



Alternatives

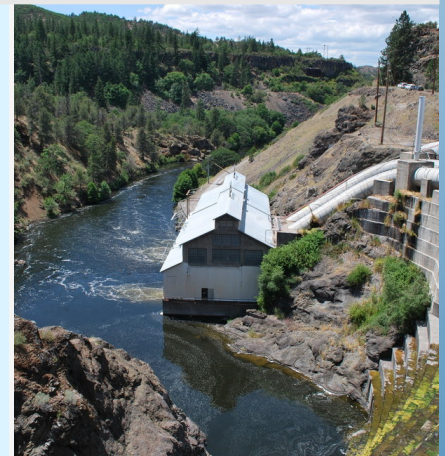
As part of the environmental review process, 18 potential alternatives were identified by members of the public during the public scoping process conducted in the summer of 2010. The Lead Agencies, Department of Interior through the Bureau of Reclamation and California Department of Fish and Game, then screened the 18 alternatives to identify a set of alternatives that represent a range of reasonable actions that best meet the Purpose and Need Statement and the Project Objectives. The Lead Agencies identified five alternatives to evaluate in detail in the Draft Environmental Impact Statement/ Environmental Impact Report (Draft EIS/EIR).

➤ The Five Alternatives

The five alternatives selected for review include one no action/no project alternative and four action alternatives, including the proposed action (Alternative 2) as called for by the Klamath Hydroelectric Settlement Agreement (KHSA) and associated Klamath Basin Restoration Agreement (KBRA). They are:

- Alternative 1 – No Action/No Project (Required Alternative*)
- Alternative 2 – Full Facilities Removal of Four Dams (the Proposed Action)
- Alternative 3 – Partial Facilities Removal of Four Dams
- Alternative 4 – Fish Passage Facilities at Four Dams
- Alternative 5 – Fish Passage Facilities at J.C. Boyle and Copco 2, Removal of Copco 1 and Iron Gate

*The evaluation of the No Action/No Project Alternative is a requirement under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).



Alternative 1 – No Action/No Project

The No Action/No Project Alternative is the continuation of current dam operations with the four dams remaining in place and operating under the annual Federal Energy Regulatory Commission (FERC) license. It describes the state of the environment if action is not taken.

- The four dams remain in place
- Provides no additional fish passage
- Provides no additional flow prescriptions
- Ongoing resource management activities
- Continued implementation of the Total Maximum Daily Load (TMDL) provisions of the Clean Water Act

Alternative 2 – Full Facilities Removal of Four Dams (The Proposed Action)

The Proposed Action Alternative is the full facilities removal of four dams on the Klamath River, as called for by the KHSA. This alternative includes the complete removal of the dams, power generation facilities, water intake structures, canals, pipelines, and ancillary buildings to create a free flowing river.

- Fully removes the four dams and all associated facilities
- Meets the conditions of the KHSA
- Implements the KBRA¹
- Transfers Keno Dam from PacifiCorp to the Department of the Interior

¹ Under Alternatives 2 and 3, the KBRA is considered a "connected action", and therefore is evaluated in the Draft EIS/EIR as part of these two alternatives.

Alternative 3 – Partial Facilities Removal of Four Dams

The Partial Facilities Removal of Four Dams Alternative is the removal of enough of each dam to allow free-flowing river conditions and volitional² fish passage for all Klamath River anadromous³ species at all times. Under this alternative, some of the dam facility outside of the river channel would be left in place, including ancillary buildings and structures such as powerhouses, water intake structures, and pipelines.

- Partially removes the four dams and facilities
- Requires ongoing maintenance of the facilities left in place
- Meets the conditions of the KHSA
- Implements the KBRA
- Transfers Keno Dam from PacifiCorp to the Department of the Interior

² Volitional fish passage is the ability of fish to move freely and voluntarily to any part of the river.

³ Anadromous fish are fish species that migrate up rivers from the ocean to spawn.



Alternative 4 – Fish Passage at Four Dams

The Fish Passage at Four Dams Alternative is the construction of fish passage facilities (i.e. fish ladders) at each of the four dams to allow adult fish to migrate upstream and juvenile fish to migrate downstream of the dams. This alternative retains all hydropower generating facilities and operations, although operations would change due to the mandatory fishways and passage facilities at each dam as well as mandatory flows from J.C. Boyle Dam downstream for riparian habitat, whitewater recreation, and fisheries. These requirements for fish passage would be included in any new long-term FERC license.

- The four dams remain in place
- Requires installation of fish passage facilities at the four dams
- Requires remediation of water quality issues
- Continues some operation of the hydropower facilities by PacifiCorp
- Reduces power production by 25% and peaking capacity due to water flow requirements
- Re-initiates the FERC licensing process
- Does not meet the conditions of the KHSA
- Does not transfer Keno Dam from PacifiCorp to the Department of the Interior



Alternative 5 – Fish Passage at J.C. Boyle and Copco 2, Remove Copco 1 and Iron Gate

The Fish Passage at J.C. Boyle and Copco 2, Remove Copco 1 and Iron Gate Alternative is the full removal of the Copco 1 and Iron Gate facilities and installation of upstream and downstream fish passage facilities at both the J.C. Boyle and Copco 2 dams. J.C. Boyle and Copco 2 are the smallest of the four dams. This alternative provides fish passage and retains some hydropower generation capacity. It would also improve water quality through removal of the two largest reservoirs.

- J.C. Boyle and Copco 2 dams remain in place; fish passage facilities are installed
- Fully removes Copco 1 and Iron Gate dams
- Continues operation of J.C. Boyle and Copco 2 dams by PacifiCorp
- Eliminates peaking capacity at J.C. Boyle and Copco 2 dams due to water flow requirements
- Re-initiates the FERC licensing process
- Does not meet the conditions of the KHSA
- Does not transfer Keno Dam from PacifiCorp to the Department of the Interior

