Eel River Fish Passage Technology – Filtering Tool Working Draft 05.01.2018

	Fish Passage Concept:	Biological Viability: Very high, high, medium, low							
		Juvenile Steelhead	Adult Winter Run Steelhead	Adult Summer Run Steelhead	Juvenile Chinook	Adult Chinook	Lamprey	Other Native Species	Non-Native Species
Upstream Passage	Potential to increase the carrying capacity of an existing population or establish a new, discrete, demographically independent population								
	Potential to increase average vital rates (e.g., reproductive success, survival) of quality habitat								
	Potential to reduce isolation of extant populations, thereby restoring natural patterns of dispersal and connectivity within the ESU/DPS								
	Potential to reestablish occupancy of habitats that are rare or underrepresented within the extant distribution, thereby promoting ecological and evolutionary process responsible for local adaptation and diverse life histories								
	Potential to allow species distribution to shift or access refuge habitats in response to climate change								
	Passage efficiency and delay potential (barrier passage time)								
	Volitional upstream passage potential								
	Biological monitoring potential								
	Collection, handling, stress, and mortality potential								
	Potential to segregate species if desired								
	Predation risks potential								
	Desired dispersion of adults and juveniles potential								
	Attraction and Collection 100% to 80% exceedance flows								
	Attraction and Collection 80% to 20% exceedance flows								
	Attraction and Collection 20% to 5% exceedance flows								

	Fish Passage Concept:	Biological Viability: Very high, high, medium, low					
		Juvenile Steelhead	Adult Winter/Summer Run Steelhead ~ Kelts	Juvenile Chinook	Lamprey (post-spawn)	Other Native Fish	Non-Native Fish Species
Downstream Passage	Volitional downstream passage potential						
	Safety of upstream migrants						
	Re-conditioning (kelts/post-spawn) potential						
	Passage efficiency and delay potential (barrier passage time)						
	Biological monitoring potential						
	Collection, handling, stress, and mortality potential						
	Potential to segregate species if desired						
	Predation risks potential						

Upstream Passage

Habitat Conditions:				
Fish Passage Concept:				
	Very High	High	Medium	Low
Hydrologic impairment (upper Eel River)				
Hydrologic impairment (Eel River)				
Geomorphic impairment (upper Eel River)				
Geomorphic impairment (Eel River)				
Potential for habitat production capacity				
Water quality constraints (reservoir)				
Water quality constraints (below reservoir)				
Ecosystem benefit				

Downstream Passage

Habitat Conditions:				
Fish Passage Concept:				
	Very High	High	Medium	Low
Hydrologic impairment (upper Eel River)				
Hydrologic impairment (Eel River)				
Geomorphic impairment (upper Eel River)				
Geomorphic impairment (Eel River)				
Potential for habitat production capacity				
Water quality constraints (reservoir)				
Water quality constraints (below reservoir)				
Ecosystem benefit				

Upstream Passage

Operations and Maintenance:				
Fish Passage Concept:				
	Very Good	Good	Fair	Poor
Reliability of facility				
Reliability of operations				
Debris management				
Durability of structure				
Passage performance certainty				
Operational certainty				
Adaptability of collection and passage				
Potential to complement a downstream passage facility				

Downstream Passage

Operations and Maintenance:				
Fish Passage Concept:				
	Very Good	Good	Fair	Poor
Reliability of facility				
Reliability of operations				
Debris management				
Durability of structure				
Passage performance certainty				
Operational certainty				
Adaptability of collection and passage				
Potential to complement an upstream passage facility				

Upstream Passage

Cost:				
Fish Passage Concept:				
	Very High	High	Medium	Low
Construction				
Operation and maintenance				
Certainty of cost				

Downstream Passage

Cost:				
Fish Passage Concept:				
	Very High	High	Medium	Low
Construction				
Operation and maintenance				
Certainty of cost				