Scenario # 4 Pros / Cons – Remove Scott Dam, Remove/Modify Cape Horn Dam

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	Remove Scott and Cape Horn Dam	Remove Scott and Modify Cape Horn Dam
Assumptions	This scenario entails the complete removal of Scott Dam, Cape Horn Dam, the diversion tunnel and powerhouse. It would also entail the full remediation of the river channel, stored sediment, and full volitional passage connectivity for anadromous fishes (salmonids and lampreys). Extensive studies would be conducted for dam infrastructure decommissioning. ▪ The ongoing decommissioning study will provide ballpark cost estimates for full infrastructure removal ▪ If PG&E fails to complete a project transfer, and instead chooses to abandon the FERC license, these full costs could be borne by PG&E, and/or shared by other funding sources ▪ Other population level limiting factors could diminish the benefits of expanded spawning and rearing habitat in the upper Eel watershed (this applies to all fish passage scenarios); assume that other restoration actions will continue to be taken throughout the watershed to address other limiting factors (e.g., mainstem and estuary restoration, etc.) ▪ Would need to ensure that the recovering channel doesn't result in a fish passage obstruction (e.g., a critical riffle) ▪ Consider including eradication of Pikeminnow ▪ Flood Control is not part of PVP management	This scenario entails complete removal of Scott Dam, but leaves Cape Horn Dam, diversion tunnel, and possibly/likely the powerhouse in place, for continued water diversions from Eel to Russian River. Extensive studies would be conducted for Scott Dam decommissioning as well as for water diversion operations. ▪ The ongoing decommissioning study will provide ballpark cost estimates for partial infrastructure removal ▪ Modification would presumably examine the efficacy of fish passage at the CHD ladder and the downstream migration of juvenile salmonids ▪ Only winter diversions would occur, with some cap on rate of withdrawal ▪ Would need to ensure that the recovering channel doesn't result in a fish passage obstruction (e.g., a critical riffle) ▪ Consider including eradication of Pikeminnow ▪ Flood Control is not part of PVP management
Costs [$32 - $164.4 million]	▪ This scenario would entail a one-time cost for modifying infrastructure; likely the highest cost for modification of PVP	▪ This scenario would entail a one-time cost for modifying infrastructure; likely significantly lower cost than full removal of PVP

	▪ Costs associated with remediation of the channel under Lake Pillsbury ▪ Loss of annual water storage capacity in Lake Pillsbury (~75,000 af) ▪ Loss of water available for "water management" ▪ Reduction in property values to those properties surrounding Lake Pillsbury ▪ Loss of recreation associated with Lake Pillsbury ▪ May require treatment/management of sediment with potential mercury contamination ▪ Loss of a fish counting station (but fish counting can be done without dams) ▪ Water quality and permitting issues for long-term license compliance ▪ Issues associates with water rights changes with loss of project and water storage/water abandonment ▪ Temporary impacts from mercury release, turbidity, etc. ▪ Costs associated with liability of leaving Scott Dam structure in place	▪ Costs associated with remediation of the channel under Lake Pillsbury ▪ Loss of annual water storage capacity in Lake Pillsbury (~75,000 af) ▪ Loss of water available for "water management" ▪ Reduction in property values to those properties surrounding Lake Pillsbury ▪ Loss of recreation associated with Lake Pillsbury ▪ Would require treatment/management of sediment with potential mercury contamination ▪ Continues some level of fish passage impairment, pending ladder upgrades/improvements and other associated structural improvements ▪ Maintains water impoundment conditions that continue to degrade water quality (temperature) ▪ Provides habitat and water quality conditions supportive of non-native pikeminnow ▪ Necessitates expenditure for increased storage at Coyote Valley Dam ▪ Impacts from removal of Scott Dam with delivery of sediment to CHD, capable of filling ▪ Cost of infrastructure maintenance, including dollar costs and passage opportunity cost ▪ Costs associated with liability of leaving Scott Dam structure in place
Benefits	▪ Full removal of all PVP infrastructure provides the maximum fish passage, habitat, and population benefit at the lowest long-term cost (little or no long-term maintenance cost) ▪ Restores full volitional passage and other native fish species to habitat currently underneath and upstream of Lake Pillsbury (habitat estimated by NMFS IP Model and Emily Cooper)	▪ Full removal of all PVP infrastructure provides the maximum fish passage, habitat, and population benefit at the lowest long-term cost (little or no long-term maintenance cost) ▪ Restores full volitional passage and other native fish species to habitat currently underneath and upstream of Lake Pillsbury (habitat estimated by NMFS IH Model and Emily Cooper)

	▪ Full volitional fish passage upstream into the upper Eel watershed and downstream from the watershed for ALL listed salmonid species and life histories, to all upstream accessible habitats (i.e., all the tributaries that feed into Pillsbury) ▪ Reduces pikeminnow and bass habitat and reproductive success ▪ Diminished opportunities for other invasive species to colonize and distribute throughout the Eel River ▪ Reduce or eliminate mercury methylation and bio-accumulation ▪ Avoids the cost of, and possibility of catastrophic failure of, an aging Scott Dam ▪ Reduces overall land management costs (e.g., USFS, BLM, and PG&E properties) (from USFS perspective, not certain) ▪ Benefits to commercial and recreational fisheries ▪ Benefit to Tribal trust responsibilities	▪ Full volitional fish passage upstream into the upper Eel watershed and downstream from the watershed for MOST listed salmonid species and life histories, to upstream accessible habitats (i.e., all the tributaries that feed into Pillsbury) ▪ Reduces pikeminnow and bass habitat and reproductive success ▪ Diminished opportunities for other invasive species to colonize and distribute throughout the Eel River ▪ Reduce or eliminate mercury methylation and bio-accumulation ▪ Avoids the possibility of catastrophic failure of an aging Scott Dam ▪ Reduces overall land management costs (e.g., USFS, BLM, and PG&E properties) ▪ Provides diversion facility for continued water export to Russian River, with some required infrastructure upgrade ▪ Provides a facility for counting adult salmonid upstream migrants (and juvenile downstream migrants??) ▪ Provides the least overall impact to stakeholders and diminishes the risk of continued conflict, acknowledging that some groups are still affected ▪ Provides the best pathway to negotiated and broadly supported settlement
Risks/Uncertainties	▪ Costs could balloon related to unknown outcomes (e.g., mercury contamination, other ??) ▪ Unanticipated damage to downstream habitat in the Eel River, from sediment release, contaminated sediment release, etc. ▪ Future climate change could diminish the amount of habitat available in the upper Eel watershed, through reduced water supply and correlated water temperature changes, as well as landscape-scale forest conversion ▪ Anticipated fish population responses may not be achieved due to offsetting or unforeseen factors	▪ Future unimpaired hydrology might not enable the scale of water diversion anticipated or modeled ▪ Would need to explore winter diversion; provides another baseline for flows and fish ▪ Alternative diversion mechanisms ▪ Cost of maintaining alternative diversion structure

	▪ Alternative diversion mechanisms ▪ Microcystin blooms in Lake Pillsbury ▪ Obligations for lake level maintenance? ▪ Domestic wells interconnected to Lake Pillsbury	
Limitations	▪ Partial or full dam decommissioning doesn't meet PG&E's stated outcomes of relief from current and future project liabilities, doesn't reduce/eliminate PG&E's costs	▪ Partial or full dam decommissioning doesn't meet PG&E's stated outcomes of relief from current and future project liabilities, doesn't reduce/eliminate PG&E's costs ▪ Continued winter diversions does not meet the PVID water needs for summer irrigation