for	
basins and ponds		special status species.	
Streamhank sh	oreline and	d Levee Stabilization	
Replacement of	Temporary	No mitigation required for work	NA
existing rip-rap or	Temporary	performed within the prior	IVA
existing shoreline		footprint of bank armoring.	
/levee			
stabilization			
Streambank, sh	oreline and	d Levee Stabilization	
Installation of	Temporary	Temporary Impacts:	Temporary Impacts:
new rip-rap, or	and	Revegetation of disturbed	1:1 for restoration of vegetation in
other non-	Permanent	surfaces with appropriate native	temporary impact areas.
bioengineered		seed mixes, shrubs, and/or	
bank stabilization		trees.	
		Downson out last a state	Downson out I was -t
		Permanent Impacts: Restoration: Restore lentic, lotic	Permanent Impacts: 1.5:1 to 2.5:1 for Restoration
		or tidal waters	1.3.1 to 2.3.1 ioi nestolation
		Enhancement: removal of non-	4:1 to 7:1 for Enhancement
		native vegetation of lentic, lotic	ing to 712 for Enhancement
		or tidal waters and successful	
		revegetation with appropriate	
		native species.	

ACTIVITY	IMPACT	MITIGATION	RATIO
	TYPE		(LF or Acre basis, as appropriate for the impacted water body)
Installation of new rip-rap in combination with bioengineered bank stabilization	Temporary and Permanent	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees.	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas.
		Permanent Impacts: Restoration: Restore lentic, lotic or tidal waters	Permanent Impacts: 1:1 to 2:1 for Restoration
		Enhancement: removal of non- native vegetation of lentic, lotic or tidal waters and successful revegetation with appropriate native species.	2:1 to 4:1 for Enhancement
Installation of bioengineered bank stabilization.	Temporary and Permanent	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees.	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas.
		Permanent Impacts: Restoration: Restore lentic, lotic or tidal waters Enhancement: removal of non-	Permanent Impacts: 0.5:1 for Restoration
		native vegetation of lentic, lotic or tidal waters and successful revegetation with appropriate native species.	2:1 for Enhancement
Rock Ford Cross	sings		
Installation of new armored or natural rock ford crossings	Temporary & Permanent	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees.	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas.
		Permanent Impacts: Restoration: Restore lentic, lotic or tidal waters Enhancement: removal of nonnative vegetation of lentic, lotic or tidal waters and successful revegetation with appropriate native species.	Permanent Impacts: 1.5:1 to 2.5:1 for Restoration 4:1 to 7:1 for Enhancement

ACTIVITY	IMPACT	MITIGATION	RATIO			
	TYPE		(LF or Acre basis, as appropriate for the impacted water body)			
Maintenance of existing armored rock fords	Temporary	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas.			
Clear Span Brid	ges, Spring	boxes and Existing Shorelin	e Facilities			
Maintenance and Installation of Clear span bridges	Temporary	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas. Note: Replacement of a culvert with a clear span bridge may create creek restoration credits.			
Maintenance of spring boxes	Temporary	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas.			
Maintenance of Existing Recreational Shoreline Facilities	Temporary	Temporary Impacts: Revegetation of disturbed vegetated surfaces with appropriate native seed mixes, shrubs, and/or trees	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas, if aquatic or shoreline vegetation was disturbed.			
Material Remov	Material Removal					
Removal of Vessels from Waterbodies	Temporary	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas, if aquatic or shoreline vegetation was disturbed.			
Removal of Debris from Waterbodies (including hazardous man- made structures)	Temporary	Temporary Impacts: Revegetation of disturbed surfaces with appropriate native seed mixes, shrubs, and/or trees	Temporary Impacts: 1:1 for restoration of vegetation in temporary impact areas, if aquatic, shoreline, or riparian vegetation was disturbed.			