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SAIC IN-PROGRSS DRAFT
Summary of Conservation Measures Expected to Contribute Towards Achieving Biological Goals and Objectives

Note to Reviewers: *This handout presents SAIC's assessment of proposed conservation measures that contribute towards achieving each of the draft BDCP biological goals and objectives for covered fish species. Table codes indicate the estimated contribution that each of the conservation measures may have towards achieving the objective.*

Table Codes:

H = the conservation measure is estimated to have a medium to high magnitude of contribution towards achieving the objective.

L = the conservation measure is estimated to have a minimal to low magnitude of contribution towards achieving the objective.

U = level of contribution is unpredictable. These are preventative actions that are intended to keep invasive species that could preclude attainment of biological objectives from establishing in the Planning Area.

Table 1. Conservation Measures that Contribute Towards Achieving Covered Fish Species Goals and Objectives.

Species	Delta smelt		Longfin smelt		Chinook salmon							Steelhead						Sacramento Splittail				Green Sturgeon		White Sturgeon			River Lamprey	Pacific Lamprey
Aquatic Goal[1]	1. Create conditions to support self-sustainable populations		1. Create conditions to support self-sustainable populations		1. Increase survival of juveniles			2. Increase growth of juveniles		3. Increase life history diversity	4. Increase adult migration success	1. Increase survival of juveniles		2. Increase growth of juveniles		3. Increase life history diversity	4. Increase adult migration success	1. Maintain and conserve a self-sustaining population in the Delta				1. Increase migration success	2. Increase spatial distribution of juveniles	1. Increase migration success	2. Increase spatial distribution of juveniles	3. Maintain multiple spawning cohorts	1. Maintain conditions to support self-sustainable populations	1. Maintain conditions to support self-sustainable populations
Aquatic Objective[1] / Conservation Measure	1.1: Increase abundance	1.2: Increase ;population growth rates	1.1: Increase abundance	1.2: Increase population growth rates	1.1: Increase survival of SR Basin salmon	1.2: Increase survival of SJR Basin salmon	1.3: Increase survival of SJR Basin Spring-run salmon	2.1: Increase size of SR Basin salmon	2.2: Increase size of SJR Basin salmon	3.1: Increase survival across temporal distribution		1.1: Increase survival of SR Basin steelhead	1.2: Increase survival of SJR Basin steelhead	2.1: Increase size of SR Basin steelhead	2.2: Increase size of SJR Basin steelhead	3.1: Increase survival across temporal distribution		1.1: Increase abundance	1.2: Maintain distribution	1.3: Increase connectivity w/ Napa/Petaluma river populations	1.4: Maintain multiple spawning cohorts							
HRCM1/2: Floodplain-downstream of Vernalis	L	L	L	L		L	L		L	L					L	L		H	H		L		L		L			
HRCM3: Floodplain-SD	L	L	L	L		L	L		L	L					L	L		H	H		L		L		L			
HRCM4: Tidal marsh-Yolo/Cache	H	H	L	L	L			L		L		L		L		L		H	H				L		L			
HRCM5: Tidal marsh-Cosumnes/Mokelumne	L	L			L	L		L	L	L		L	L	L	L	L		H	H				L		L			
HRCM6: Tidal marsh-West Delta	L	L	L	L	L	L	L	L	L	L		L	L	L	L	L		H	H				L		L			
HRCM7: Tidal marsh-South Delta	L	L				L	L		L	L			L		L	L		L	L				L		L			
HRCM8: Tidal marsh-East Delta	L	L				L	L		L	L			L		L	L		L	L				L		L			
HRCM9: Tidal marsh-Suisun	L	L	L	L	L	L	L	L	L	L		L	L	L	L	L		H	H	H			L		L			
HRCM11/14: Riparian - 5,000 acres in ROA's					L	L	L	L	L	L		L	L	L	L	L		L	L				L		L			
HRCM12: Channel Margin-Sutter/Steamboat					H			H		L		L		L		L		L	L				L		L			
HRCM13: Channel margin-South Delta						L	L		L	L			L		L	L		H	H				L		L			
HRCM15: Channel margin along non-Project levees					L	L	L	L	L	L		L	L	L	L	L		L	L				L		L			

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Matrix#2

Species	Delta smelt		Longfin smelt		Chinook salmon							Steelhead						Sacramento Splittail				Green Sturgeon		White Sturgeon			River Lamprey	Pacific Lamprey
Aquatic Goal[1]	1. Create conditions to support self-sustainable populations		1. Create conditions to support self-sustainable populations		1. Increase survival of juveniles			2. Increase growth of juveniles		3. Increase life history diversity	4. Increase adult migration success	1. Increase survival of juveniles		2. Increase growth of juveniles		3. Increase life history diversity	4. Increase adult migration success	1. Maintain and conserve a self-sustaining population in the Delta				1. Increase migration success	2. Increase spatial distribution of juveniles	1. Increase migration success	2. Increase spatial distribution of juveniles	3. Maintain multiple spawning cohorts	1. Maintain conditions to support self-sustainable populations	1. Maintain conditions to support self-sustainable populations
Aquatic Objective[1] / **Conservation Measure**	1.1: Increase abundance	1.2: Increase ;population growth rates	1.1: Increase abundance	1.2: Increase population growth rates	1.1: Increase survival of SR Basin salmon	1.2: Increase survival of SJR Basin salmon	1.3: Increase survival of SJR Basin Spring-run salmon	2.1: Increase size of SR Basin salmon	2.2: Increase size of SJR Basin salmon	3.1: Increase survival across temporal distribution		1.1: Increase survival of SR Basin steelhead	1.2: Increase survival of SJR Basin steelhead	2.1: Increase size of SR Basin steelhead	2.2: Increase size of SJR Basin steelhead	3.1: Increase survival across temporal distribution		1.1: Increase abundance	1.2: Maintain distribution	1.3: Increase connectivity w/ Napa/Petaluma river populations	1.4: Maintain multiple spawning cohorts							
HRCM16: Tidal marsh-ROAs	L	L	L	L	L	L	L	L	L	L		L	L	L	L	L		H	H	H			L		L			
HRCM17: Flood bypass east of Sac Ship Channel																												
HRCM##: Channel margin – 20 miles channel banks					L	L	L	L	L	L		L	L	L	L	L		L	L				L		L			
OSCM1: Ammonia/um reduction	H	H	L	L	L	L	L	L	L	L		L	L	L	L	L		L	L				L		L			
OSCM2: EDC reduction	L	L	L	L	L	L	L			L	L	L	L			L	L	L				L		L		L	L	L
OSCM3: MeHg reduction	L	L	L	L	L	L	L	L	L	L		L	L	L	L	L		L									L	L
OSCM4: Pesticide/herbicide reduction	H	H	L	L	H	H	H	L	L			H	H	L	L			H				L		L			L	L
OSCM5: Stormwater/urban pollution	L	L	L	L	L	L	L	L	L			L	L	L	L			L				L		L			L	L
OSCM7: DO in Stockton DWSC						L	L				L		L				L											
OSCM8: DO in managed seasonal wetlands	L		L		L	L	L					L	L					L										
OSCM10: Non-natives on recreational vessels	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
OSCM11: Rapid response to non-natives	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
OSCM13: SAV/FAV removal	L	L	L	L	H	H	H	H	H	H		H	H	H	H	H		L	L									
OSCM14: Harvest of non-natives	L	L	L	L	L	L	L			L		L	L			L		L										
OSCM16: Reduce illegal harvest			L		L	L	L					L	L									H		H		H		
OSCM17: Splittail harvest																		H										
OSCM18: Hatchery and Genetic Management Plans										H						H												
OSCM19: Mark select fishery										H	H																	
OSCM20: Artificial propagation of smelt	H		H																									
OSCM21: Non-project diversions	L		L		L	L	L					L	L					L									L	L
OSCM24: Localized predator control	L	L	L	L	L	L	L			L		L	L			L		L										
OSCM25: Non-physical barriers					H	H	H					H	H															
WOCML1: North Delta diversion	H	H	H	H	L	L	L					L	L					L								X	X	X
WOCMN2: Yolo Bypass	L	L	L	L	H			H		H		H						H			H	H		H		H		
WOCML2 (Long-term): Yolo Bypass	L	L	L	L	H			H		H		H						H			H	H		H		H		X
WOCMN5: Delta Cross Channel	L		L		L						L	L					L	L										

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WOCML5: Delta Cross Channel	L		L		L						L	L					L	L										
WOCMN6: Rio Vista flows	L	L	L	L	L						L	L															L	L
WOCML6: Rio Vista flows	L	L	L	L	L						L	L															L	L
WOCMN8: 2-gates	L		L																									
WOCMN9: Delta Outflow	L		L															L		L							L	L
WOCML9: Delta Outflow	L		L															L		L							L	L
WOCMN11: MS Salinity Control Gate	L		L		L	L	L					L	L															
WOCML11: MS Salinity Control Gate	L		L		L	L	L					L	L															
WOCMN12: South Delta diversions	L	L	L	L	L	L	L					L	L					L									L	L
WOCML12: South Delta diversions	H	H	H	H	L	H	H					L	H					L									L	L
WOCMN14: Delta salinity standards																												
WOCML14: Delta salinity standards																												
WOCML# : Dual conveyance operation	H	H	H	H	L	H	H					L	H					L									L	L

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