Long-Term Operation – Final Environmental Impact Statement

Appendix J – Indian Trust Resources Technical Appendix

November 2024

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Appendix J Indian Trust Resources Technical Appendix

J.1 Background Information

This appendix describes Indian Trust Assets (ITAs) in the study area to support the impact analysis in the environmental impact statement (EIS).

Potential actions that could be implemented under the alternatives evaluated in this EIS could affect ITAs in the areas along the rivers and reservoirs directly affected by changes in the operation of Central Valley Project (CVP) or State Water Project (SWP) reservoirs and in the vicinity of lands served by CVP and SWP water supplies.

The Federal Indian Trust Asset policies, summarized below, have been used to identify potential areas of change to ITAs that could occur due to changes in long-term operation of the CVP and/or SWP facilities.

The ITAs are legal interests in property held in trust by the United States (U.S.) for federally recognized Indian Tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITAs can include land, minerals, federally reserved hunting and fishing rights, federally reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally recognized Indian Tribes with trust land; the U.S. is the trustee. By definition, ITAs cannot be sold, leased, or otherwise encumbered without approval of the U.S. government. The characterization and application of the U.S. trust relationship have been defined by case law that interprets congressional acts, executive orders, and historic treaty provisions.

The federal government, through treaty, statute, or regulation, may take on specific, enforceable fiduciary obligations that give rise to a trust responsibility to federally recognized Tribes and individual Indians possessing trust assets. Courts have recognized an enforceable federal fiduciary duty with respect to federal supervision of Indian money or natural resources, held in trust by the federal government, where specific treaties, statutes or regulations create such a fiduciary duty.

Consistent with President William J. Clinton's 1994 memorandum, "Government-to-Government Relations with Native American Tribal Governments," the U.S. Department of the Interior (DOI), United States Department of the Interior, Bureau of Reclamation (Reclamation) assesses the effect of its programs on tribal trust resources and federally recognized tribal governments. Reclamation is tasked to actively engage federally recognized tribal governments and consult with such Tribes on government-to-government level when its actions affect ITAs (*Federal Register*, Vol. 59, No. 85, May 4, 1994, pages 22951–22952). The DOI Departmental Manual Part 512.2 ascribes the responsibility for ensuring protection of ITAs to the heads of bureaus and offices. DOI is required to carry out activities in a manner that protects ITAs and avoids adverse effects whenever possible.

The U.S. Government's trust responsibility for Indian resources requires Reclamation and other agencies to take measures to protect and maintain trust resources. These responsibilities include taking reasonable actions to preserve and restore tribal resources.

Table J-1 includes the federally recognized tribes in the vicinity of the study area.

Table J-1. Federally Recognized Tribes in the Vicinity of the Study Area.

Federally Recognized Tribe	EIS Geographical Region	County/ Counties	In the Vicinity of this Community
Hoopa Valley Tribe	Trinity River	Trinity and Humboldt	Hoopa
Resighini Rancheria Tribe	Trinity River	Del Norte	Klamath
Yurok Tribe of the Yurok Reservation	Trinity River	Trinity, Humboldt, and Del Norte	Klamath
Pit River Tribe	Sacramento River	Shasta	Burney
Redding Rancheria Tribe	Sacramento River	Shasta	Redding
Paskenta Band of Nomlaki Indians of California	Sacramento River	Tehama and Glenn	Corning and Orland
Grindstone Indian Rancheria of Wintun-Wailaki Indians of California	CVP and SWP Service Areas, Sacramento River	Glenn	Elk Creek
Cachil Dehe Band of Wintun Indians of the Colusa Indian Community of the Colusa Rancheria	CVP and SWP Service Areas, Sacramento River	Colusa	Colusa
Cortina Indian Rancheria of Wintun Indians of California	CVP and SWP Service Areas, Sacramento River	Colusa	Williams
Tyme Maidu of Berry Creek Rancheria	CVP and SWP Service Areas	Butte	Oroville
Konkow Maidu of Mooretown Rancheria	CVP and SWP Service Areas	Butte	Oroville
Enterprise Rancheria of Maidu Indians of California	CVP and SWP Service Areas, Sacramento River	Butte	Oroville
Mechoopda Indian Tribe of Chico Rancheria	CVP and SWP Service Areas, Sacramento River	Butte	Chico
Miwok Maidu United Auburn Indian Community of the Auburn Rancheria	American River	Placer	Auburn
United Auburn Indian Community of the Auburn Rancheria of California	American River	Placer	Rocklin
Shingle Springs Band of Miwok Indians, including Shingle Springs Rancheria	American River	El Dorado and Nevada	Shingle Springs
Buena Vista Rancheria of Me-Wuk	Sacramento River	Sacramento	Sacramento

Federally Recognized Tribe	EIS Geographical Region	County/ Counties	In the Vicinity of this Community
Wilton Miwok Indians of the Wilton Rancheria	Sacramento River	Sacramento	Elk Grove
Yocha Dehe Wintun Nation	Sacramento River	Yolo	Brooks
Northfork Rancheria of Mono Indians of California	San Joaquin River	Madera	North Fork
Picayune Rancheria of Chukchansi Indians of California	San Joaquin River	Madera	Coarsegold
California Valley Miwok Tribe	San Joaquin River	San Joaquin	Stockton
Big Sandy Rancheria of Mono Indians of California	San Joaquin River	Fresno	Auberry
Table Mountain Rancheria	San Joaquin River	Fresno	Friant
Santa Rosa Indian Community of Santa Rosa Rancheria	CVP and SWP Service Areas	Kings	Lemoore
Tule River Indian Tribe of the Tule River Reservation of the Yokut Indians	CVP and SWP Service Areas	Tulare	Porterville
Santa Ynez Band of Chumash Mission Indians of Santa Ynez Reservation	CVP and SWP Service Areas	Santa Barbara	Santa Ynez
Cahuilla Band of Mission Indians of the Cahuilla Reservation	CVP and SWP Service Areas	San Diego	Anza
Campo Band of Diegueno Mission Indians of the Campo Indian Reservation	CVP and SWP Service Areas	San Diego	Campo
Capitan Grande Band of Diegueno Mission Indians of California (Barona Reservation and Viejas Reservation)	CVP and SWP Service Areas	San Diego	Alpine
Ewiiaapaayp Band of Kumeyaay Indians	CVP and SWP Service Areas	San Diego	Alpine
Iipay Nation of Santa Ysabel	CVP and SWP Service Areas	San Diego	Santa Ysabel
Inaja Band of Diegueno Mission Indians of the Inaja and Cosmit Reservation	CVP and SWP Service Areas	San Diego	Escondido
Jamul Indian Village of California	CVP and SWP Service Areas	San Diego	Jamul
La Jolla Band of Luiseño Indians	CVP and SWP Service Areas	San Diego	Pauma Valley
La Posta Band of Diegueno Mission Indians of the La Posta Indian Reservation	CVP and SWP Service Areas	San Diego	Boulevard
Los Coyotes Band of Cahuilla and Cupeno Indians	CVP and SWP Service Areas	San Diego	Warner Springs

Federally Recognized Tribe	EIS Geographical Region	County/ Counties	In the Vicinity of this Community
Manzanita Band of Diegueno Mission Indians of the Manzanita Reservation	CVP and SWP Service Areas	San Diego	Boulevard
Mesa Grande Band of Diegueno Mission Indians of the Mesa Grande Reservation	CVP and SWP Service Areas	San Diego	Santa Ysabel
Pala Band of Luiseño Mission Indians of the Pala Reservation	CVP and SWP Service Areas	San Diego	Pala
Pauma Band of Luiseño Mission Indians of the Pauma & Yuima Reservation	CVP and SWP Service Areas	San Diego	Pauma Valley
Rincon Band of Luiseño Mission Indians of the Rincon Reservation	CVP and SWP Service Areas	San Diego	Valley Center
San Pasqual Band of Diegueno Mission Indians of California	CVP and SWP Service Areas	San Diego	Valley Center
Sycuan Band of the Kumeyaay Nation	CVP and SWP Service Areas	San Diego	El Cajon
Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation	CVP and SWP Service Areas	Riverside	Palm Springs
Augustine Band of Cahuilla Indians	CVP and SWP Service Areas	Riverside	Coachella
Cabazon Band of Mission Indians	CVP and SWP Service Areas	Riverside	Indio
Morongo Band of Mission Indians	CVP and SWP Service Areas	Riverside	Banning
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	CVP and SWP Service Areas	Riverside	Temecula
Ramona Band of Cahuilla	CVP and SWP Service Areas	Riverside	Anza
Santa Rosa Band of Cahuilla Indians	CVP and SWP Service Areas	Riverside	Mountain Center
Soboba Band of Luiseño Indians	CVP and SWP Service Areas	Riverside	San Jacinto
Torres-Martinez Desert Cahuilla Indians	CVP and SWP Service Areas	Riverside	Thermal
Twenty-Nine Palms Band of Mission Indians of California	CVP and SWP Service Areas	Riverside and San Bernardino	Coachella
Chemehuevi Indian Tribe of the Chemehuevi Reservation	CVP and SWP Service Areas	San Bernardino	Needles
San Manuel Band of Mission Indians	CVP and SWP Service Areas	San Bernardino	Highland
Big Lagoon Rancheria	Not within study area	Humboldt	Arcata
Blue Lake Rancheria	Not within study area	Humboldt	Blue Lake
Karuk Tribe	Not within study area	Siskiyou	Happy Camp
Greenville Rancheria of Maidu Indians	Not within study area	Plumas and Tehama	Greenville

Federally Recognized Tribe	EIS Geographical Region	County/ Counties	In the Vicinity of this Community
Susanville Indian Rancheria	Not within study area	Lassen	Susanville
Lytton Rancheria	Not within study area	Sonoma	Santa Rosa
Chicken Ranch Rancheria of Me-Wuk Indians of California	Not within study area	Tuolumne	Jamestown
Cold Springs Rancheria of Mono Indians	Not within study area	Fresno	Tollhouse
Colorado River Indian Tribes of the Colorado River Indian Reservation	Not within study area	Riverside	Parker, Arizona

J.2 Evaluation of Alternatives

This section describes the technical background for the evaluation of environmental consequences associated with the action alternatives and the No Action Alternative.

J.2.1 Methods and Tools

The impact assessment considers changes to existing or potential ITAs related to changes in CVP and SWP operations under the alternatives as compared with the No Action Alternative. This section details methods and tools used to evaluate those effects. It should be noted that Alternative 2 consists of four phases that could be utilized under its implementation. All four phases are considered in the assessment of Alternative 2 to bracket the range of potential impacts. The analysis is also informed by the requirements of federal and state laws and regulations that apply to ITAs.

There are no ITAs within any of the reservoir inundation areas (California Department of Water Resources 2005; Bureau of Reclamation 2010, 2012, 2013, 2014). Therefore, changes in reservoir elevations would not affect ITAs and are not analyzed further in this EIS.

There are no ITAs that directly receive CVP or SWP water. Municipalities that use CVP or SWP water supplies, including agencies that serve ITAs would continue to meet water demands in 2030 if CVP and SWP water supplies are reduced through the increased use of non-CVP and SWP water supplies. Therefore, changes in CVP and SWP water deliveries would not affect water supplies to ITAs and are not analyzed further in this EIS.

Changes in CVP and SWP operation under the action alternatives, compared with the No Action Alternative, could change flow patterns in the rivers downstream of CVP and SWP reservoirs, and CVP and SWP water deliveries. Impacts on existing ITAs would be considered adverse if the action:

- Interfered with the exercise of a federally reserved water right, or degrades water quality where there is a federally reserved water right
- Interfered with the use, value, occupancy, character, or enjoyment of an ITA

- Failed to protect ITAs from loss, damage, waste, depletion, or other negative effects

The analysis focuses on changes in reservoir and channel erosion and water quality conditions in all project rivers, and salmon fisheries in the Trinity River. There are no ITAs in the rivers in the Central Valley that would be affected by the project.

J.2.2 No Action Alternative

Under the No Action Alternative, Reclamation would continue with current operation of the CVP, as described in the 2020 Record of Decision and subject to the 2019 Biological Opinions. The 2020 Record of Decision for the CVP and the 2020 Incidental Take Permit for the SWP represent current management direction or intensity pursuant to 43 CFR § 46.30.

Although the No Action Alternative included habitat restoration projects at a programmatic level, the 2020 ROD did not provide environmental coverage for these projects, and all of the habitat projects considered under the No Action required or will require additional environmental documentation. Thus, ground disturbance for habitat restoration projects did not materialize as a result of implementing the No Action Alternative. For the purpose of the analysis, these habitat restoration projects are considered independent projects that will be considered under cumulative effects.

The No Action Alternative is based on 2040 conditions. Changes that would occur over that time frame without implementation of the action alternatives are not analyzed in this technical appendix. However, the changes to ITAs that are assumed to occur by 2040 under the No Action Alternative are summarized in this section.

Conditions in 2040 would be different than existing conditions because of the following factors:

- Climate change and sea-level rise
- General plan development throughout California, including increased water demands in portions of the Sacramento Valley

By the end of September, the surface water elevations at CVP reservoirs generally decline. It is anticipated that climate change would result in more short-duration high-rainfall events and less snowpack in the winter and early spring months. The reservoirs would be full more frequently by the end of April or May by 2040 than in recent historical conditions, potentially. However, as the water is released in the spring, there would be less snowpack to refill the reservoirs. This condition would reduce flow within streams, potentially resulting in less dilution of constituents of concern. Since this water is delivered to reservoirs for storage in CVP and SWP reservoirs, concentrations of constituents of concerns in reservoirs may increase.

Under the No Action Alternative, land uses in 2040 would occur in accordance with adopted general plans. Development under the general plans could affect water quality, depending on the type of development. Development in urbanized areas that are already developed is less likely to result in substantial erosion and subsequent impacts on water quality because areas are already disturbed. Infill projects where areas are already developed could increase density but would be done in compliance with applicable local, state, and federal regulations around water quality, as required. Development in non-urbanized areas could convert natural or rural areas to developed areas, resulting in erosion during construction activities and impacts to water quality that could affect ITAs.

Habitat conditions for coho salmon, spring-run Chinook salmon, and fall-run Chinook salmon in the Trinity River are expected to continue to improve under the No Action Alternative. Under the No Action Alternative, Trinity River flow below Lewiston Dam would continue to be managed to improve habitat conditions for anadromous fish, including coho salmon, spring-run Chinook salmon, and fall-run Chinook salmon. Seasonal flow releases in addition to water-year-specific peak flows would continue to include natural hydrograph elements that support habitat-forming processes, maintain suitable water temperatures, and support life-stage-specific habitat requirements. In addition, peak flow releases are expected to interact with existing and new habitat restoration actions to promote continuing geomorphic change to increase habitat complexity and spatial and temporal stream temperature diversity. Habitat improvements and seasonal flow releases under the No Action Alternative are expected to maintain a low risk of disease outbreaks for coho salmon, spring-run Chinook salmon, and fall-run Chinook salmon, although there is uncertainty in how disease prevalence will affect future disease risk for coho salmon, spring-run Chinook salmon, and fall-run Chinook salmon.

Under the No Action Alternative, the synergistic impact of variable annual flows interacting with the channel's morphological conditions and planned restoration actions is expected to foster a dynamic river channel and floodplain system, which is likely to improve habitat conditions for coho salmon, spring-run Chinook salmon, and fall-run Chinook salmon under the No Action Alternative. Consistent with the 2020 Record of Decision, the No Action Alternative is expected to result in potential changes in water supply deliveries, with improved water supply deliveries to some CVP and SWP contractors and for other water users, deliveries would remain similar to existing conditions. These changes were described and considered in the 2020 Record of Decision.

The No Action Alternative would also rely upon increased use of Livingston-Stone National Fish Hatchery during droughts to increase production of winter-run Chinook salmon. However, this component requires no physical changes to the facility and would have no adverse effect on ITAs.

J.2.3 Alternative 1

J.2.3.1 Potential Changes in Erosion or Degradation of Land or Sites of Religious or Cultural Importance to Federally Recognized Tribes

Appendix W, *Geology and Soils Technical Appendix*, describes in detail channel (bed and bank) erosion in rivers in the project area. Under Alternative 1, changes in surface water deliveries could result in modifications of flow regimes, including peak flows in the Trinity River, that could affect stream channel erosion. Alternative 1 would result in changes in releases to Trinity River in wet periods by an average annual decrease of -1.8% and in dry periods by an annual average decrease of -3.1%. This would result in a negligible decrease in potential for channel erosion in both wet and dry periods compared with No Action Alternative. Because there is a negligible potential for a decrease in channel erosion in the Trinity River, there would be no degradation of land or sites of religious or cultural importance caused by changes in erosion under Alternative 1.

J.2.3.2 Potential Changes in Quality of Water Used by a Federally Recognized Tribe

Appendix G, *Water Quality Technical Appendix*, describes in detail changes in water quality resulting from changes in seasonal operations. Under Alternative 1, the water quality in the Trinity River would be similarly affected by changes in flow caused by changes in operations compared with the No Action Alternative.

J.2.3.3 Potential Changes to Salmonid Populations

A detailed analysis is provided in Appendix O, *Aquatic Resources Technical Appendix*. Under Alternative 1, effects on Southern Oregon/Northern California Coast Coho salmon, Upper Klamath-Trinity River spring-run Chinook salmon, and Upper Klamath-Trinity River fall-run Chinook salmon populations in the Trinity River would be similar to the No Action Alternative.

J.2.4 Alternative 2

J.2.4.1 Potential Changes in Erosion or Degradation of Land or Sites of Religious or Cultural Importance to Federally Recognized Tribes

Appendix W describes in detail channel (bed and bank) erosion in rivers in the project area. Under Alternative 2, changes in surface water deliveries could result in modifications of flow regimes, including peak flows in the Trinity River, that could affect stream channel erosion. Under Alternative 2, surface water deliveries would result in negligible to minor changes in the peak flows in the Trinity River. Dry periods under all phases of Alternative 2 would experience minor decreases in reservoir releases to the Trinity River, and therefore a minor (-8.7%) potential decrease in channel erosion. Wet periods for Alternative 2 With TUCP Without VA and Alternative 2 Without TUCP Without VA would have a negligible (-0.2%) potential decrease in channel erosion, while Alternative 2 Without TUCP With Delta VA and Alternative 2 Without TUCP All VA would have a negligible 2.2% and 0.04% respectively) potential increase in channel erosion.

Because there would either be a decrease potential for channel erosion or a negligible potential increase for channel erosion in the Trinity River, there would likely be negligible to no resulting change in degradation of land or sites of religious or cultural importance caused by changes in erosion under Alternative 2.

J.2.4.2 Potential Changes in Quality of Water Used by a Federally Recognized Tribe

Appendix G describes in detail changes in water quality resulting from changes in seasonal operations. Under all phases of Alternative 2, the water quality in the Trinity River would be similarly affected by changes in flow caused by changes in operations compared with the No Action Alternative.

J.2.4.3 Potential Changes to Salmonid Populations

A detailed analysis is provided in Appendix O. Under Alternative 2, relative to the No Action Alternative, effects on Southern Oregon/Northern California Coast Coho salmon, Upper Klamath-Trinity River spring-run Chinook salmon, and Upper Klamath-Trinity River fall-run Chinook salmon populations would be similar, except for Alternative 2 With TUCP Without VA. Alternative 2 With TUCP Without VA would have minor adverse effects on spawning and incubating Southern Oregon/Northern California Coast Coho salmon.

J.2.5 Alternative 3

J.2.5.1 Potential Changes in Erosion or Degradation of Land or Sites of Religious or Cultural Importance to Federally Recognized Tribes

Appendix W describes in detail channel (bed and bank) erosion in rivers in the project area. Under Alternative 3, changes in surface water deliveries could result in modifications of flow regimes, including peak flows in the Trinity River, that could affect stream channel erosion. Alternative 3 would result in changes in releases to Trinity River in dry periods by an average annual increase of 5.8% and in wet periods by an annual average decrease of -7.7%. This would result in a negligible increase in potential for channel erosion in dry periods compared with the No Action Alternative. Because there is only a negligible to minor potential for an increase in channel erosion in the Trinity River, there would not be enough erosion that would result in degradation of land or sites of religious or cultural importance caused by changes in erosion under Alternative 3.

J.2.5.2 Potential Changes in Quality of Water Used by a Federally Recognized Tribe

Appendix G describes in detail changes in water quality resulting from changes in seasonal operations. Under Alternative 3, the water quality in the Trinity River would be similarly affected by changes in flow caused by changes in operations compared with the No Action Alternative.

J.2.5.3 Potential Changes to Salmonid Populations

A detailed analysis is provided in Appendix O. Under Alternative 3 relative to the No Action Alternative, impacts to Southern Oregon/Northern California Coast Coho salmon, Upper Klamath-Trinity River spring-run Chinook salmon, and Upper Klamath-Trinity River fall-run Chinook salmon populations in the Trinity River would be similar.

J.2.6 Alternative 4

J.2.6.1 Potential Changes in Erosion or Degradation of Land or Sites of Religious or Cultural Importance to Federally Recognized Tribes

Appendix W describes in detail channel (bed and bank) erosion in rivers in the project area. Under Alternative 4, changes in surface water deliveries could result in modifications of flow regimes, including peak flows in the Trinity River, that could affect stream channel erosion. Alternative 4 would result in changes in releases to Trinity River in dry periods by an average annual decrease of -4.3% and in wet periods by an annual average decrease of -2.0%. This would result in a negligible increase in potential for channel erosion in wet periods compared with the No Action Alternative. Because there is only a negligible potential for an increase in channel erosion in the Trinity River, there would not be enough erosion that would result in degradation of land or sites of religious or cultural importance caused by changes in erosion under Alternative 4.

J.2.6.2 Potential Changes in Quality of Water Used by a Federally Recognized Tribe

Appendix G describes in detail changes in water quality resulting from changes in seasonal operations. Under Alternative 4, the water quality in the Trinity River would be similarly affected by changes in flow caused by changes in operations relative to the No Action.

J.2.6.3 Potential Changes to Salmonid Populations

A detailed analysis is provided in Appendix O. Under Alternative 4 relative to the No Action Alternative, effects on Southern Oregon/Northern California Coast Coho salmon, Upper Klamath-Trinity River spring-run Chinook salmon, and Upper Klamath-Trinity River fall-run Chinook salmon populations in the Trinity River would be similar.

J.2.7 Mitigation Measures

Following is a description of mitigation measures identified for Indian Trust Assets.

Mitigation Measure EJ-3: Increasing Participation with Trinity River Parties.

Reclamation will hold a public meeting in Trinity County to hear from local interests on Trinity River-specific alternatives and potential impacts.

J.2.8 Summary of Impacts

Table J-2 includes a summary of impacts, the magnitude and direction of those impacts, and potential mitigation measures to consider.

Table J-2. Impact Summary

Impact	Alternative	Magnitude and Direction of Impacts	Potential Mitigation Measures
	No Action [a]	No anticipated changes expected.	--

Impact	Alternative	Magnitude and Direction of Impacts	Potential Mitigation Measures
Potential changes in erosion or degradation of land or sites of religious or cultural importance to federally recognized Tribes	Alternative 1	Negligible potential decrease for channel erosion compared with the No Action Alternative, so would not impact sites of religious or cultural importance.	--
	Alternative 2	Mostly decreased potential for channel erosion with some negligible potential for increased erosion compared with the No Action Alternative, so negligible to no impacts to sites of religious or cultural importance.	--
	Alternative 3	Minor potential increase for channel erosion in dry periods but minor potential decrease for erosion in wet periods compared with the No Action Alternative, so negligible to minor impacts to sites of religions or cultural importance.	--
	Alternative 4	Negligible potential increased for channel erosion in wet periods compared with the No Action Alternative so negligible to no impacts to sites of religious or cultural importance.	--
Potential changes in quality of water used by a federally recognized Tribe	No Action	No anticipated changes expected.	--
	Alternative 1	Similar water quality delivered to Tribes compared with the No Action Alternative.	--
	Alternative 2	Similar water quality delivered to Tribes compared with the No Action Alternative.	--
	Alternative 3	Similar water quality delivered to Tribes compared with the No Action Alternative.	--
	Alternative 4	Similar water quality delivered to Tribes compared with the No Action Alternative.	--
Potential changes to salmonid populations	No Action	No anticipated changes expected.	--
	Alternative 1	Similar effects on all salmon populations compared with the No Action Alternative.	--
	Alternative 2	Similar effects except minor adverse effects on spawning and incubating Southern Oregon/Northern California Coast Coho salmon under Alternative 2 With TUCP Without VA compared with the No Action Alternative.	--
	Alternative 3	Similar effects on all salmon populations compared with the No Action Alternative.	--

Impact	Alternative	Magnitude and Direction of Impacts	Potential Mitigation Measures
	Alternative 4	Similar effects on all salmon populations compared with the No Action Alternative.	--

[a] For the evaluation of alternatives, operation of the action alternatives are compared with the No Action Alternative. Under the No Action Alternative, Reclamation would operate the CVP consistent with the 2020 Record of Decision implementing the Proposed Action consulted upon for the 2019 Biological Opinions and the reasonable and prudent measures in the incidental take statements. The California Department of Water Resources would operate the SWP consistent with the 2020 Record of Decision and the 2020 Incidental Take Permit for the SWP. Reclamation and the California Department of Water Resources would operate consistent with authorizing legislation, water rights, contracts, and agreements as described by common components. The evaluation under the No Action Alternative is compared with existing conditions.

J.2.9 Cumulative Impacts

Past, present, and reasonably foreseeable projects, described in Appendix Y, *Cumulative Impacts Technical Appendix*, may have cumulative effects on Indian Trust Assets, to the extent that they could affect erosion or degradation of land or sites or religious or cultural importance to federally recognized Tribes, quality of water used by a federally recognized Tribe, or salmon populations.

Past and present actions contribute to the existing condition of the affected environment in the project area while reasonably foreseeable actions are those that are likely to occur in the future that are not speculative. Past, present, and reasonably foreseeable projects include actions to develop water storage capacity, water conveyance infrastructure, water recycling capacity, the reoperation of existing water supply infrastructure, including surface water reservoirs and conveyance infrastructure, and habitat restoration actions. The projects identified in Appendix Y that have the most potential to contribute to cumulative impact on Indian Trust Assets are related to water supply, water quality, and fisheries on the Trinity River (e.g. B.F. Sisk Dam Raise and Reservoir Expansion Project, Bay-Delta Water Quality Control Plan Update, and Cache Slough Area Restoration).

The No Action Alternative would continue with the current operation of the CVP and may result in changes to erosion or degradation of land or sites of religious or cultural importance to federally recognized Tribes, quality of water used by a federally recognized Tribe, and salmonid populations. These changes may potentially contribute to cumulative impacts and were described and considered in the 2020 Record of Decision.

There are no ITAs in the rivers in the Central Valley that would be affected by the project. Additionally, under Alternatives 1, 2, 3, and 4, flow changes and water fluctuations would not be of a magnitude that would be expected to result in changes to erosion or degradation of land or sites of religious or cultural importance to federally recognized Tribes, quality of water used by a federally recognized Tribes, and salmonid populations in the Trinity River. Therefore, no cumulative impacts to Indian Trust Assets are expected as none of the action alternatives would contribute to cumulative effects on Indian Trust Assets. Any cumulative impacts resulting from

the No Action Alternative and the action alternatives on salmonids are discussed in detail in Appendix O.

J.3 References

California Department of Water Resources. 2005. *Before the Federal Energy Regulatory Commission, Application for New License, Oroville Facilities FERC Project No. 2100, Volume III, Preliminary Draft Environmental Assessment*. January.

U.S. Department of the Interior, Bureau of Reclamation. 2010. *New Melones Lake Area, Final Resource Management Plan and Environmental Impact Statement*. February.

U.S. Department of the Interior, Bureau of Reclamation. 2012. *San Luis Reservoir State Recreation Area, Final Resource Management Plan/General Plan and Final Environmental Impact Statement/Final Environment Impact Report*. August.

U.S. Department of the Interior, Bureau of Reclamation. 2013. *Shasta Lake Water Resources Investigation Draft Environmental Impact Statement*. June.

U.S. Department of the Interior, Bureau of Reclamation. 2014. *Upper San Joaquin River Basin Storage Investigation, Draft Environmental Impact Statement*. August.

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