

ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE DELTA CONVEYANCE PROJECT

PREPARED FOR:

California Department of Water Resources

PREPARED BY:

ICF
980 9th Street, Suite 1200
Sacramento, CA 95814

February 2025



Contents

Chapter 1 Introduction	1-1
Chapter 2 Background	2-1
Chapter 3 Description of Project Refinements and Updates	3-1
3.1 Refinements and Updates with Potential to Change EIR Impacts	3-1
3.1.1 Operational and Modeling Refinements	3-1
3.1.2 Updates for Utility Features.....	3-5
3.1.3 Refinements During Project Construction	3-5
3.2 Refinements with No Potential to Change EIR Impacts	3-6
3.2.1 Acreage Refinements for Facility Footprints and Utility Design Refinement	3-6
3.3 New Information Provided for Disclosure Purposes	3-7
3.3.1 Development of CESA Take Minimization Measures.....	3-7
3.3.2 Candidate Species Updates	3-9
Chapter 4 Environmental Analysis	4-1
4.1 Surface Water (Final EIR Chapter 5)	4-2
4.1.1 Operational and Modeling Refinements	4-2
4.1.2 Conclusion.....	4-3
4.2 Water Supply (Final EIR Chapter 6)	4-3
4.2.1 Operational and Modeling Refinements	4-3
4.2.2 Conclusion.....	4-4
4.3 Flood Protection (Final EIR Chapter 7)	4-4
4.3.1 Operational and Modeling Refinements	4-4
4.3.2 Conclusion.....	4-4
4.4 Groundwater (Final EIR Chapter 8)	4-5
4.4.1 Operational and Modeling Refinements	4-5
4.4.2 Conclusion.....	4-6
4.5 Water Quality (Final EIR Chapter 9)	4-6
4.5.1 Operational and Modeling Refinements	4-6
4.5.2 Conclusion.....	4-8
4.6 Fish and Aquatic Resources (Final EIR Chapter 12)	4-9
4.6.1 Operational and Modeling Refinements	4-9
4.6.2 Project Refinements During Construction	4-9
4.6.3 Conclusion.....	4-9
4.7 Terrestrial Biological Resources (Final EIR Chapter 13).....	4-10
4.7.1 Operational and Modeling Refinements	4-10

4.7.2 Updates for Utility Features..... 4-10

4.7.3 Project Refinements During Construction 4-10

4.7.4 Conclusion..... 4-10

4.8 Land Use (Final EIR Chapter 14) 4-11

4.8.1 Operational and Modeling Refinements 4-11

4.8.2 Updates for Utility Features..... 4-11

4.8.3 Conclusion..... 4-11

4.9 Agricultural Resources (Final EIR Chapter 15)..... 4-11

4.9.1 Operational and Modeling Refinements 4-11

4.9.2 Updates for Utility Features..... 4-12

4.9.3 Conclusion..... 4-12

4.10 Noise and Vibration (Final EIR Chapter 24) 4-12

4.10.1 Operational and Modeling Refinements..... 4-13

4.10.2 Updates for Utility Features 4-13

4.10.3 Conclusion 4-13

Chapter 5 Cumulative Effects 5-1

Chapter 6 Conclusion/Summary of Findings 6-1

Chapter 7 References Cited 7-1

Attachment A Surface Water and Refined Project Operations Figures

Attachment B Water Supply Tables

Attachment C Groundwater Figures

Attachment D Water Quality Figures

List of Tables

Table 3-1. Summary of Operational Refinements 3-2

Table 4-1. Project Refinements and Updates as Analyzed for Specific Resources 4-2

Acronyms, Initialisms, and Abbreviations

Banks Pumping Plant	Harvey O. Banks Pumping Plant
BiOp	Biological Opinion
Cal. Code Regs.	California Code of Regulations
CCWD	Contra Costa Water District
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	cubic feet per second
CVP	Central Valley Project
DPS	distinct population segment
DWR	California Department of Water Resources
EC	electrical conductivity
ECO-PTM	Ecological Particle Tracking Model
Final EIR	<i>Delta Conveyance Project Final Environmental Impact Report</i>
Fish & G. Code	California Fish and Game Code
ITP	Incidental Take Permit
ITPA	Incidental Take Permit Application
LCME	Life Cycle Model with Entrainment
LTO	long-term operations
LTO FEIR	<i>Long-Term Operations of the State Water Project Final Environmental Impact Report</i>
NDDMT	North Delta Diversions Monitoring Team
NMFS	National Marine Fisheries Service
project	Delta Conveyance Project
Reclamation	Bureau of Reclamation
SCADA	supervisory control and data acquisition
STARS	Survival, Travel Time, and Routing Simulation
SWP	State Water Project
TAF	thousand acre-feet
USFWS	U.S. Fish and Wildlife Service
WOMT	Water Operations Management Team

Chapter 1

Introduction

The California Department of Water Resources (DWR), the Lead Agency under the California Environmental Quality Act (CEQA), for the Delta Conveyance Project (project), certified the *Delta Conveyance Project Final Environmental Impact Report* (Final EIR), executed a Notice of Determination documenting project approval, adopted project Findings of Fact and a Statement of Overriding Considerations, and adopted a Mitigation Monitoring and Reporting Program on December 21, 2023 (California Department of Water Resources 2023a, 2023c).

As described in Section 15164(a) of the CEQA Guidelines “The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.” The conditions in Section 15162 are:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

As discussed in more detail, below, the Delta Conveyance Project, modified through the California Endangered Species Act (CESA) consultation process, will not trigger any of the requirements for a subsequent EIR as discussed above. Because all the effects associated with the project refinements or updates are within the envelope of impacts addressed in the Final EIR and do not constitute a new or substantial increase in the severity of a previously identified significant effect, an addendum is the appropriate form in which to disclose these changes and their associated effects.

Chapter 2 Background

Following project approval of the Delta Conveyance Project as described and analyzed in the certified Final EIR, DWR continued developing the Delta Conveyance Project CESA 2081(b) Incidental Take Permit (ITP) Application.

California Department of Fish and Wildlife (CDFW) administers and enforces CESA, which prohibits the unpermitted import, export, take, possession, purchase, or sale of species listed by the State as endangered, threatened, or in specific cases, candidate species (California Fish and Game Code [Fish & G. Code] §§ 2080, 2081.1). *Take* under CESA is defined as any action or attempt “to hunt, pursue, catch, capture, or kill” (Fish & G. Code § 86). As provided by Section 2081(b) of the Fish and Game Code, CDFW may authorize incidental take that occurs incidental to an otherwise lawful activity that is prohibited by Section 2080. CESA allows CDFW to issue an ITP for a state-listed threatened, endangered or candidate species only if specific criteria are met (14 California Code of Regulations [Cal. Code Regs.] § 783.4 (a) and (b)).

The requirements of an application for incidental take under CESA are described in Section 2081 of the Fish and Game Code. Incidental take of endangered, threatened, or candidate species may be authorized if an applicant demonstrates, among other things, that the effects of the proposed take will be minimized and fully mitigated (Fish & G. Code § 2081(b)(2)). DWR will comply with California endangered species laws by obtaining an ITP from CDFW for the project under Section 2081(b) of CESA.

DWR worked closely with CDFW to ensure that the Delta Conveyance Project will include species-specific minimization and avoidance measures and will fully mitigate potential impacts, and that issuance of the permit will not jeopardize the continued existence of the listed species, consistent with 2081(b) guidelines. As a result, refinements, hereinafter referred to as “project refinements,” have been made to the Final EIR project description, including refinements related to project operations.

This Addendum discusses these project refinements, which were identified during the CESA consultation process. Where applicable, this CEQA document describes how these changes do not, among other things, create new significant impacts, or substantially increase the severity of a previously identified impact as shown in the Final EIR, consistent with CEQA Guidelines Sections 15162 and 15164.

The following terminology is used throughout this document.

- *Final EIR existing conditions* or *Final EIR baseline*, which refers to the baseline used in the EIR impact analyses.
- *Final EIR project* or *Alternative 5*, which refers to the approved Delta Conveyance Project as described in the Final EIR.
- *ITP Application*, which refers to the submittal of the 2081(b) ITP Application submitted to CDFW in April 2024, including the subsequent supplemental materials provided to CDFW.
- *ITP baseline*, which refers to the refined modeled baseline conditions and represents long-term operations (LTO) of the State Water Project (SWP) (as described in Section 3.1.1.3, *Existing Conditions (Baseline) Modeling Refinements*).

- *Project refinements or project with operational refinements*, which refers to the refined project as described in the 2081(b) ITP Application or refinements proposed by DWR during the CESA consultation process. These refinements are analyzed relative to the ITP baseline described above.

Description of Project Refinements and Updates

Several project refinements were proposed through the ITP Application process. In addition, updates were made related to some utility features and candidate species status. The updates are included in the ITP Application and are, therefore, included in this Addendum. Project refinements and updates that have the potential to result in changes to EIR impacts are described in Section 3.1, *Refinements and Updates with Potential to Change EIR Impacts*.

In addition, project refinements and updates that are not directly related to the CESA consultation process but that are expected to be part of the ITP are also included in this addendum. Refinements that do not have the potential to result in changes to EIR impacts are described in Section 3.2, *Refinements with No Potential to Change EIR Impacts*. Updates that have occurred since certification of the Final EIR and reflect developments through the CESA consultation process that do not have the potential to result in changes to EIR impacts are described Section 3.3, *New Information Provided for Disclosure Purposes*.

3.1 Refinements and Updates with Potential to Change EIR Impacts

The project refinements and updates described in this section will alter anticipated river flows, refine the baseline (existing conditions) modeling assumptions, update the project footprint associated with some utility features, or change the timing of construction. These refinements and updates are therefore analyzed in Chapter 4, *Environmental Analysis*, because they were determined to have the potential to change EIR impact conclusions. However, as discussed for each resource analyzed in Chapter 4, none of the changes to impacts as a result of these project refinements and updates meet any of the conditions described in Section 15162 of the CEQA Guidelines requiring preparation of a subsequent EIR.

3.1.1 Operational and Modeling Refinements

3.1.1.1 Methods for Modeling Analysis and Results

As part of the project's 2081(b) ITP development process, two additional CalSim 3 models were run with and without the project, which included new modeling assumptions, operational refinements, and existing conditions as described above. Key operations results are presented in Figures 1 through 24 in Attachment A, *Surface Water and Refined Project Operations Figures*. Each figure compares CalSim 3 results for the project to existing conditions, using modeling from the EIR and the refined modeling. As shown on the figures, results for flows, storages, and export operations in the refined modeling remain similar to Alternative 5 as detailed in the Final EIR, though with a few changes due to refined model and operations assumptions.

Based on the results from the simulation, project effects and impacts were assessed for water supply, surface water, groundwater resources, water quality, and fish and aquatic resources. The incremental changes under the project compared to existing conditions are assessed below in the relevant resource area.

3.1.1.2 Operational Criteria Refinements

Operational criteria refinements were developed based on feedback from CDFW during the CESA consultation process. The refinements include modified bypass criteria to achieve minimization targets for CESA-listed fish, a prohibition on diversions when Delta Cross Channel gates are open during certain time periods, as well as adjustments in the sub-daily operations. Other than these refinements, all operational criteria identified in the Final EIR are still applicable.

Timing of fish presence near the intakes and their exposure to far-field hydrodynamic effects through the Delta follows general patterns but can vary according to multiple factors, which can be tracked using real-time monitoring and management to protect biological resources. In addition to the proposed operational criteria; DWR would operate within the level of flexibility afforded, while demonstrating that diversions will not cause the Biological Criteria developed through the ITP consultation process, or such modified criteria that CDFW determines meets the Biological Criteria to be exceeded (as described during the CESA consultation process and summarized in Section 3.3.1.1, *Covered Fish Species Biological Criteria*). DWR shall work with CDFW to consider an assessment of risk to Covered Fish Species (as described during the CESA consultation process and summarized in Section 3.3.1.2, *Collaborative Approach to Real-Time Decision Making*) relative to the Biological Criteria before each water year, and regularly during project operations, and adjust operations if determined appropriate while not exceeding Biological Criteria.

Table 3-1. Summary of Operational Refinements

Time of Year	Sacramento River Flow < 10,000 cfs	Sacramento River Flow 10,000–20,000 cfs	Sacramento River Flow 20,000–35,000 cfs	Sacramento River Flow > 35,000 cfs
Dec–Feb	No Diversions	6%	6%–10%	10%–12%
Mar–May	No Diversions	No Diversions	3%	10%–12%
Jun–Nov ^a	ITPA Criteria (modified with 10,000 cfs minimum bypass in June, July, and November)			

cfs = cubic feet per second; ITPA = Incidental Take Permit Application; K = thousand; NDD= north Delta diversion.

Notes:

Refinements to NDD operational criteria reflect updated bypass flow requirements, which restrict diversions to the percentages of flow as measured at Freeport within the flow ranges identified.

A North Delta Diversion Monitoring Team (NDDMT) would be developed to guide real-time operations based on weekly risk assessments. The NDDMT would be convened weekly, in coordination and consistent with existing processes, starting the first week of October and would conduct week ahead risk assessments, based on relevant biological and abiotic conditions (such as presence of listed fish near the intake reach), modeling, and forecasting starting the first week of November. The NDDMT would continue in this role annually through July. Risk assessments would inform real-time operations as follows: November default criteria could be transitioned to December criteria based on risk assessment; December–May diversion could range from 6%–10% (20–35,000 cfs) and 10%–12% (greater than 35,000 cfs) based on risk assessment; June would transition based on a salmon presence offramp; July default could differ based on adaptive management and on risk assessment.

^a A salmon presence offramp in June and an onramp in June, July, and November would apply.

Refined Bypass Criteria

The proposed refinements for the north Delta intakes operational criteria included in the Delta Conveyance Project CESA process consist of modified bypass criteria, as summarized in Table 3-1. These criteria refinements reflect shifts in the allowable diversion percentage, based on Sacramento River flows at the intakes, relative to criteria described in the Final EIR. In particular, the refined criteria further minimize and restrict operations of north Delta diversions in periods with lower

flows. This is reflected in the minimum 10,000 cubic feet per second (cfs) bypass criteria from November 1 to July 30, as well as changes to the maximum diversion rate when the Sacramento River is tidally dominant at the intakes, with flows between 10,000–20,000 cfs (6% December–February; 0% March–May). Allowable maximum diversion rates at when Sacramento River flows transitioning from tidal to riverine dominance (20,000–35,000 cfs) are 6% from December to February, but may be adjusted up to 10% in response to a risk assessment and real-time decision making. The March to May diversion rates in this flow range would be restricted to 3% based on the desire to reduce potential effects on spring outflow in this transitional hydrodynamic range. At Sacramento River flows above 35,000 cfs, when the system is riverine and tidal reversals are pushed further downstream, allowable diversion rates increase to 10%, and a maximum diversion rate of 12% could be allowed in response to risk assessment and real-time decision making.

Sub-Daily Operations

Based on feedback from CDFW during CESA consultation, the diurnal prioritization of operations from October through June that was included in the Final EIR was refined to project operations throughout the day. Whereas diurnal prioritization focused diversions starting at 6 a.m. and primarily occurring during the daytime, under the refined criteria, project diversions can occur throughout the day starting at 12 a.m.

3.1.1.3 Existing Conditions (Baseline) Modeling Refinements

The operations of the existing SWP facilities will be governed by and will remain consistent with the applicable existing and relevant future regulatory requirements. The proposed operations contained in the *Long-Term Operations of the State Water Project Final Environmental Impact Report* (LTO FEIR) are used in the Delta Conveyance Project ITP Application. The details of the proposed LTO can be found in the LTO FEIR, which was published on October 29, 2024 (California Department of Water Resources 2024a) and the LTO ITP (California Department of Fish and Wildlife 2024), issued on November 4, 2024. These criteria are included in the modeled baseline conditions and represent LTO of the SWP with Delta Conveyance Project operations.

The SWP, of which the Delta Conveyance Project will be a part when fully operational, is subject to numerous regulatory conditions. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) consult on the coordinated LTO for the Central Valley Project (CVP) and SWP and, as appropriate, issue Biological Opinions (BiOps) that provide incidental take authority under the federal Endangered Species Act. CDFW consults on the LTO for the SWP and, as appropriate, issues incidental take authority for SWP operations under CESA. These incidental take authorizations and the CVP LTO and SWP LTO are periodically amended, and new authorizations are approved. The project is not seeking permits for the ongoing operation of existing SWP facilities. The SWP, and the project, will operate to the BiOps and CDFW ITP issued in 2024, and as amended over time.

The Bureau of Reclamation (Reclamation) reinitiated consultation on the 2019 BiOps on the coordinated LTO of the CVP and SWP. In November 2024, CDFW issued a new ITP to replace the 2020 ITP for the LTO of the SWP. USFWS and NMFS issued BiOps for the CVP and SWP LTO in November and December 2024. Reclamation issued a Record of Decision in 2024. The project's submitted ITP Application included modeling with the refined relevant operations under the anticipated state permit for the SWP LTO, consistent with direction provided by CDFW. In compliance with CEQA, the Final EIR included the 2019 BiOps and 2020 ITP baseline (and did not

use the anticipated BiOps and ITP for the SWP LTO) because they represent existing conditions at the time DWR issued its notice of preparation of the Delta Conveyance Project EIR. The additional environmental analysis in this document (along with the Final EIR) will be provided to CDFW to document additional information provided in support of its decision to issue the ITP for the Delta Conveyance Project and for use as a Responsible Agency under CEQA.

SWP Proposed Project Long-Term Operations Modeling Refinements

Refinements to the Delta operations criteria assumed under the baseline (existing conditions) as a result of the 2024 SWP LTO process include:

- **South Delta Operations.** Refinement of factors including Old and Middle River flow management (LTO FEIR, p. 2-21).
- **Spring Delta Outflow.** Refinement of spring outflow criteria to include Agreements to Support Healthy Rivers and Landscapes Implementation (LTO FEIR, p. 2-33).
- **Summer and Fall Habitat Actions.** Refinement to Suisun Marsh Salinity Control Gates operations (LTO FEIR, p. 2-36).

Detailed differences in modeling assumptions to capture the refinements to operations are provided in LTO FEIR, Appendix 4A, Attachment 1, *Model Assumptions* and Table 3-1 in Chapter 3, *Scope of Analysis*, of the LTO FEIR.

CalSim 3 and Other Physical and Biological Modeling

CalSim 3 and subsequent physical and biological modeling were updated to account for refinements to the project operational criteria, regulatory framework (i.e., LTO ITP and LTO FEIR criteria), and adjustments to historical hydrology.¹ A summary of the project operational criteria refinements is provided in Table 3-1. CDFW intends to identify areas of operational flexibility in the ITP criteria (e.g., based on real-time risk assessments) whereby north Delta diversion operations would fall within a range of allowable diversion rates. For purposes of the analysis in this Addendum, the upper end of that potential range (e.g., Dec–Feb: 10% between 20,000–35,000 cfs; 15% when flows are greater than 35,000 cfs) were modeled to conservatively assess potential impacts. Furthermore, future climate scenarios as well as alternative baseline assumptions were explored in consultation with CDFW through sensitivity modeling.²

Additional biological modeling analyses were conducted based on refined models (i.e., various Draft EIR models that were refined during the ITP Application process) or new models used in the

¹ The CalSim 3 model includes adjusted historical hydrology, consistent with the *State Water Project Delivery Capability Report 2023* (California Department of Water Resources 2024b), to provide a reasonable representation of recent climatic conditions. Statistical characteristics of historical rim inflow in California’s Central Valley show noticeable and statistically significant changes in the past 100 years. Standard deviations of precipitation and rim inflow from most of the rim watersheds in the early periods of the past 100 years are significantly different from the recent 30 years. Detailed discussion of the adjusted historical hydrology is provided in the *Evaluation and Adjustment of Historical Hydroclimate Data* report (California Department of Water Resources 2023b).

² For example, modeling scenarios evaluated different climate change assumptions (median and central tendency projections for 2040), as well as alternative regulatory baseline assumptions focused on SWP LTO operations (9av2a and 9bv2) and CVP and SWP LTO operations (12av2), including full implementation of Healthy Rivers and Landscapes. These sensitivity runs also evaluated, for example, updated fallowing and Clifton Court Forebay fill window modeling assumptions to assess the potential to affect operations.

preparation of the LTO ITP Application and reflecting coordination with CDFW during ITP Application development and preparation of the ITP. These were generally used to compare the project to existing conditions modeling scenarios (except as noted below) and included the following:

- ECO-PTM³ (also used to compare diurnal north Delta diversion operations to uniform north Delta diversion sub-daily operations, in addition to comparing project to existing conditions).
- Updates to the Survival, Travel Time, and Routing Simulation (STARS) model from the spreadsheet version to the modeling code version in order to illustrate statistical uncertainty.
- Delta smelt LCME.⁴
- Additional smelt zooplankton prey–Delta outflow regression relationships.
- Updates to the longfin smelt–Delta outflow abundance index relationships to reflect additional years of data and surveys.
- Updates to white sturgeon year class strength–Delta outflow regressions to reflect additional years of data.

Analyses for fish and aquatic resources under the operational criteria refinements described above were based on CalSim 3 model outputs that reflect influences on potential operational effects.

3.1.2 Updates for Utility Features

The analyses in this addendum consider the updates to some utility features (ICF 2024a) within the project footprint as described in the Final EIR. These features were identified and updated in the ITP Application prior to submittal to CDFW in April 2024. Impacts of the project on covered species modeled habitat and occurrences, including the updated utility features, are described in each species take analysis in the ITP Application Chapter 4, *Analysis of Take and Effects*. Impacted acreages for all covered species are summarized in ITP Application Appendix 4B, *Terrestrial Take Analysis Methods*, Table 4B-2. The ITP Application project footprint, including the updated utility features, is shown relative to covered species habitat and impacts in Figures 4.6.1 through 4.12.1.

3.1.3 Refinements During Project Construction

As described in Environmental Commitment EC-14: *Construction Best Management Practices for Biological Resources* (Appendix 3B, *Environmental Commitments and Best Management Practices*, in the Final EIR), at the north Delta intakes in-water impact pile driving is allowed from June 1 to October 31 subject to terms set forth therein. EC-14 provides further that this work window for the north Delta intakes may be lengthened with NMFS, CDFW, and USFWS approval based on the success of bubble curtain or other noise attenuation methods (see Mitigation Measure AQUA-1a:

³ ECO-PTM (Ecological Particle Tracking Model) is a computer model in which through-Delta survival of emigrating juvenile Chinook salmon entering the Delta at Freeport is simulated as a function of DSM2-HYDRO–simulated Delta channel flows applied to particles with fish-like behaviors. This is described further in Appendix 4A, *Bay-Delta Methods and Results*, Section 4A.7, *ECO-PTM*, of the ITP Application (ICF 2024b).

⁴ LCME (Life Cycle Model with Entrainment) is a statistical model that estimates delta smelt annual population replacement rate as a function of various predictor variables including June-August Delta outflow and five Old and Middle River flow periods representing entrainment risk during vulnerable life stages. This is described further in Appendix 4A, Attachment 4A.4, *Delta Smelt Life Cycle Modeling*, of the ITP Application (ICF 2024b).

Develop and Implement an Underwater Sound Control and Abatement Plan in Chapter 12, *Fish and Aquatic Resources*) and real-time monitoring for fish presence. Additionally, while no impact pile driving is proposed within cofferdams or behind training walls, EC-14 provides that in-water work may occur within a cofferdam or behind the sheet pile training walls, regardless of the timing of in-water work windows. As a result of CESA consultation, additional conditions were proposed for all in-water impact pile driving at the north Delta intakes. For example, CDFW provided specific sound threshold criteria for fish injury and disturbance that must not be exceeded, based on in-channel acoustic monitoring to be conducted by DWR. Furthermore, clarification has been proposed to limit the period when CDFW may authorize lengthening the work window for the north Delta intakes to May 16 to May 31 and November 1 to November 15 each year if bubble curtains or other measures for noise attenuation achieve an equivalent level of protection as during the main work window, and CESA-listed species monitoring demonstrates absence.

3.2 Refinements with No Potential to Change EIR Impacts

The acreage refinements for facility footprints and utility features described in this section were determined to have no potential to change EIR impact conclusions because construction is already assumed at these locations within the construction footprint utilized in the Final EIR and no additional activities (e.g., construction equipment, phasing, ground disturbance, access routes) that could increase impacts will occur. These refinements do not create the conditions described in Section 15162 of the CEQA Guidelines that require preparation of a subsequent EIR.

3.2.1 Acreage Refinements for Facility Footprints and Utility Design Refinement

The analyses in this addendum include consideration of minor refinements in acreages of temporary and permanent impacts associated with some project facility footprints and utility design refinements for permitting purposes.

3.2.1.1 Bethany Complex

The Final EIR included a design reconfiguration of the Bethany Complex footprint to better accommodate potential future facilities for the Transmission Agency of Northern California and the Western Area Power Administration. The reconfiguration resulted in redistribution of permanently and temporarily disturbed acreages for some areas within the facility's footprint, which the Final EIR evaluated qualitatively. The ITP Application includes the reconfigured Bethany Complex footprint as described in the Final EIR in its quantitative assessment of impacts on modeled habitat for covered species and presents the impact acres in Table 4B-2 in ITP Application Appendix 4B.

The acreage quantification of the Bethany Complex footprint impacts does not have the potential to affect the amount or type of resources beyond those analyzed in the Final EIR because impacts under these acreage refinements will occur on lands that are already assumed to be affected by construction and are within the scope of the analysis in the Final EIR since construction equipment, phasing, methodology, and access routes will remain the same. Further, no additional features will be constructed and no new activities will occur beyond those analyzed in the Final EIR.

3.2.1.2 Undergrounding of SCADA Line Near Clarksburg

The Final EIR included a design refinement to underground approximately 1.9 miles of supervisory control and data acquisition (SCADA) line previously proposed in the Draft EIR to be installed on existing overhead power poles. This design refinement resulted in minimal changes to temporarily and permanently disturbed acreages. The Final EIR considered impacts on resources from the total area of disturbance qualitatively. The ITP Application includes the reconfigured footprint as described in the Final EIR in its quantitative calculation of impacts on covered species modeled habitat, which reduced the permanent impacts and increased the temporary impact acres for these lines due to the trench installation of underground lines. A description of this quantification of impacts on covered species is included in the ITP Application under multiple sections in Chapter 4 titled *Electrical and SCADA Facilities*. Table 4B-2 in Appendix 4B of the ITP Application provides the total impacts on covered species habitat, including SCADA facilities. Quantification of these impacts identified in the Final EIR does not have the potential to affect resources as analyzed in the Final EIR because all associated impacts are within the envelope of impacts addressed in the Final EIR.

3.2.1.3 Contra Costa Water District Interconnection Facility

The proposed refinement for the Contra Costa Water District (CCWD) Interconnection Facility footprint included in the Delta Conveyance Project 2081(b) ITP Application consists of a redesign to reduce impacts on agricultural ditches and to remove overlap with Victoria Canal, as the CCWD interconnection pipeline will be micro-tunneled under Victoria Canal. Chapter 4 of the ITP Application includes a description of the CCWD Interconnection Facilities and the associated impacts on covered species in multiple sections titled *Contra Costa Water District Interconnection Facilities*. Table 4B-2 in Appendix 4B of the ITP Application provides the total impacts on all covered species habitat, including CCWD Interconnection Facilities. Figures 4.7-5, 4.7-42, and 4.7-43 in the ITP Application show the CCWD Interconnection Facility footprint and modeled habitat impacts. Refinement of the CCWD Interconnection Facility footprint does not have the potential to affect resources as analyzed in the Final EIR because all associated impacts under this refinement will occur on lands that are already assumed to be affected by construction and will be within the scope of the analysis in the Final EIR. Further, no additional features will be constructed, and no new activities will occur beyond those analyzed in the Final EIR.

3.3 New Information Provided for Disclosure Purposes

The updates to the CESA take minimization measures and the status of candidate species described in this section are for informational purposes only. These updates occurred after certification of the Final EIR. This information does not create the conditions described in Section 15162 of the CEQA Guidelines that require preparation of a subsequent or supplemental EIR.

3.3.1 Development of CESA Take Minimization Measures

The ITP Application requires permittees to implement species-specific take minimization measures (Fish & G. Code § 2081 (b); Cal. Code Regs., tit. 14, §§ 783.2-783.8). Take minimization measures are actions intended to avoid, minimize, and offset effects on listed species. Take minimization measures were developed as part of the Delta Conveyance Project Final EIR and further discussed during

informal consultation with CDFW for the 2081(b) ITP Application for CESA-listed terrestrial species based on the mitigation measures in the Final EIR. In some cases, the take minimization measures provided more specificity for the purposes of CESA; in other cases, the take minimization measures incorporated comments received from CDFW during informal consultation. For example, the *Mason's Lilaeopsis Take Minimization Measure* in the ITP Application (Section 5.3.9) was developed based on Mitigation Measure BIO-2a, *Avoid or Minimize Impacts on Special-Status Natural Communities and Special-Status Plants* and provides specific measures for minimizing take of the species under CESA. The *Giant Garter Snake Take Minimization Measure* in the ITP Application (Section 5.3.5) was developed based on Mitigation Measure BIO-30, *Avoid and Minimize Impacts on Giant Garter Snake* and, based on comments received from CDFW during informal consultation, requires a more protective buffer and monitoring procedures (if a snake is found within the construction area) to minimize take under CESA. Additional analysis for CEQA is not necessary. The development of the ITP Application take minimization measures do not result in any new significant environmental effects or a substantial increase in the severity of previously identified significant effects in the Final EIR.

3.3.1.1 Covered Fish Species Biological Criteria

Through the CESA consultation process, DWR and CDFW have identified several refinements. Consistent with the Final EIR, DWR proposes to include an aquatics resources study framework to evaluate potential project effects during project implementation and better understand uncertainties associated with north Delta diversion effects on listed fish species, among others. Building on elements included in the Final EIR, DWR and CDFW have further developed covered species monitoring and scientific studies, including fisheries evaluation studies, water quality evaluation studies, ecological response evaluation studies, fish guidance system studies, hydraulic testing studies, and associated monitoring, which are needed to establish baseline biological and environmental conditions before impacts associated with specified Covered Activities begin. The science and monitoring required during pre-project historical conditions and/or In-Water Preconstruction Monitoring time periods shall be used to establish baseline conditions before impacts associated with project operations begin. Science and monitoring conducted during In-Water Construction Monitoring may be included in calculations of baseline conditions, as approved by CDFW.

As part of the CESA consultation process, Biological Criteria for listed species were developed based on the project's effects analysis and consultation process and function as limits to changes to, for example, the population growth rates of Covered Fish Species as a result of project operations. Additionally, DWR proposes future science, studies, and monitoring, in the ITP Application consistent with the project, to assess and verify listed species response to impacts associated with the project and inclusive of mitigation and other requirements.

The results of the required science and monitoring shall be used during initial project operations (e.g., Phase 1 and 2,⁵ as described during the CESA consultation process) to ensure project operations meet the Biological Criteria for Covered Fish Species. The science and monitoring may be used to identify alternative approaches to minimize and fully mitigate impacts (e.g., refinements to operations) on Covered Fish Species to meet the Biological Criteria, if determined to be necessary.

⁵ Phase 1 (Startup and Commissioning) and Phase 2 (Full Project Operations).

3.3.1.2 Collaborative Approach to Real-Time Decision Making

Consistent with the Final EIR, DWR proposes to include requirements for a real-time decision-making process during project operations. Building on elements from the Final EIR, DWR, in coordination with CDFW, will charter the North Delta Diversion Monitoring Team (NDDMT) in advance of the project becoming operational. DWR shall convene the NDDMT to consider Covered Fish Species survey data, salvage data, other pertinent biotic and abiotic factors, and hydrologic and biological modeling outputs. NDDMT staff shall evaluate system conditions broadly and develop risk assessments to anticipate impacts on Covered Fish Species that could occur if a temporary change in operating criteria were approved for the coming week. The NDDMT shall share and discuss all available biological, abiotic, and operational information to inform discussions among DWR and CDFW Water Operations Management Team (WOMT) representatives.

Operating criteria will be evaluated to ensure that project operations achieve Biological Criteria for Covered Fish Species (Criterion #1 for Smelt, Salmon, and White Sturgeon). The operating criteria and Biological Criteria were developed using best available science and data available. Consistent with the adaptive management process described in the Final EIR, DWR proposes new monitoring and science to augment available data, and refine or develop analytical tools to assess the magnitude, timing and spatial distribution of impacts of project operations on Covered Fish Species. This new science, modeling, and data shall be used to inform real-time assessments of risk of impacts of Project operations on Covered Fish Species and the potential to exceed the Biological Criteria.

DWR and CDFW NDDWT staff may conclude different operations are warranted when conducting risk assessments under the circumstances described above, in which case the difference shall be noted and elevated. If consensus is reached, DWR shall implement the alternative action. If the Directors do not reach a resolution on operations, DWR proposes that the CDFW Director may require DWR to implement an operational decision provided by CDFW in writing. DWR agrees to implement CDFW's operational decision.

3.3.1.3 CESA Compensatory Mitigation Refinements

In consultation with CDFW, several mitigation measures have been updated to ensure they are consistent with CESA requirements to fully mitigate potential impacts on listed species. While these updates will refine mitigation requirements identified in the ITP Application and Final EIR, types and acres of habitat analyzed in the Final EIR are still appropriate. As actual compensatory mitigation sites are identified, including any potential refinements to the current estimates, additional CEQA analysis may be necessary.

3.3.2 Candidate Species Updates

3.3.2.1 White Sturgeon

Although the Final EIR included analysis of white sturgeon as a species of special concern, the California Fish and Game Commission changed the listing status of white sturgeon under CESA to a Candidate Species on June 19, 2024. Additional information for the species was provided to CDFW as part of the ITP Application (ICF 2024b) and for the development of the ITP. Additional analysis for CEQA is not necessary because the additional analyses provided in the ITP Application and supplemental information submitted to CDFW do not constitute new information of substantial

importance as they do not disclose new significant environmental effects or a substantial increase in the severity of the species' significance conclusion as discussed in the Final EIR.

3.3.2.2 Longfin Smelt

Longfin smelt were listed throughout their range in California as threatened under CESA in 2009. Recently, due to ongoing threats from altered hydrology, nonnative species, and effects of climate change, USFWS ruled that the San Francisco Bay-Delta distinct population segment (DPS) of the longfin smelt is federally endangered, effective August 29, 2024. Additional analysis for CEQA is not necessary because the additional analyses provided in the ITP Application and supplemental information submitted to CDFW do not constitute new information of substantial importance as they do not disclose new significant environmental effects or a substantial increase in the severity of the species' significance conclusion as discussed in the Final EIR.

3.3.2.3 Burrowing Owl

The Final EIR included analysis of burrowing owl as a species of special concern. On October 10, 2024, the California Fish and Game Commission approved a petition to grant burrowing owl "candidate" species status under CESA. The candidacy designation temporarily affords the burrowing owl the same CESA protections as listed species, including prohibition of take without permit authorization throughout the entirety of California while CDFW conducts a species status review to confirm whether (and for which populations) listing is warranted and to recommend management and recovery actions.

Additional information for the burrowing owl will be provided to CDFW as an application for an amendment to the ITP for the project. Additional analysis for CEQA is not necessary. The candidacy designation and analyses during consultation with CDFW do not constitute new information of substantial importance, as they do not disclose new significant environmental effects or a substantial increase in the severity of the species' previously identified significance conclusion as discussed in the Final EIR.

3.3.2.4 Monarch Butterfly

December 12, 2024, USFWS announced a proposal to list the monarch butterfly as a threatened species with proactive regulations under Section 4(d) and designate critical habitat under the Endangered Species Act. A 90-day public comment period opened on December 12, 2024, and will close on March 12, 2025, offering the public the opportunity to influence the final rule. USFWS anticipates issuing a determination on the proposed listing by the end of 2025.

The Final EIR included an analysis of monarch butterfly. Additional information on the monarch butterfly will be provided to USFWS as an addendum to the Biological Assessment for the project. Additional analysis for CEQA is not necessary. The proposal by USFWS to list the monarch butterfly as a threatened species does not constitute new information of substantial importance, as the proposed listing does not disclose new significant environmental effects or a substantial increase in the severity of the species' significance conclusion as discussed in the Final EIR.

3.3.2.5 Western Spadefoot

December 5, 2023, USFWS announced a proposal to list the western spadefoot as a threatened species under Section 4(d) of the Endangered Species Act.

The Final EIR included an analysis of western spadefoot as a CDFW species of special concern because it had no federal status at the time of preparation. Additional analysis for CEQA is not necessary. The proposal by USFWS to list the western spadefoot as a threatened species does not constitute new information of substantial importance, as the proposed listing does not disclose new significant environmental effects or a substantial increase in the severity of the species' significance conclusion as discussed in the Final EIR.

3.3.2.6 Western Pond Turtle

October 3, 2023, USFWS announced a proposal to list the northwestern pond turtle as a threatened species with a Section 4(d) rule under the Endangered Species Act.

The Final EIR included an analysis of western pond turtle⁶ as a species under review for listing under the Endangered Species Act and as a CDFW species of special concern. Additional analysis for CEQA is not necessary. The proposal by USFWS to list the northwestern pond turtle as a threatened species does not constitute new information of substantial importance as the proposed listing does not disclose new significant environmental effects or a substantial increase in the severity of the species' significance conclusion as discussed in the Final EIR.

⁶ In 2017, western pond turtle was recognized and accepted by the scientific community as two separate species (northwestern pond turtle [*Actinemys marmorata*] and southwestern pond turtle [*Actinemys pallida*]) (Crother 2017: 82; Rhodin et al. 2017:76, 171–172). Because of the relatively recent split of the species into two separate entities, the majority of available research and information refers to a single species (western pond turtle). The project is within the range of the northwestern pond turtle only.

Chapter 4

Environmental Analysis

This chapter analyzes the potential for the project refinements and updates described in Section 3.1, *Refinements and Updates with Potential to Change EIR Impacts*, to affect impact conclusions. As described for each resource analyzed, none of the conditions described in Section 15162 of the CEQA Guidelines calling for preparation of a subsequent EIR have occurred.

Potential environmental impacts from the project refinements and updates described in Section 3.1 were considered for all resource areas evaluated in the Delta Conveyance Project Final EIR. The following environmental resource areas have been eliminated from further analysis in this document because little or no potential exists for project refinements or updates to have a physical effect on the specified resources based on the nature and scope of the refinements and updates to the project description. The operational and construction window refinements and the updates will not change the project footprint, cause physical changes, or create the need for increased services that could affect the following resources; the updates for utility feature refinements will be minor; and all refinements and updates will fall well within the envelope of impacts analyzed for these resources.

- Geology and Seismicity
- Soils
- Recreation
- Socioeconomics
- Aesthetics and Visual Resources
- Cultural Resources
- Transportation
- Public Services and Utilities
- Energy
- Air Quality and Greenhouse Gases
- Hazards, Hazardous Materials, and Wildfire
- Public Health
- Mineral Resources
- Paleontological Resources
- Environmental Justice
- Climate Change
- Growth Inducement
- Tribal Cultural Resources

Table 4-1 lists the resource areas that could be affected by the project refinements and updates described in Section 3.1.

Table 4-1. Project Refinements and Updates as Analyzed for Specific Resources

Resource	Operational and Modeling Refinements	Refinements During Project Construction	Updates for Utility Features
Surface Water	Analyzed	Not applicable	Not applicable
Water Supply	Analyzed	Not applicable	Not applicable
Flood Protection	Analyzed	Not applicable	Not applicable
Groundwater	Analyzed	Not applicable	Not applicable
Water Quality	Analyzed	Not applicable	Not applicable
Fish and Aquatic Resources	Analyzed	Analyzed	Not applicable
Terrestrial Biological Resources	Analyzed	Analyzed	Analyzed
Land Use	Analyzed	Not applicable	Analyzed
Agricultural Resources	Analyzed	Not applicable	Analyzed
Noise and Vibration	Analyzed	Not applicable	Analyzed

Resource area discussions include a summary of applicable impacts from the Final EIR. Resource area discussions only discuss refinements and updates that may have a change in effect. Each resource section discussion includes an explanation about how the proposed Delta Conveyance Project refinements as a part of the 2081(b) ITP Application process and other project refinements and updates will not result in new impacts or a substantial increase in the severity of a previously identified impact in the Final EIR and a CEQA conclusion statement. As discussed below, impacts associated with project refinements and updates will generally be reduced or the same as those described in the Final EIR resource analysis.

4.1 Surface Water (Final EIR Chapter 5)

This section discusses the proposed project refinements as they relate to potential changes to surface water resources discussed in Final EIR Chapter 5, *Surface Water*.

4.1.1 Operational and Modeling Refinements

The operational refinements described in Section 3.1.1, *Operational and Modeling Refinements*, will not result in substantial changes in river flows and upstream storages from what was presented in the Final EIR (i.e., the impact of the project on flow and upstream storages will not change). As discussed in Final EIR Chapter 5, CalSim 3 was used to simulate SWP/CVP operations, providing information about the surface water flows and reservoir storage to evaluate surface water-related changes associated with project alternatives. Potential changes to surface water resources that could result from the project, by themselves, were not considered an impact under CEQA, and thus, were not evaluated as impacts in the chapter. Instead, the changes framed the analysis for other resources that are dependent on surface water flows. Therefore, surface water changes resulting from operational refinements are discussed in the same manner.

Modeling completed for the ITP Application process indicates that operational refinements would not result in substantial changes to Sacramento River Basin flows as compared to the changes that were presented in the Final EIR. Generally, changes in surface water flows under operational refinements as compared to the refined existing condition baseline follow similar monthly flow

patterns as those seen for the flows that were simulated and presented in the Final EIR (Figures 1 through 8 in Attachment A).

SWP and CVP changes in end-of-May and end-of-September reservoir storage under operational refinements would be within a similar percentage of the refined baseline condition as compared to the changes in storage presented in the Final EIR (Figures 14 through 23 in Attachment A). The primary difference between the two occurs in the San Luis Reservoir, where the pattern of change in end-of-May storage from the refined baseline condition to the project differs slightly between the Final EIR modeling and the refined modeling in support of the ITP development process (Figure 22). This is due to different assumptions on regulations controlling south Delta and Delta Conveyance Project diversions in the refined modeling. Despite the slight differences in the pattern of change, the overall change in storage would be less under the refined modeling in support of the ITP development process.

4.1.2 Conclusion

Overall, refined project operations will result in changes to river flows and upstream storages similar to the changes that were presented in the Final EIR. By themselves, changes to surface water are not considered an impact under CEQA. No specific impact assessment results are discussed in this section because the effects of these changes are not considered environmental impacts under CEQA.

4.2 Water Supply (Final EIR Chapter 6)

This section discusses the proposed project refinements as they relate to potential changes to SWP and CVP water supply discussed in Final EIR Chapter 6, *Water Supply*.

4.2.1 Operational and Modeling Refinements

The operational refinements described in Section 3.1.1 will result in similar changes in SWP and CVP water supply deliveries as those presented in the Final EIR. As discussed in Final EIR Chapter 6, CalSim 3 was used to simulate SWP/CVP operations and changes in reservoir storage, annual deliveries, and Delta outflow. These simulations were presented to provide a basis for understanding changes in SWP and CVP exports and deliveries. Potential changes to water supply that could result from the project, by itself, were not considered an impact under CEQA, and thus, were not evaluated as impacts in the chapter. Instead, the changes were provided as a basis for understanding the impact assessments associated with other resource chapters in the Final EIR. Therefore, water supply changes resulting from operational refinements are also discussed in the same manner. The comparison of changes in water supply as presented in the Final EIR and under the refined project operations is presented in Tables 1 and 2 in Attachment B, *Water Supply Tables*.

Similar to the total SWP deliveries in the Final EIR, under refined project operations, deliveries are expected to increase over existing conditions; however, the increase is slightly less than what was presented in the Final EIR (i.e., 13% increase versus 15% increase, respectively). Changes in annual deliveries in the SWP Feather River Service Area remain unchanged from what was presented in the Final EIR. Table A deliveries were similar under refined project operations, although increases under all water year types will be slightly lower (about 1%) than what was presented in the Final EIR (Attachment B, Table 1).

While there is a change in Article 21 deliveries on a raw percentage basis, the absolute change in deliveries in the ITP Application models as compared to the Final EIR models is fairly similar, indicating that the operational refinements will not have a substantial effect on Article 21 increases. For average annual Article 21 deliveries, the ITP Application models showed an increase of 199 thousand acre-feet (TAF) while the Final EIR showed an increase of 235 TAF. In dry/critical years, the ITP Application models show an increase of 4 TAF vs. 0 TAF in the Final EIR models. CVP deliveries show only minor changes in the ITP Application models, and are similar to the Final EIR models.

Table 2 in Attachment B provides a comparison of Delta outflow and exports under refined project operations as compared to outflow and exports reported in the Final EIR. The changes in outflow and exports are similar when comparing the ITP Application refined project with the ITP Application existing conditions as with EIR Alternative 5 compared to EIR existing conditions, except the increase in exports is somewhat less, due to the operational refinements discussed earlier.

4.2.2 Conclusion

Refined project operations result in a reduction in SWP Delta exports relative to the Final EIR and no change in SWP Feather River Service Area or CVP water deliveries. By themselves, changes to water supply are not considered an impact under CEQA. No specific impact assessment results are discussed in this section because the effects of these changes are not considered environmental impacts under CEQA.

4.3 Flood Protection (Final EIR Chapter 7)

This section discusses the proposed project refinements as they relate to the impacts discussed in Final EIR Chapter 7, *Flood Protection* (i.e., Impacts FP-1 and FP-2).

4.3.1 Operational and Modeling Refinements

Consistent with the analysis in the Final EIR, the project is being implemented for water supply purposes and operational refinements do not include or result in changes in flood management infrastructure in the Sacramento River Basin and in the Delta, including the reservoirs of the Sacramento River Flood Control Project and CVP, and associated flood operation rules and management. Project operations will be conducted consistent with regulatory requirements for State Plan of Flood Control levees and the Central Valley Flood Protection Plan. Operational refinements will not result in an increase in water surface elevations during a 100- or 200-year flood event beyond what was previously described in the Final EIR, and Impacts FP-1 and FP-2 will remain less than significant.

4.3.2 Conclusion

Overall, refined project operations will not create new significant impacts or increase the severity of a previously identified significant impact on flood protection. Additionally, no changes in circumstances or new information of substantial importance have been identified for flood protection that could result in any new potentially significant effects or a substantial increase in the severity of previously identified significant effects.

4.4 Groundwater (Final EIR Chapter 8)

This section discusses project refinements as they relate to the impacts discussed in Final EIR Chapter 8, *Groundwater* (i.e., Impacts GW-1 through GW-7).

4.4.1 Operational and Modeling Refinements

The operational refinements described in Section 3.1.1 will not result in new significant impacts or substantially increase the severity of previously identified significant impacts on groundwater as analyzed in the Final EIR. As discussed in Final EIR Chapter 8, changes to groundwater conditions as a result of project operations will be less than significant. Evaluation of operational effects on groundwater conditions for the Final EIR was conducted using the DeltaGW model, an integrated surface water–groundwater model. The DeltaGW model builds on and incorporates the results of the surface water analysis conducted using CalSim 3 to simulate changes to groundwater conditions. The primary components influencing changes to groundwater conditions as a result of project operations are the baseline surface water flows in the lower Sacramento River and project diversions at the new north Delta intakes.

Comparing the Final EIR baseline against the ITP baseline as modeled by the CalSim 3 model shows minor increases or decreases, depending on the month, in surface water flows in the Sacramento River at Verona. The difference between the modeled flows for the Sacramento River at Verona that were presented in the Final EIR and under the refined project operations is negligible. The timing of the Sacramento River flows at Verona is slightly different under the ITP baseline compared to the timing used in the Final EIR baseline, with higher flows in the spring/early summer (April through June) and fall (September through November) and slightly lower flows in July and in the winter (December through March). Average monthly flows for the Sacramento River at Verona between the Final EIR baseline and ITP baseline are shown on Figure 1 of Attachment C, *Groundwater Figures*.

Diversions associated with project operations at the north Delta intakes under the refined project operations show a reduction in net volume compared to the analysis conducted for the Final EIR. An average of 590 TAF is diverted under the refined project operations compared to 749 TAF per year under the Final EIR. Larger reductions in diversions are seen in February, March, and July, with smaller changes in other months. Small increases in diversions are seen in November and June. A comparison of the average monthly diversions at the north Delta intakes between the Final EIR and under refined project operations is shown on Figure 2 of Attachment C. The increases and decreases to diversions correspond to increases and decreases in streamflows in the Sacramento River, and therefore, the water left in the Sacramento River under project refinements is similar to that shown for project operations in the Final EIR. Any quantitative changes will not create new significant impacts or increase the severity of a previously identified significant impact. The total annual diversion volume with operational refinements is significantly lower than that evaluated in the EIR analysis, and diversions in some individual months (i.e., July, August, September) are measurably lower than the maximum diversions in the Final EIR analysis. As a result, the Impacts GW-1 through GW-7 under refined operations are expected to be less than those described in the Final EIR.

The review of the surface water inflows and project diversions associated with the revised surface water modeling shows there will not be any changes to operations-related significance conclusions of the Final EIR or increase in the magnitude of previously identified changes to groundwater

conditions. Operational changes to surface water flows and diversions are minimal and do not suggest they will result in any substantial change to groundwater conditions in the Delta region.

4.4.2 Conclusion

Overall, refined project operations will not create new significant impacts or increase the severity of a previously identified significant impact on groundwater. Additionally, no changes in circumstances or new information of substantial importance have been identified for groundwater resources that could result in any new potentially significant effects or a substantial increase in the severity of previously identified significant effects.

4.5 Water Quality (Final EIR Chapter 9)

This section discusses the proposed project refinements as they relate to the impacts discussed in Final EIR Chapter 9, *Water Quality*. The discussion is applicable to water quality impacts affected by changes in operations (i.e., Impacts WQ-2 through WQ-14), such as effects on bromine, chloride, electrical conductivity (EC), dissolved oxygen, trace metals, turbidity, and cyanobacterial harmful algal blooms. The discussion is not applicable to impacts that will not be affected by the operational refinements to the project, such as impacts related to construction and consistency with water quality control plans (i.e., Impacts WQ-1 and WQ-15 through WQ-17).

4.5.1 Operational and Modeling Refinements

The Final EIR impact determinations in Chapter 9 were based on a comparative analysis, which assessed the frequency and magnitude of expected changes in water quality parameters at numerous locations within the study area due to project operations relative to existing conditions. Minimal water quality changes and no significant water quality impacts due to project operations were identified in the Final EIR for surface waters upstream of the Delta. Changes in Delta water quality due to project operations described in the Final EIR were primarily driven by modeled changes to Delta inflows, exports, and outflows. Consequently, to determine whether the operational refinements to the project will change any of the water quality impact determinations presented in the Final EIR, incremental differences in the modeling output for these key parameters from the project and baseline model runs completed in support of the ITP Application were compared to incremental difference for these same parameters in the Final EIR. The specific outputs evaluated from CalSim 3 were Sacramento River flows at Freeport, exports at Jones Pumping Plant and Harvey O. Banks (Banks) Pumping Plant, north Delta diversions, and Delta outflow. Delta water quality as affected by project operations would be a result of changes in source water (i.e., Sacramento River) inflows and outflows, which change the relative contributions of primary source waters across the Delta. In addition, incremental electrical conductivity (EC) differences with the refined project relative to the baseline, as modeled for the ITP Application process using DSM2 at the Delta D-1641 compliance locations, were compared to EC incremental differences disclosed for the Delta D-1641 compliance locations between the project and existing conditions in the Final EIR to directly assess the effects of refined project operations on salinity-related parameters.

The incremental differences between the project with operational refinements and the ITP baseline are compared to the incremental differences between the Final EIR project and the Final EIR baseline in the following subsections.

4.5.1.1 Sacramento River Flows Downstream of the North Delta Diversion

The modeled monthly average Sacramento River flow downstream of the north Delta diversion for the full simulation period for the refined project operations is similar to the ITP baseline for all months of the year, as shown on Figure 1 of Attachment D, *Water Quality Figures*, which is the same finding presented in the Final EIR. The greatest reduction in modeled monthly average flow relative to the ITP baseline is in January, February, and March, which is also the same finding presented in the Final EIR, with the average incremental flow reduction with the operational refinements being of similar magnitude to that shown in the Final EIR. Because the differences in modeled Sacramento River flows due to the operational refinements compared to the ITP baseline are similar in magnitude to the differences described in the Final EIR, the operational refinements to the project do not result in any substantial change to water quality conditions within the Delta, Suisun Marsh, San Francisco Bay, or the SWP/CVP export service area beyond what was previously described in the Final EIR in Impacts WQ-2 through WQ-14.

4.5.1.2 Delta Outflow

The Final EIR showed the modeled Delta outflow with the project to be the same or somewhat less compared to existing conditions for each month of the year. The operational refinements to the project as depicted by the modeling done in support of the ITP development process shows the same relationship to its ITP baseline condition, and the monthly average reduction in outflow relative to the baseline is of similar magnitude to that shown for the Final EIR in most months, as shown on Figure 2 of Attachment D. A notable exception is March for the project with operational refinements, where modeling shows a lesser reduction in average March outflow relative to the ITP baseline compared to the Final EIR. Being more similar to the ITP baseline, this condition will cause less change in water quality relative to the baseline, and thus will have lesser effects on water quality compared to those described in the Final EIR. Therefore, the operational refinements to the project do not result in any substantial change to water quality conditions within the Delta, Suisun Marsh, San Francisco Bay, or the SWP/CVP export service area beyond what was previously described in the Final EIR in Impacts WQ-2 through WQ-14.

4.5.1.3 Jones Pumping Plant

In the Final EIR, long-term monthly average modeled exports at Jones Pumping Plant with the project are similar to or slightly higher than under existing conditions each month of the year. With the operational refinements to the project as depicted by the modeling done in support of the ITP development process, exports at Jones Pumping Plant will be more similar to the baseline, as shown on Figure 3 of Attachment D. Hence, operational refinements will reduce the average effect on Jones Pumping Plant exports on Delta water quality relative to the ITP baseline condition. Hence, to the degree that Jones Pumping Plant exports affect Delta water quality, the operational refinements will result in similar or lesser effects compared to the water quality effects disclosed in the Final EIR for the Delta, Suisun Marsh, San Francisco Bay, or the SWP/CVP export service area in Impacts WQ-2 through WQ-14.

4.5.1.4 Banks Pumping Plant

The differences in the modeled Banks Pumping Plant exports between the project with operational refinements and the ITP baseline are similar to or less than the modeled differences between the project and existing conditions presented in the Final EIR, as shown on Figure 4 of Attachment D. The Final EIR showed that monthly average exports from Banks Pumping Plant with the project will be lower than exports under existing conditions in all months of the year. The operational refinements to the project as depicted by the modeling done in support of the ITP development process also show lower average monthly exports at Banks Pumping Plant relative to the ITP baseline, but the magnitude of average monthly reduction is somewhat less January through September, and November, and somewhat greater in October and December compared to that presented in the Final EIR. To the degree that Banks Pumping Plant exports affect Delta water, the operational refinements to the project will result in similar or lesser effects compared to those described in the Final EIR for the Delta, Suisun Marsh, San Francisco Bay, or the SWP/CVP export service area in Impacts WQ-2 through WQ-14.

4.5.1.5 Electrical Conductivity

To further assess the effects that operational refinements to the project could have on Delta and downstream water quality, an evaluation of EC output from DSM2 for the D-1641 compliance locations was made. For the full simulation period, the probability with which any given EC levels will be exceeded was similar or the same between the operationally refined project and its ITP baseline and that shown for the project and existing conditions in the Final EIR. The magnitude of probability difference between the project and baseline for the operationally refined project was similar or the same as that modeled for the project in the Final EIR at all D-1641 compliance locations. Output is provided in Figures 5 through 16 of Attachment D for the D-1641 compliance locations for the full simulation period. Because EC in the Delta is the water quality parameter most affected by project operations, it serves as an effective surrogate for effects on other water quality parameters in the Delta and downstream waters. In other words, if the incremental differences in EC with the ITP Application modeling are similar to the incremental differences in EC in the Final EIR, then the operational refinements would result in incremental differences in the other water quality constituents similar to those described in the Final EIR (e.g., mercury, selenium, organic carbon, nutrients) in Impacts WQ-2 through WQ-14. Based on the small differences between the modeled scenarios of the Final EIR and those done in support of the ITP development process, the operational refinements to the project do not result in any substantial change to water quality conditions within the Delta, Suisun Marsh, San Francisco Bay, or the SWP/CVP export service area beyond what was previously described in the Final EIR.

4.5.2 Conclusion

Overall, the operational refinements will not create new significant impacts or increase the severity of a previously identified significant impact on water quality. Additionally, no changes in circumstances or new information of substantial importance have been identified for water quality that could result in any new potentially significant effects or a substantial increase in the severity of previously identified significant effects.

4.6 Fish and Aquatic Resources (Final EIR Chapter 12)

This section discusses the proposed project refinements relevant to the impacts discussed in Final EIR Chapter 12, *Fish and Aquatic Resources* (i.e., operations-related Impacts AQUA-2 through AQUA-20 and construction-related Impact AQUA-1).

4.6.1 Operational and Modeling Refinements

Updating of CalSim 3 modeling in the Final EIR to reflect the operational refinements described in Chapter 3, *Description of Project Refinements and Updates*, indicates that there will not be any changes to operations-related significance conclusions from the Final EIR, nor any new significant impact, nor any increase in the severity of the previously identified potentially significant impacts (i.e., Impact AQUA-2, Impact AQUA-3, Impact AQUA-5, Impact AQUA-6, and Impact AQUA-7). This is based on overall similarity in model outputs that reflect influences on potential operational effects on fish and aquatic resources (i.e., Sacramento River flows at Hood; Old and Middle River flows; Delta outflow; and X2). Additional modeling with ECO-PTM demonstrated that the change from the previous diurnal prioritization of north Delta diversion operations to north Delta diversion operations throughout the day resulted in minimal differences in through-Delta survival of juvenile Chinook salmon. The operational refinements described in Chapter 3 (i.e., modified bypass criteria) generally minimize overall impacts on fish and aquatic resources. Impacts will remain less than significant with the inclusion of Mitigation Measure CMP: *Compensatory Mitigation Plan* (specifically CMP-25, CMP-26, CMP-27, and CMP-28, as described in Attachment 3F.1, *Compensatory Mitigation Design Parameters*). Finally, the Biological Criteria, as well as other CESA-listed species minimization measures identified during the CESA consultation process, will function to ensure potential project effects are further minimized and fully mitigated, consistent with CESA requirements.

4.6.2 Project Refinements During Construction

Additional conditions related to impact pile driving, as described in Chapter 3, were identified consistent with Final EIR Environmental Commitment EC-14: *Construction Best Management Practices for Biological Resources* and Mitigation Measure AQUA-1a: *Develop and Implement an Underwater Sound Control and Abatement Plan*. These additional conditions included defining the potential for impact pile driving to occur during May 16 to May 31 and November 1 to November 15, subject to CDFW approval and provided that noise attenuation achieves an equivalent level of protection as during the main work window, and monitoring demonstrates absence of CESA-listed fish species. Impact AQUA-1 will remain less than significant with the inclusion of Mitigation Measure AQUA-1a.

4.6.3 Conclusion

Overall, the refined project operations and in-water construction work window will not create new significant impacts or increase the severity of a previously identified significant impact on fish and aquatic resources. Additionally, no changes in circumstances or new information of substantial importance have been identified for fish and aquatic resources that could result in any new potentially significant effects or a substantial increase in the severity of previously identified significant effects.

4.7 Terrestrial Biological Resources (Final EIR Chapter 13)

This section discusses project refinements and updates as they relate to the impacts discussed in Final EIR Chapter 13, *Terrestrial Biological Resources* (i.e., Impacts BIO-1 through BIO-57).

4.7.1 Operational and Modeling Refinements

The operational refinements as discussed in Section 3.1.1 will not result in any new significant terrestrial biological resources impacts nor any substantially more severe significant impacts as compared to those described in the Final EIR in Impacts BIO-1 through BIO-57. The operational refinements will not result in increased loss of modeled habitat or increase the potential for injury, mortality, or alteration of normal behaviors of terrestrial biological resources and will not change the significance conclusions from the Final EIR.

4.7.2 Updates for Utility Features

The updates for utility features as discussed in Section 3.1.2, *Updates for Utility Features*, will result in small changes to permanent and temporary impacts on modeled habitat for some terrestrial species (ICF 2024a), but the impacts will be similar to those described in Final EIR Chapter 13 in Impacts BIO-10 through BIO-14, BIO-16, BIO-18, BIO-21 through BIO-42, and BIO-44 through BIO-48, and will not result in any new significant terrestrial biological resources impacts as compared to those described in the Final EIR or increase the severity of the previously identified potentially significant impacts. Impacts will remain less than significant with inclusion of the mitigation measures identified in Chapter 13 of the Final EIR, including Mitigation Measure CMP: *Compensatory Mitigation Plan* (Appendix 3F, *Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources*) and the design commitments and guidelines CMP-0 through CMP-22, and CMP-29 (Attachment 3F.1, *Compensatory Mitigation Design Parameters*).

4.7.3 Project Refinements During Construction

The additional conditions identified during the CESA consultation process, as described in Chapter 3, for in-water impact pile driving at the north Delta intakes would not increase noise and visual disturbance impacts on terrestrial biological resources as analyzed in the Final EIR because they remain within the periods analyzed. Furthermore, the analysis of noise impacts from pile driving on terrestrial species is not limited to the in-water impact pile driving construction work window, but rather considers potential effects from all pile driving, both in water and on land. Impacts BIO-1 through BIO-57 will remain less than significant with implementation of the mitigation measures identified in Chapter 13 of the Final EIR.

4.7.4 Conclusion

Overall, the refined project operations, updates for utility features, and refined in-water construction work window will not create new significant impacts or increase the severity of a previously identified significant impact on terrestrial biological resources. Additionally, no changes in circumstances or new information of substantial importance have been identified for terrestrial

biological resources that could result in any new potentially significant effects or a substantial increase in the severity of previously identified significant effects.

4.8 Land Use (Final EIR Chapter 14)

This section discusses project refinements and updates as they relate to the impacts discussed in Final EIR Chapter 14, *Land Use* (i.e., Impacts LU-1 through LU-3).

4.8.1 Operational and Modeling Refinements

The operational refinements described in Section 3.1.1 will not result in new significant impacts or substantially increase the severity of previously identified significant impacts on land use impacts as analyzed in the Final EIR in Impacts LU-1 through LU-3. Implementation of the operational refinements will not result in any changes to project construction or project facilities as described in the Final EIR. Therefore, no new unanticipated removal of structures, changes in land use patterns, or conflicts with land use designations or policies will occur. As stated in Final EIR Chapter 14, operations will not result in effects on or conflicts with existing land uses.

4.8.2 Updates for Utility Features

The updates for some segments of project utility features resulted in updates to temporary and permanent impacts on acreages located in portions of the project study area. The updated affected acreages are located in Alameda, Sacramento, and San Joaquin Counties. However, the updates to the amount of affected acreages will not result in new incompatibilities with applicable land use designations, goals, and policies. Additionally, the areas that will be affected by the updated utility features overlap with other project features (e.g., roadways, facility footprints) considered in the calculation of affected acreages. Therefore, no new impacts as compared to those described in Final EIR in Impacts LU-1 through LU-3 will occur.

4.8.3 Conclusion

Overall, the operational refinements and updates for utility features will not create new significant impacts or increase the severity of a previously identified significant land use impact because no new conflicts with land use designations, policies, or plans will occur. Additionally, no changes in circumstances or new information of substantial importance have been identified for land use that could result in any new potentially significant effects or a substantial increase in the severity of previously identified significant effects.

4.9 Agricultural Resources (Final EIR Chapter 15)

This section discusses project refinements and updates as they relate to the impacts discussed in Final EIR Chapter 15, *Agricultural Resources* (i.e., Impacts AG-1 through AG-3).

4.9.1 Operational and Modeling Refinements

The operational refinements described in Section 3.1.1 will not result in new significant impacts or substantially increase the severity of previously identified significant impacts on agricultural

resources as analyzed in the Final EIR. As discussed in the Final EIR in Impact AG-3, there are no impacts from operations that will result in the physical conversion of Important Farmland (i.e., Prime Farmland, Unique Farmland, Farmland of Local Importance, Farmland of Statewide Importance), land subject to Williamson Act contract, or land under contract in Farmland Security Zones to nonagricultural uses. Further, as discussed in the Final EIR, operations are not anticipated to indirectly affect agriculture because although operation of the project's water conveyance facilities will modestly increase salinity regimes in the study area relative to existing conditions in the western Delta, operations will be in compliance with all water quality standards set by the State Water Board to be protective of Delta agricultural beneficial uses and will not result in a substantial conversion of Important Farmland to nonagricultural use. As discussed in Section 4.1, *Surface Water (Final EIR Chapter 5)*, flow variations associated with the operational refinements will be minor and similar to the flow changes described in the Final EIR. Furthermore, as described in Section 4.5, *Water Quality (Final EIR Chapter 9)*, the operational refinements do not result in any substantial change in water quality conditions described in the Final EIR, including effects on salinity parameters. Therefore, impact conclusions for agricultural resources would not differ from those identified in the Final EIR.

4.9.2 Updates for Utility Features

The updates for some segments of project utility features resulted in updates to temporary and permanent impacts on agricultural acreage. However, the amount of affected acreages was so small that it will not result in changes to the total percentage of impacted Important Farmland, land subject to Williamson Act contract, or land under contract in Farmland Security Zones as presented in Final EIR in Impacts AG-1 through AG-3 because the change would be less than 0.0001%. Additionally, the areas that will be affected by the updated utility features overlap with other project features (e.g., roadways, facility footprints) considered in the calculation of affected acreages. Therefore, updates to utility features will not result in new or more severe impacts as compared to those described in Final EIR Chapter 15, which concluded impacts on Important Farmland, land subject to Williamson Act contract, or land under contract in Farmland Security Zones to be significant and unavoidable (i.e., Impact AG-1 and Impact AG-2), and the mitigation described in the Final EIR will apply.

4.9.3 Conclusion

Overall, the operational refinements and updates for utility features will not create new significant impacts or increase the severity of a previously identified significant impact on Important Farmland, land subject to Williamson Act contract, or land under contract in Farmland Security Zones. Additionally, no changes in circumstances or new information of substantial importance have been identified for agricultural resources that could result in any new potentially significant effects or a substantial increase in the severity of previously identified significant effects.

4.10 Noise and Vibration (Final EIR Chapter 24)

This section discusses the proposed project refinements and updates as they relate to the operations impacts discussed in Final EIR Chapter 24, *Noise and Vibration*. The discussion is applicable to Impacts NOI-1 and NOI-2. The discussion is not applicable to Impact NOI-3 because the project refinements are not related to the influence of noise from aircraft or airports.

4.10.1 Operational and Modeling Refinements

The operational refinements described in Section 3.1.1 will not result in new noise or vibration impacts as analyzed in the Final EIR in Impacts NOI-1 and NOI-2. Implementation of the operational refinements will not result in any changes to project construction or project facilities as described in the Final EIR; therefore, no new noise or vibration-generating facilities associated with the operational refinements will occur. Further, the Final EIR indicated that pumping plants will include noise-attenuating measures that will be specified and implemented such that facilities will be in compliance with local noise level performance standards. As stated in Final EIR Chapter 24, operations are not expected to be a significant source of noise at the nearest receptors and the modifications to water flow from the operational refinements are too minimal to change this result.

4.10.2 Updates for Utility Features

The updates for some segments of utility features resulted in minor changes to noise level contours associated with short-term construction-related noise impacts for the updated utility and SCADA components. The updated noise level contours show that updated utility features result in a potential exceedance of the daytime noise limit at two additional residences due to short-term construction (mostly 1 to 2 days, but up to 1 to 2 weeks in some cases) that will occur in these locations. Final EIR Chapter 24 (Impact NOI-1) discloses that the project would result in significant and unavoidable construction-related exceedances of daytime noise level criteria associated with the construction of project infrastructure, including utility features. The identification of two additional residences that have the potential to be exposed to short-term exceedances of the daytime noise level criteria does not constitute a substantial increase in the severity of impacts as compared to those described in Final EIR Chapter 24 (i.e., Impact NOI-1 and Impact NOI-2), and the mitigation described in the Final EIR will apply to the additional residences. Additionally, the Final EIR concluded that if all eligible property owners participate in the mitigation, Mitigation Measure NOI-1: *Develop and Implement a Noise Control Plan*, the impacts will be less than significant with mitigation and the same will apply under the updates for utility features.

4.10.3 Conclusion

Overall, the operational refinements and updates for utility features will not create new significant impacts or increase the severity of a previously identified significant impact regarding noise. Additionally, no changes in circumstances or new information of substantial importance have been identified for noise and vibration that could result in any new potentially significant effects or a substantial increase in the severity of previously identified significant effects.

Chapter 5

Cumulative Effects

Under CEQA, cumulative impacts are defined as two or more individual effects on environmental resources, that when considered together, are considerable or compound or increase other environmental impacts (CEQA Guidelines §15355). Cumulative impacts consist of impacts that are created as a result of the combination of the project with other projects that would cause related impacts (CEQA Guidelines §15130 (a)(1)). The focus under CEQA cumulative impacts is on whether the project's incremental contribution to any significant cumulative impact is cumulatively considerable and thus significant in and of itself (CEQA Guidelines §15065(a)(3)). The related past, present, and reasonably foreseeable probable future projects and programs to be considered in the cumulative impacts analysis generally (though not always) are not components of, or outgrowths from, the individual identified projects or programs. Rather, the identified projects and programs are usually separate and distinct, often with different lead entities that may cause impacts similar to, or related to, those of the project or alternatives.

The environmental analysis provided in Chapter 4, *Environmental Analysis*, evaluates specific resource areas that could be affected by the project refinements and updates relative to the Final EIR environmental analysis. As discussed in the individual resource-specific analyses in Chapter 4, potential effects of the refined project will generally be similar or less, and impact determinations described in the Final EIR will remain the same in this Addendum. Because effects will be similar or less, the project's incremental contribution to any cumulative effect will not increase relative to the Final EIR analyses. Thus, the project refinements and updates do not change the cumulative analysis conclusions described in the Final EIR.

Chapter 6

Conclusion/Summary of Findings

As described in Chapter 4, *Environmental Analysis*, resource areas were assessed to determine whether the project refinements and updates or other changes made to the Final EIR as discussed in Chapter 3, *Description of Project Refinements and Updates*, will create new significant impacts or increase the severity of a previously identified impact in the Final EIR. Overall, the modified project will not create new significant effects or increase the severity of a previously identified significant effect presented in the Final EIR.

Chapter 7 References Cited

- California Department of Fish and Wildlife. 2024. *California Endangered Species Act Incidental Take Permit for Long-Term Operation of the State Water Project in the Sacramento–San Joaquin Delta*. Permit No. 2081-2023-054-00. November. Sacramento, CA. Available: https://water.ca.gov/-/media/DWR-Website/Web-Pages/News/Files/PDF--2081-2023-054-00-SWP-ITP_Final_20241104.pdf.
- California Department of Water Resources. 2024a. *Long-Term Operations of the State Water Project in the Sacramento-San Joaquin Delta, Suisun Marsh, and Suisun Bay Final Environmental Impact Report*. October. (ICF 104469.0.014.01.) Sacramento, CA. Prepared by ICF, Sacramento, CA. Available: <https://ceqanet.opr.ca.gov/2023060467/2>.
- California Department of Water Resources. 2024b. *The State Water Project Delivery Capability Report 2023*. July 2024. Available: <https://water.ca.gov/Library/Modeling-and-Analysis/Central-Valley-models-and-tools/CalSim-3/DCR>.
- California Department of Water Resources. 2023a. *Delta Conveyance Project Final Environmental Impact Report*. December. (ICF 103653.0.003.) Sacramento, CA. Prepared by ICF, Sacramento, CA. Available: <https://www.deltaconveyanceproject.com/planning-processes/california-environmental-quality-act/final-eir>.
- California Department of Water Resources. 2023b. *Evaluation and Adjustment of Historical Hydroclimate Data: Improving Representation of Current Hydroclimatic Conditions in Key California Watersheds*. December 2023. Available: <https://data.cnra.ca.gov/dataset/state-water-project-delivery-capability-report-dcr-2023/resource/ad861b0b-c0aa-4578-8af0-54485e751ca8>.
- California Department of Water Resources. 2023c. *Mitigation Monitoring and Reporting Program for the Delta Conveyance Project*. December. Prepared by ICF, Sacramento, CA. Available: <https://cadwr.app.box.com/s/qct5ey81zeyaxouccc25yyrotzfh2wq8>.
- Crother, B. I. 2017. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding*. Eighth Edition. Society for the Study of Amphibians and Reptiles. SSAR Herpetological Circular 43.
- ICF. 2024a. *Delta Conveyance Project, GIS Updates for Utility Features*. November. Sacramento, CA. Prepared for California Department of Water Resources, Sacramento, CA.
- ICF. 2024b. *Delta Conveyance Project, California Endangered Species Act*. April. (ICF 103653.) Sacramento, CA. Prepared for California Department of Water Resources, Sacramento, CA. Available: <https://www.deltaconveyanceproject.com/planning-processes/california-endangered-species-act/incidental-take-permit-application>.
- Rhodin, A. G. J., J. B. Iverson, R. Bour, U. Fritz, A. Georges, B. Shaffer, and P. O. van Dijk. 2017. *Turtles of the World. Annotated Checklist and Atlas of Taxonomy, Synonymy, Distribution, and Conservation Status (8th Ed.)*. Turtle Taxonomy Working Group. Chelonian Research Monographs, Number 7. New York, NY.

Attachment A Surface Water Figures

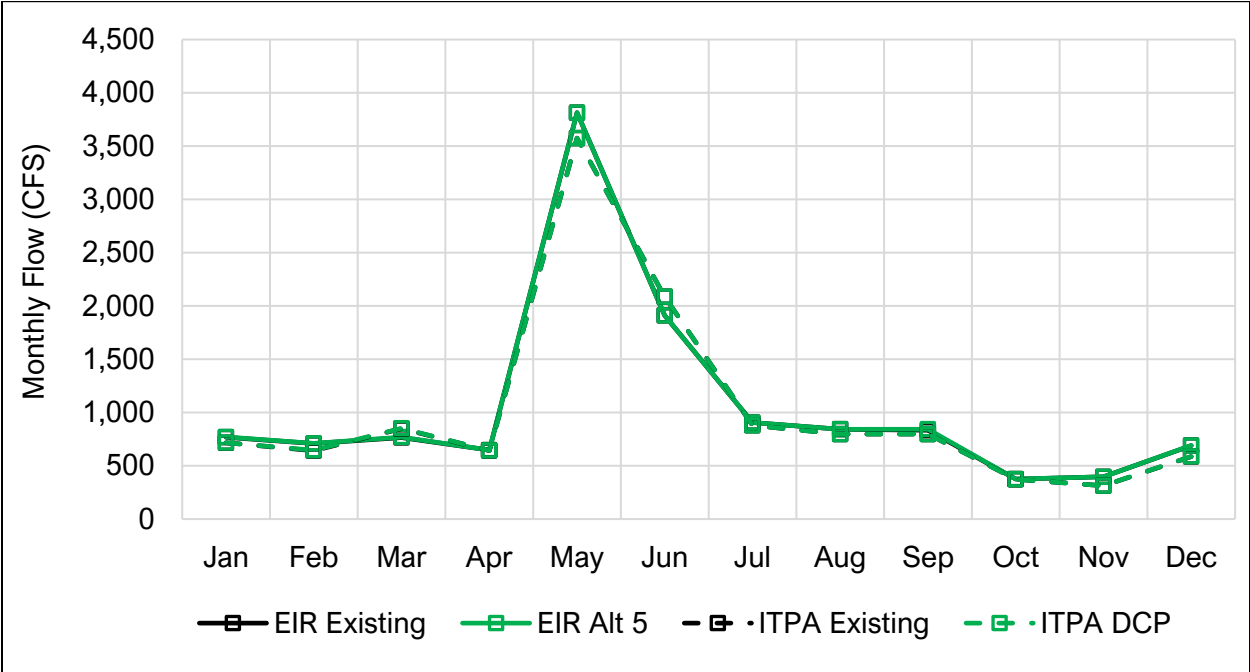


Figure 1. Trinity River at Lewiston, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

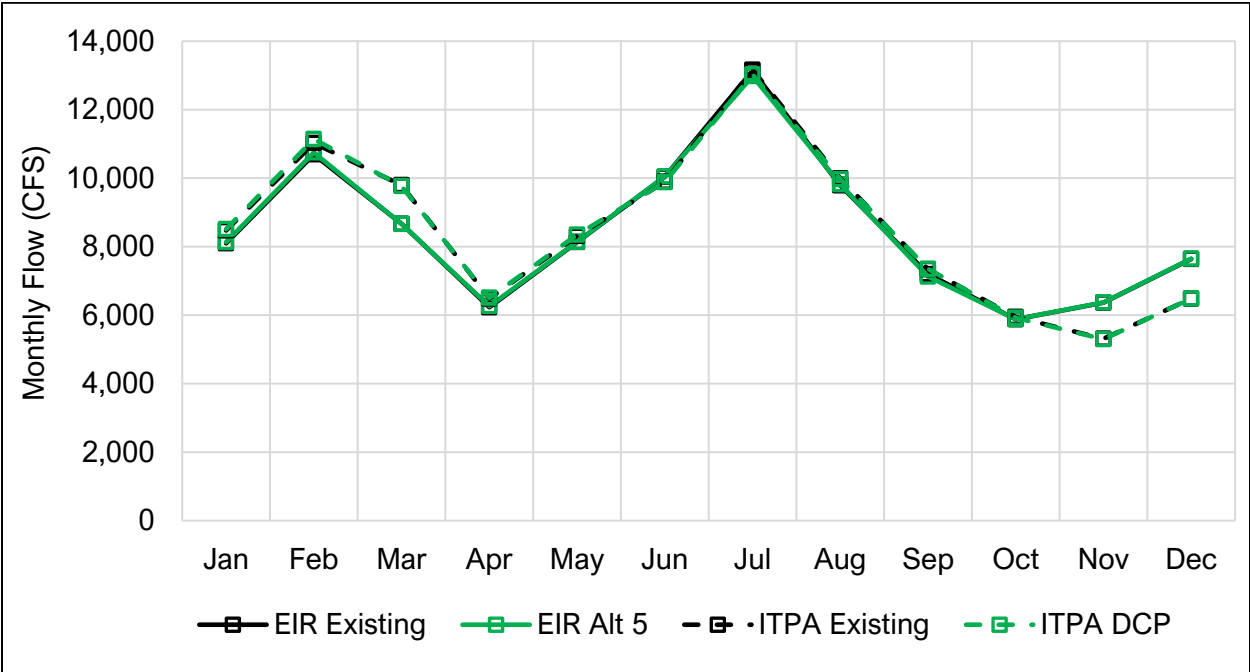


Figure 2. Sacramento River at Keswick, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

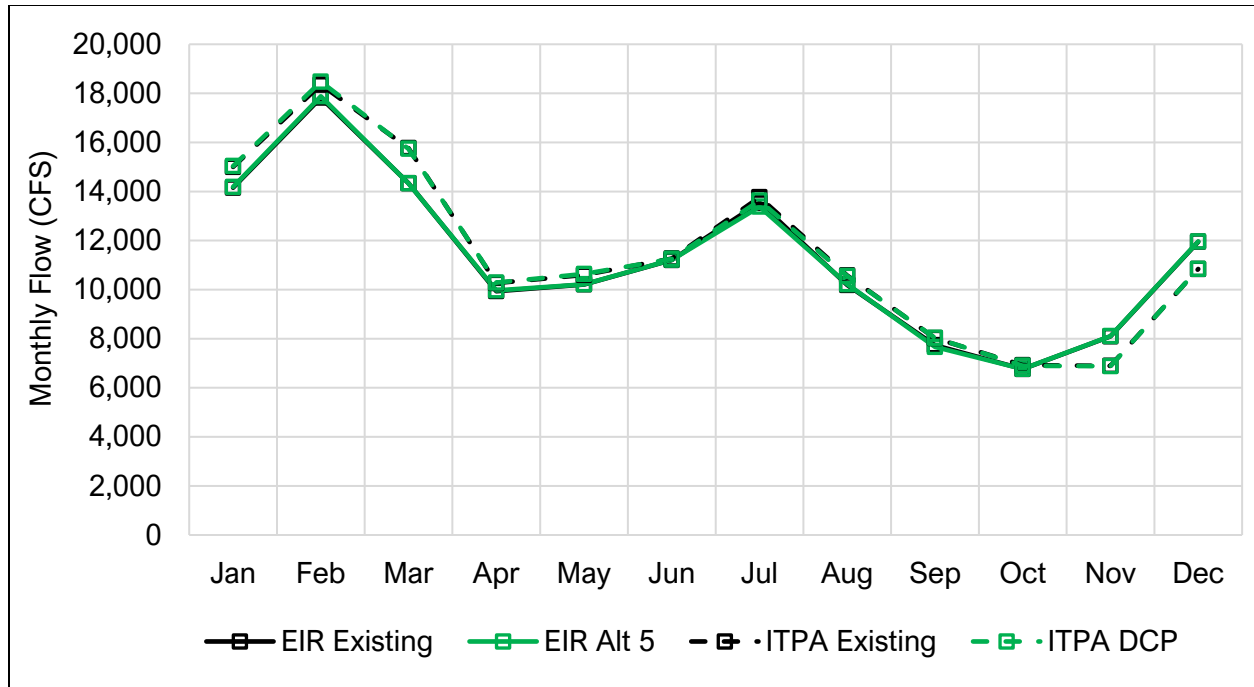


Figure 3. Sacramento River at Bend Bridge, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

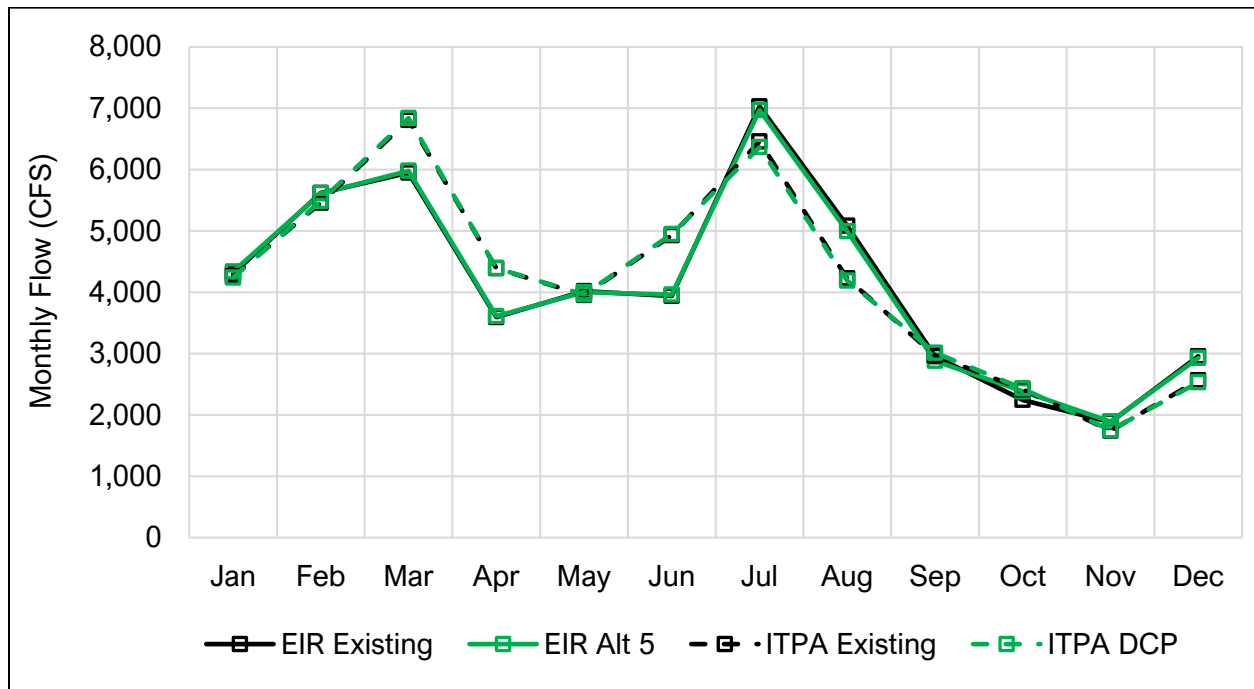


Figure 4. Feather River at Thermalito, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

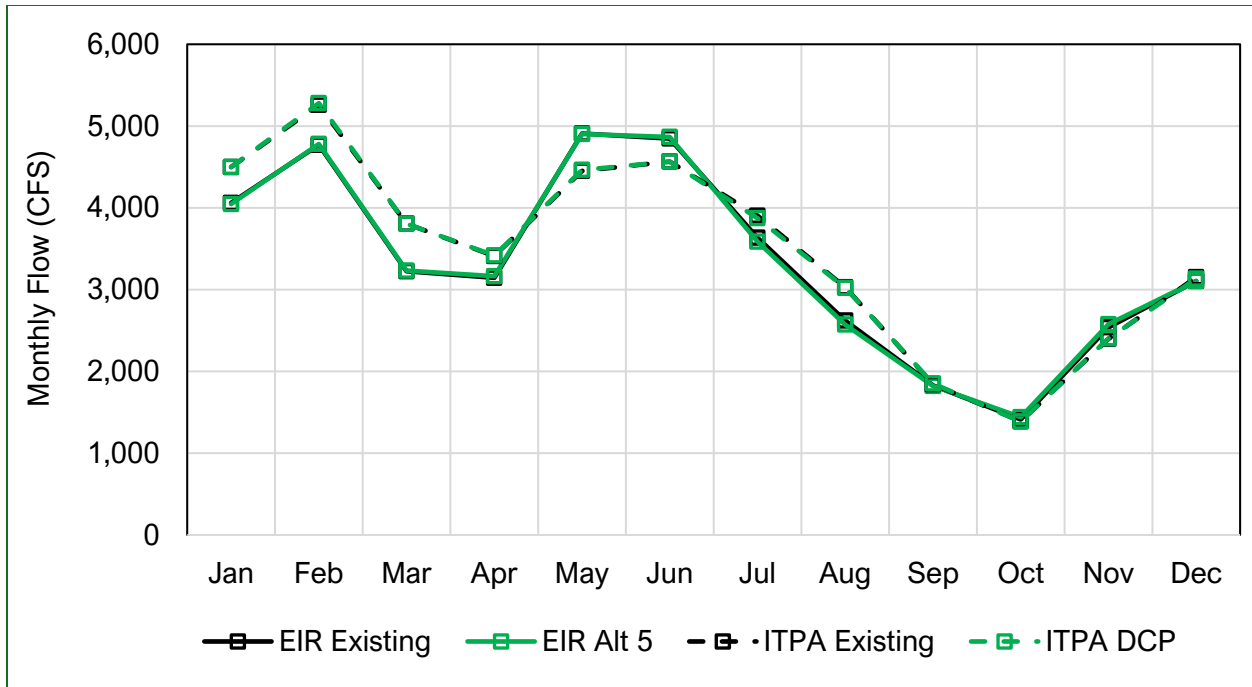


Figure 5. American River at Watt Ave, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

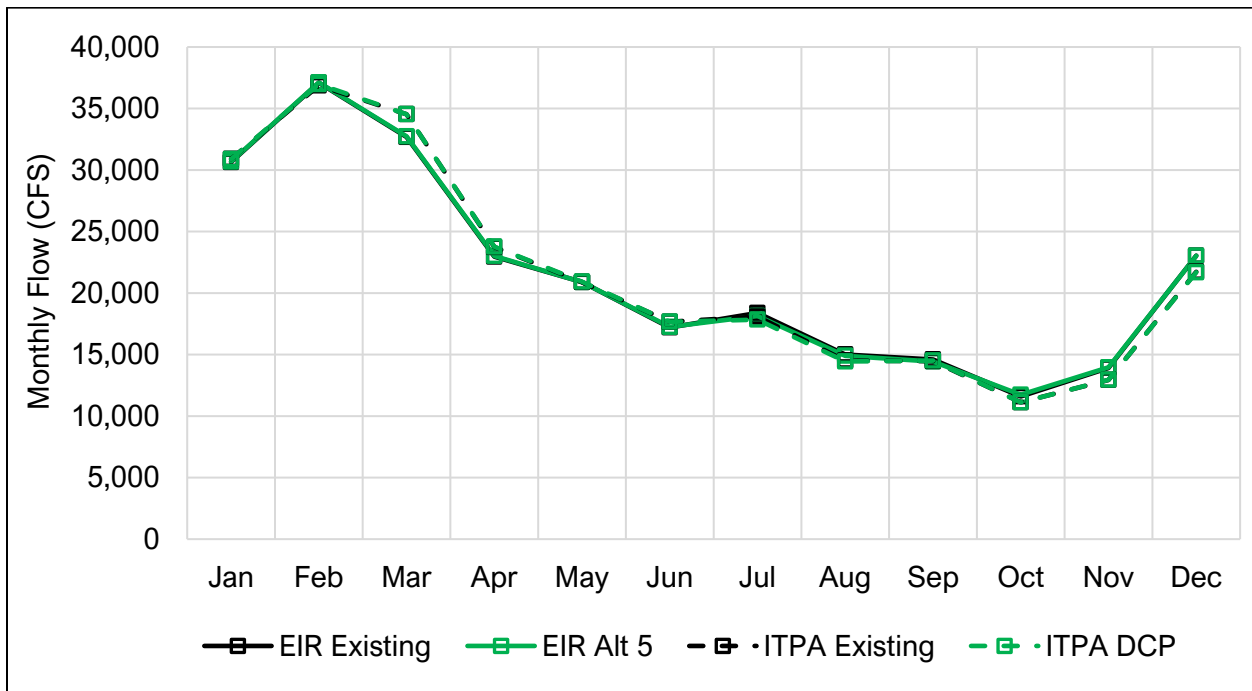


Figure 6. Sacramento River at Freeport, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITPA scenarios

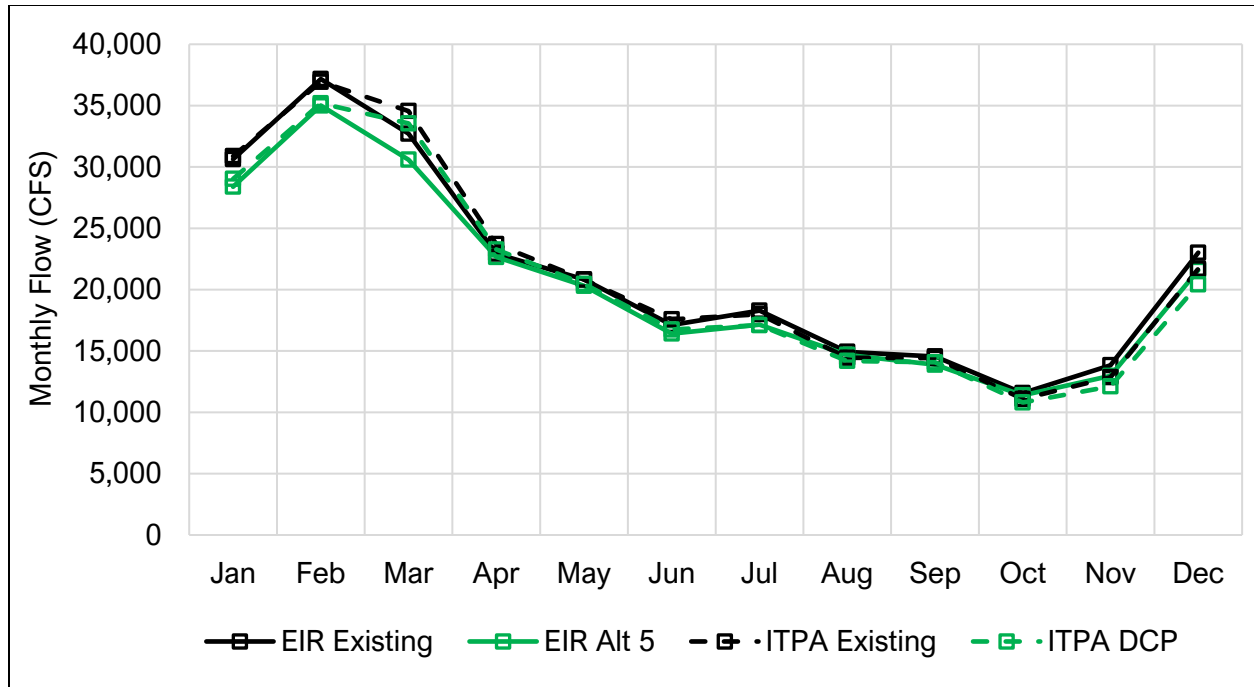


Figure 7. Sacramento River Flow Downstream of NDD, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

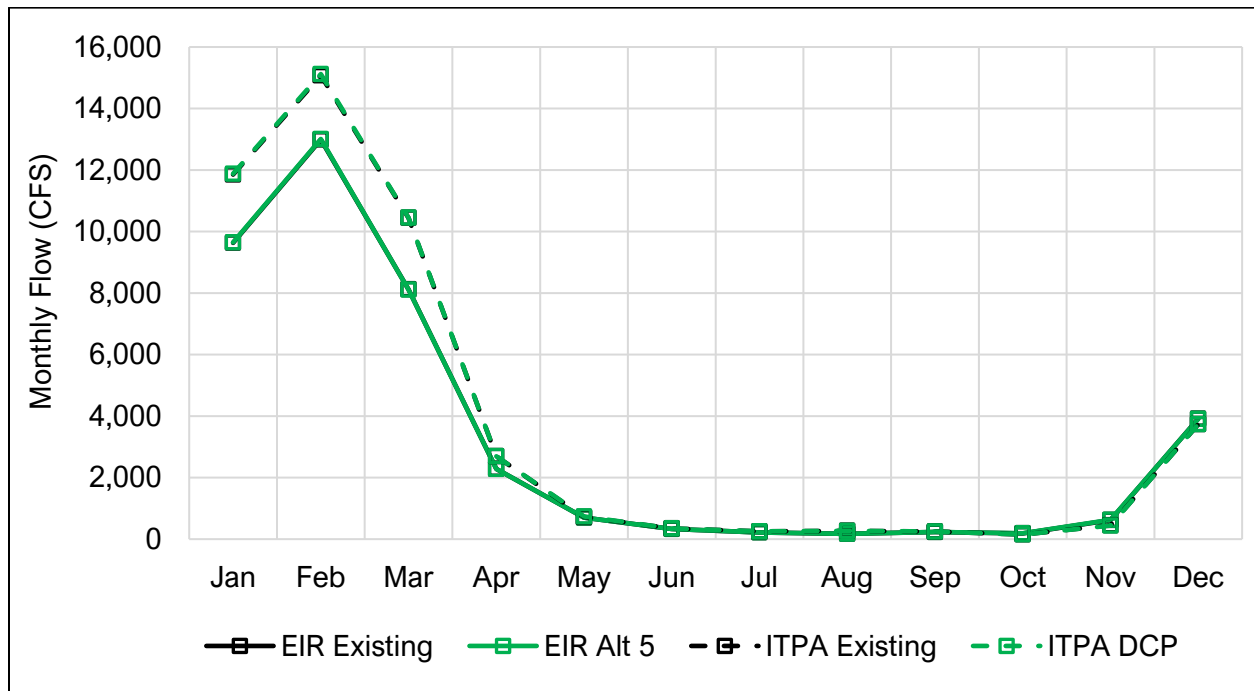


Figure 8. Yolo Bypass at Fremont Weir, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

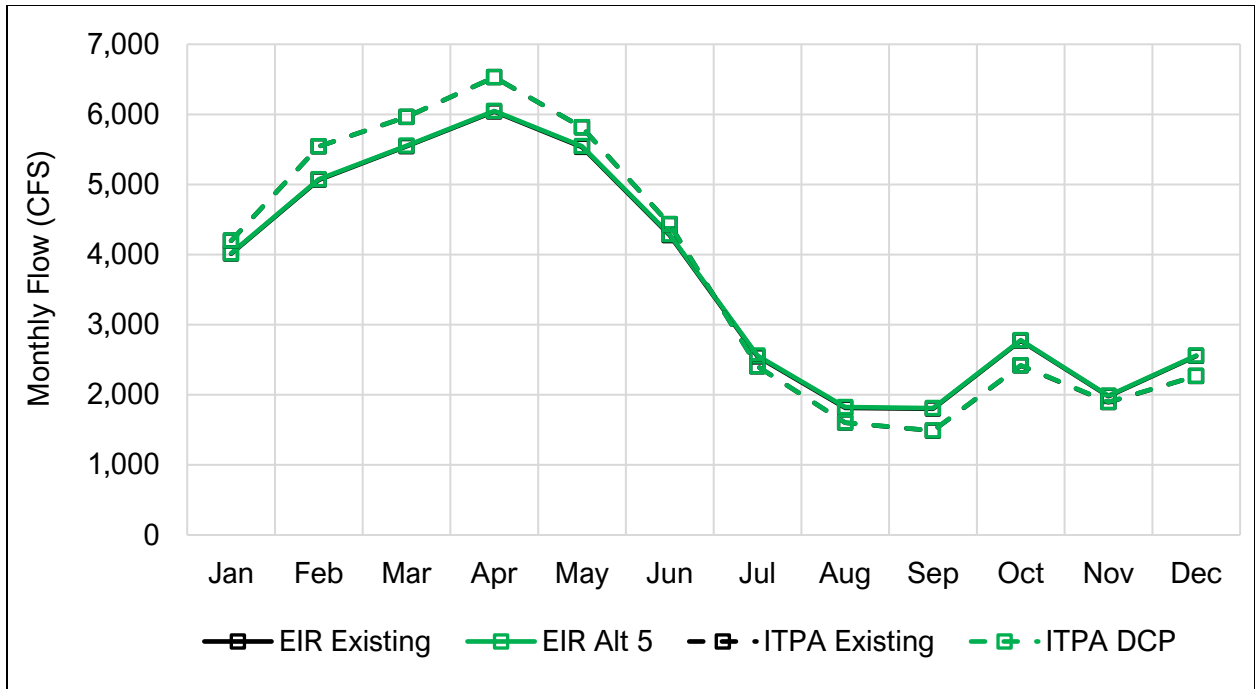


Figure 9. San Joaquin River at Vernalis, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITPA scenarios

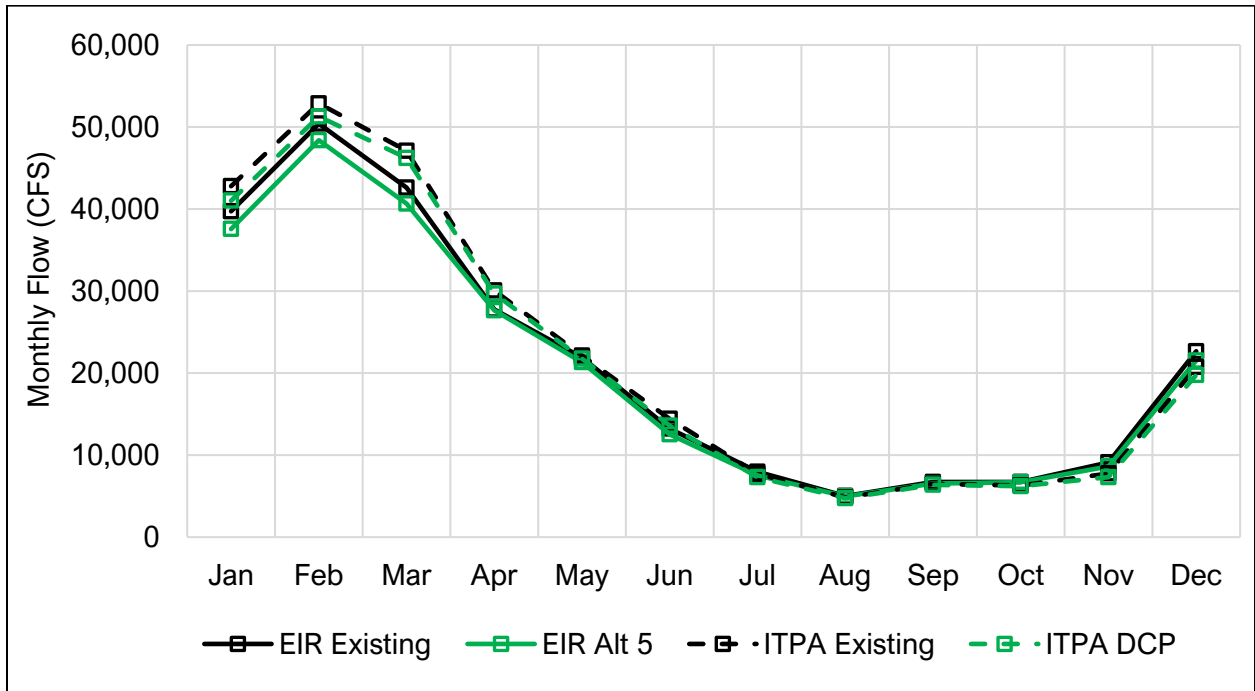


Figure 10. Delta Outflow (NDOI), Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

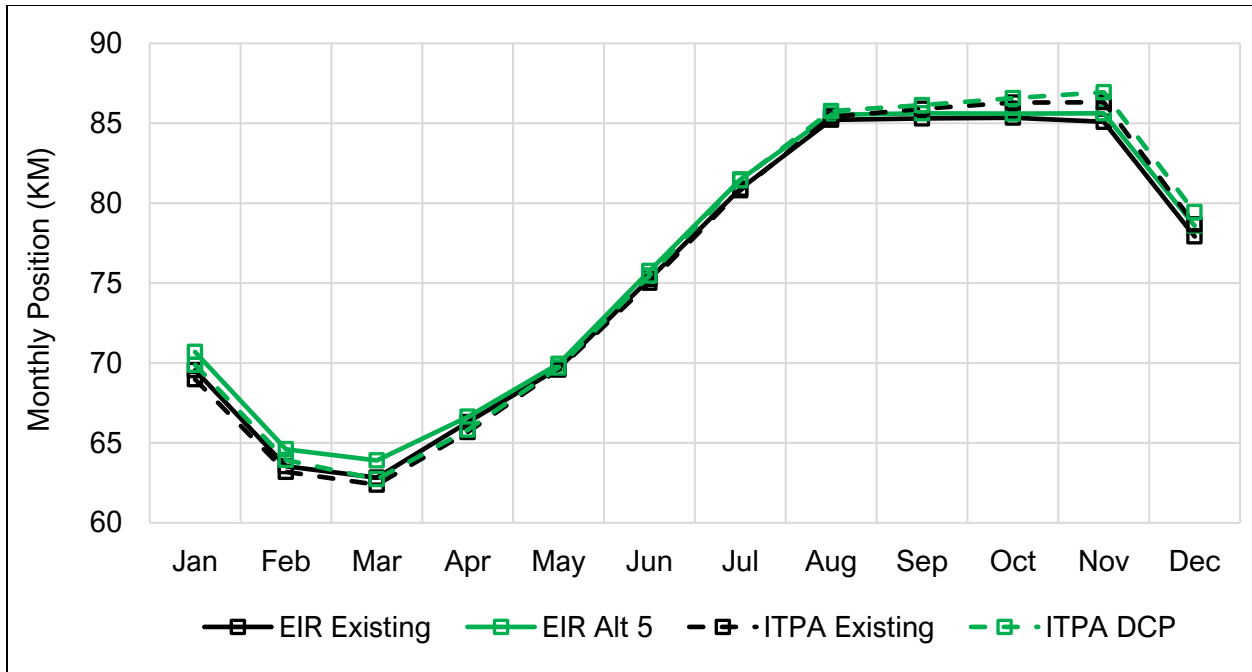


Figure 11. X2 Position, Monthly Average Position (kilometers), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

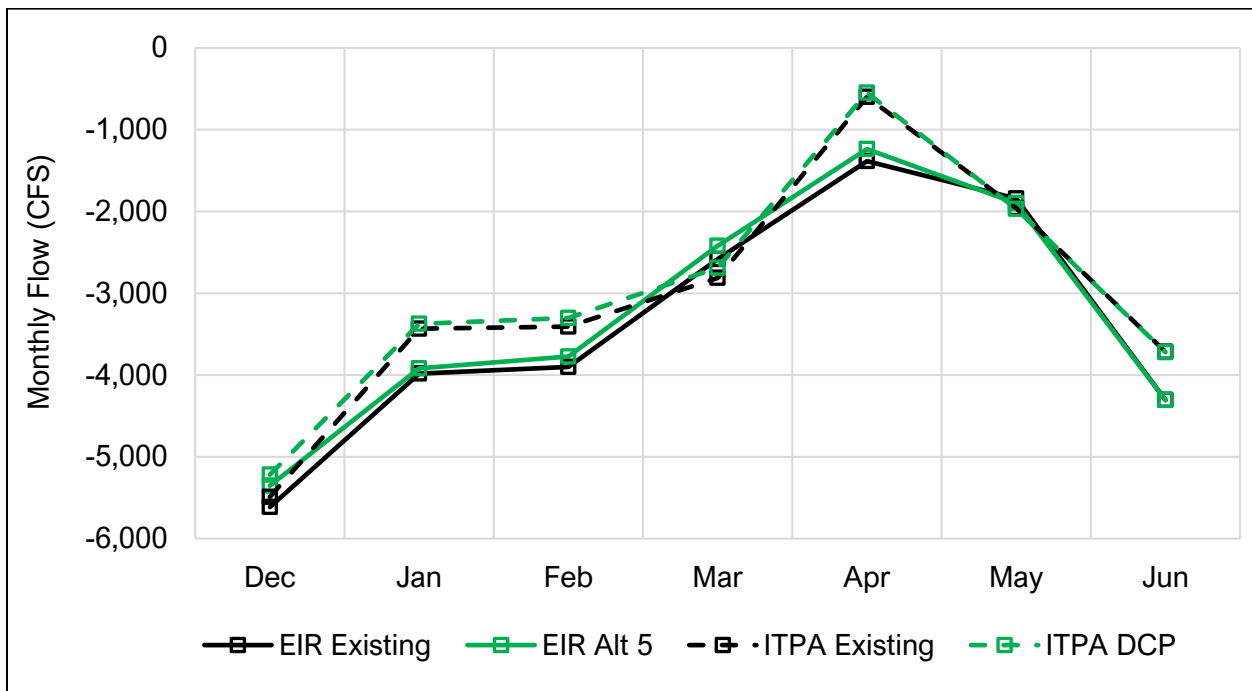


Figure 12. Combined Old and Middle River, Monthly Average Flow (cubic feet per second), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

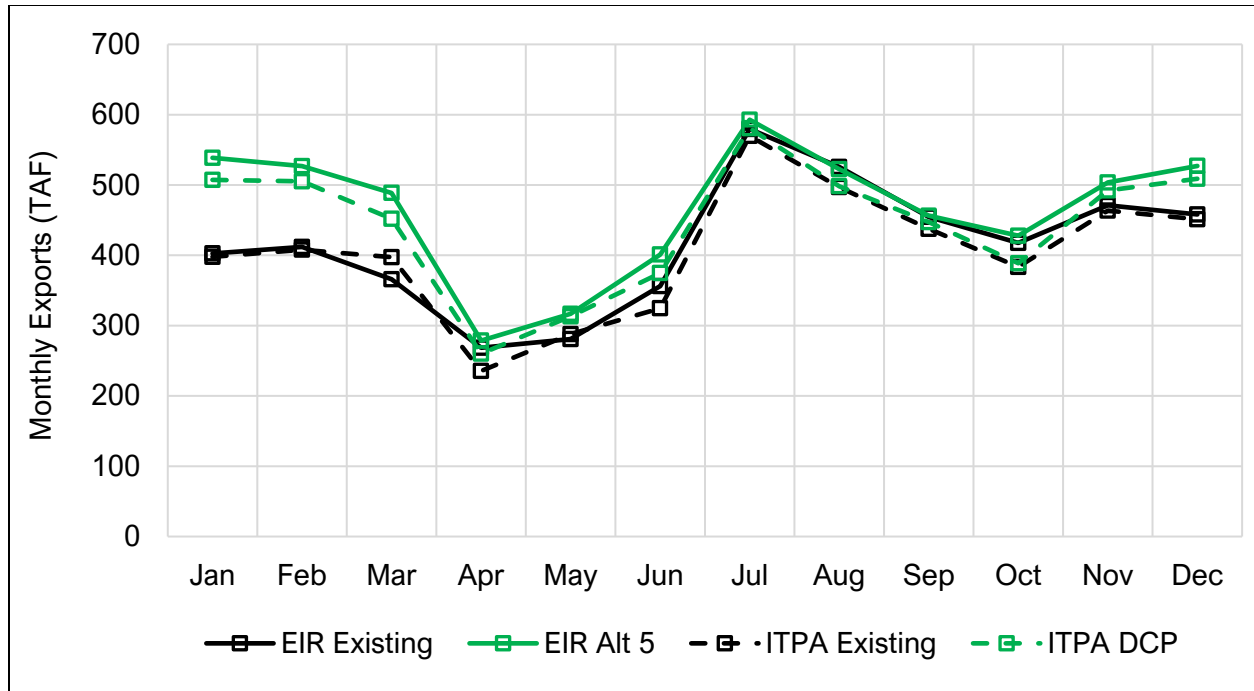


Figure 13. Total Delta Exports, Monthly Average Exports (thousand acre-feet), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

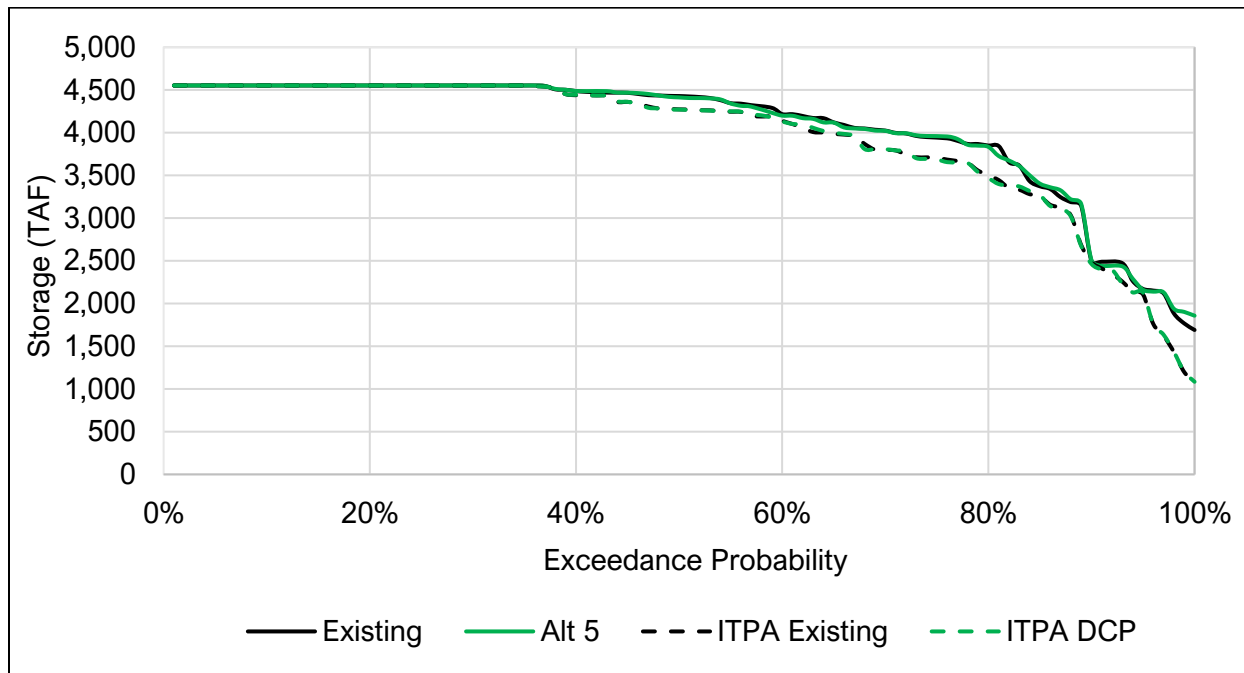


Figure 14. Shasta End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for May, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

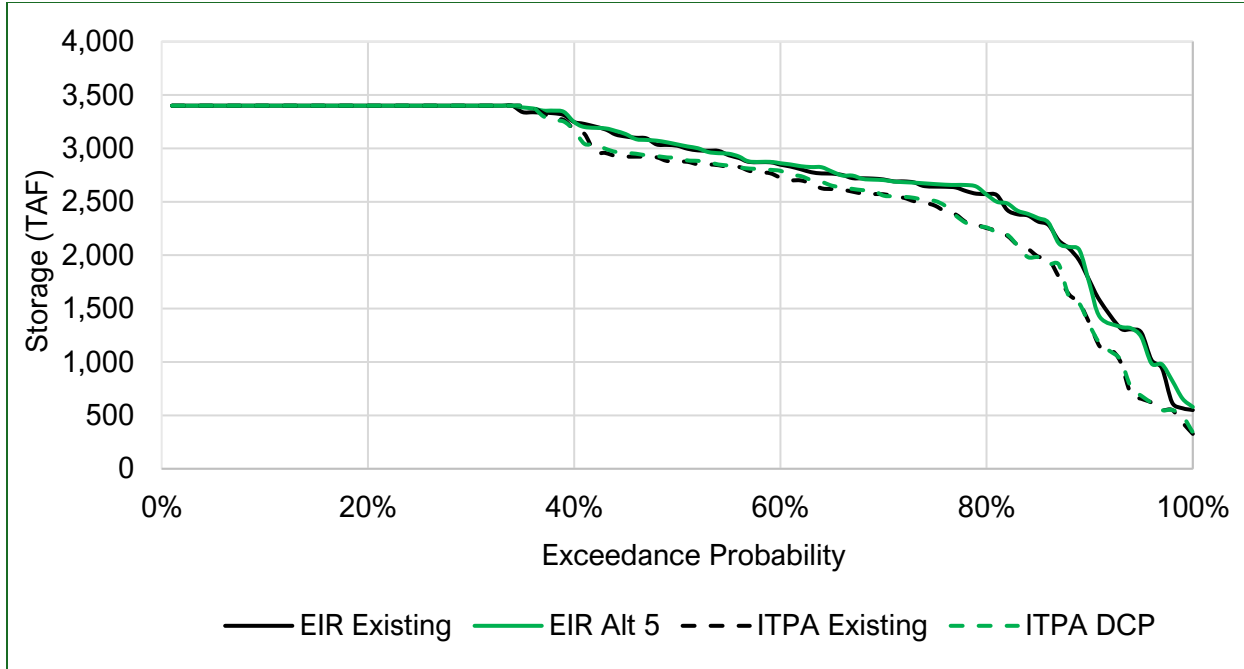


Figure 15. Shasta End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for September, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

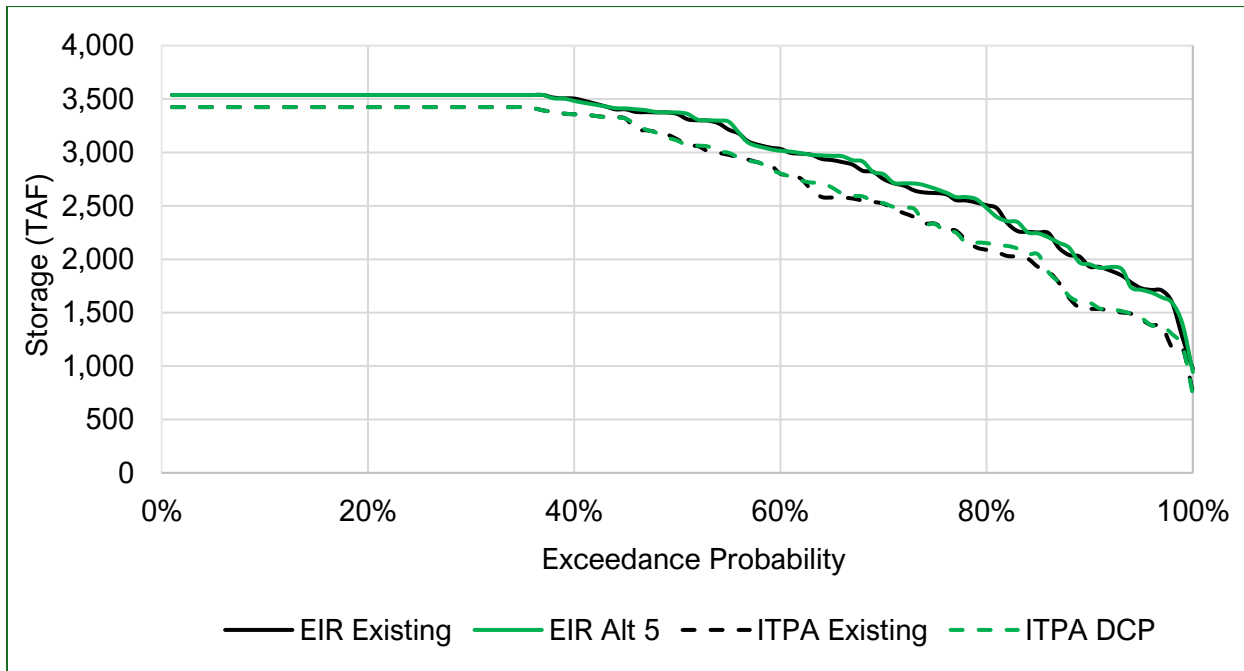


Figure 16. Oroville End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for May, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

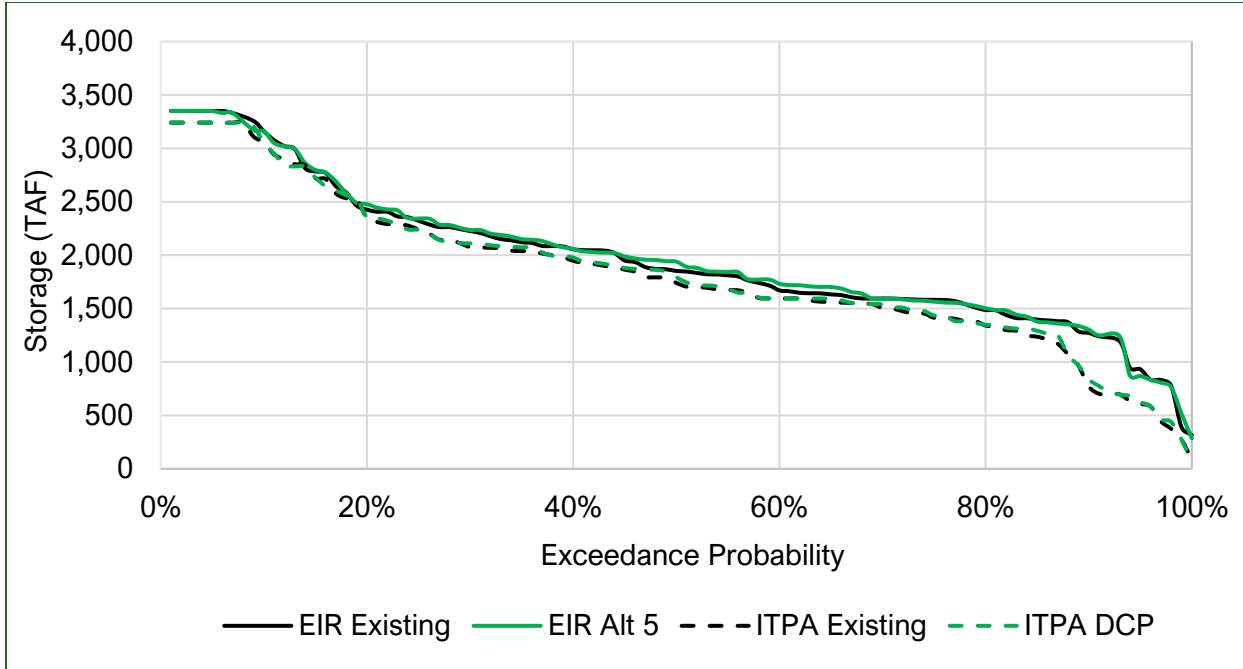


Figure 17. Oroville End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for September, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

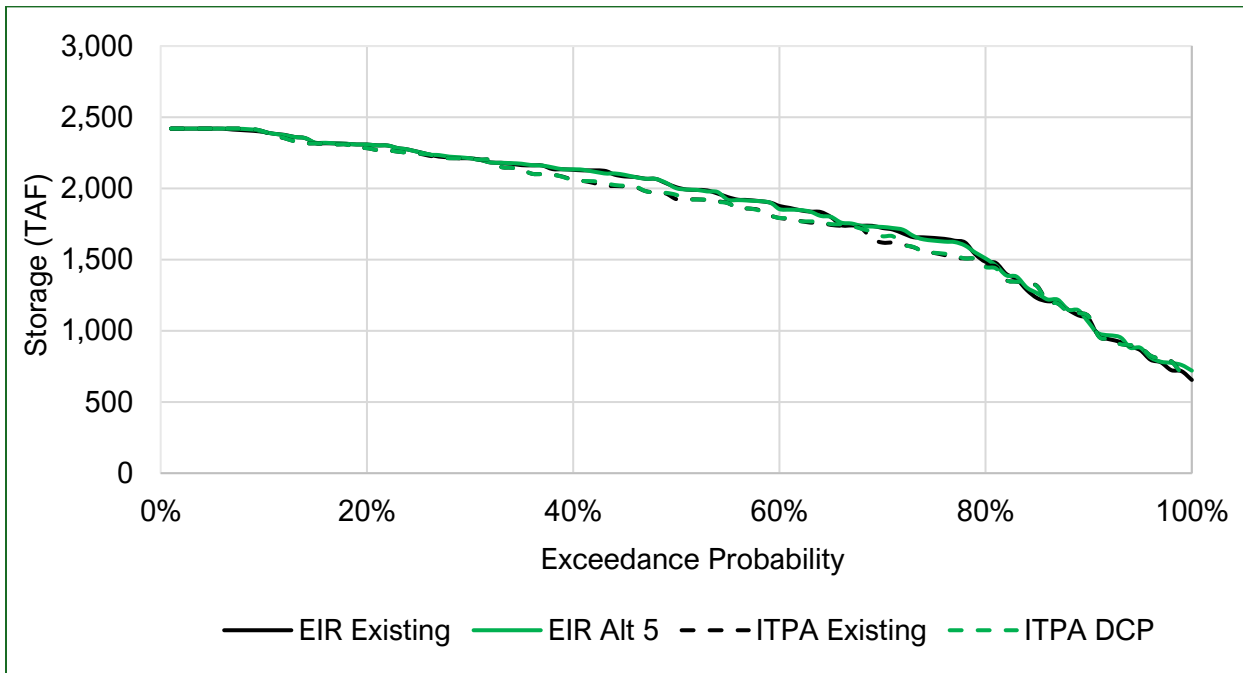


Figure 18. Trinity End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for May, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

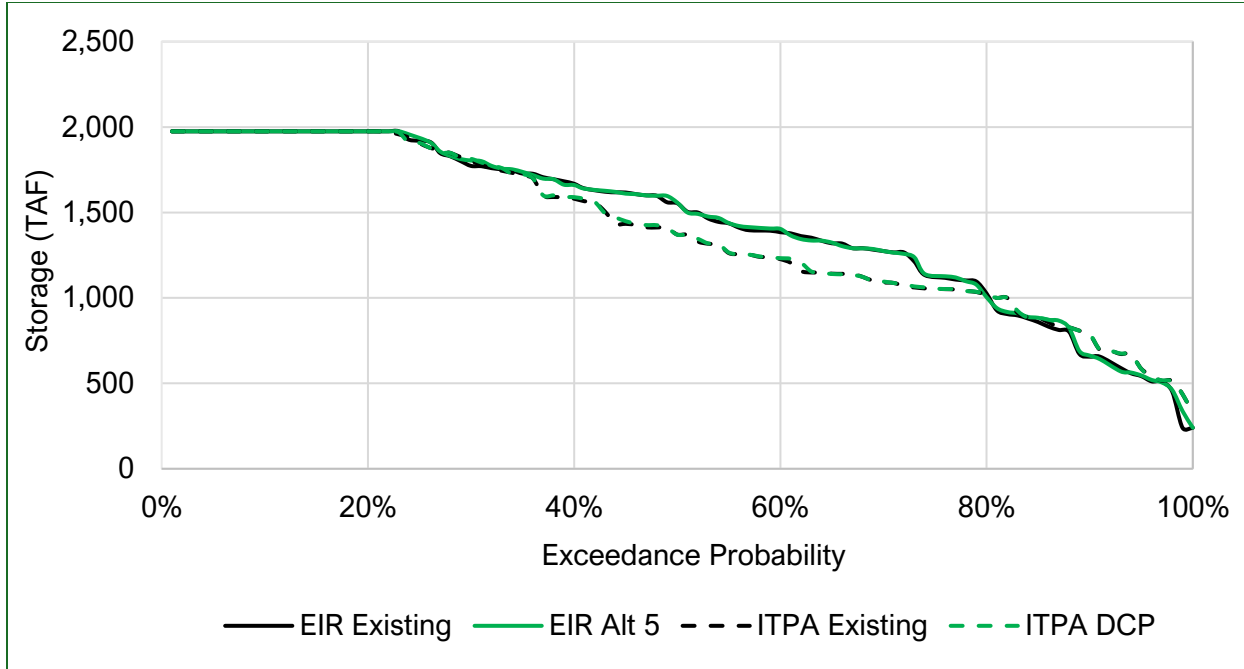


Figure 19. Trinity End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for September, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

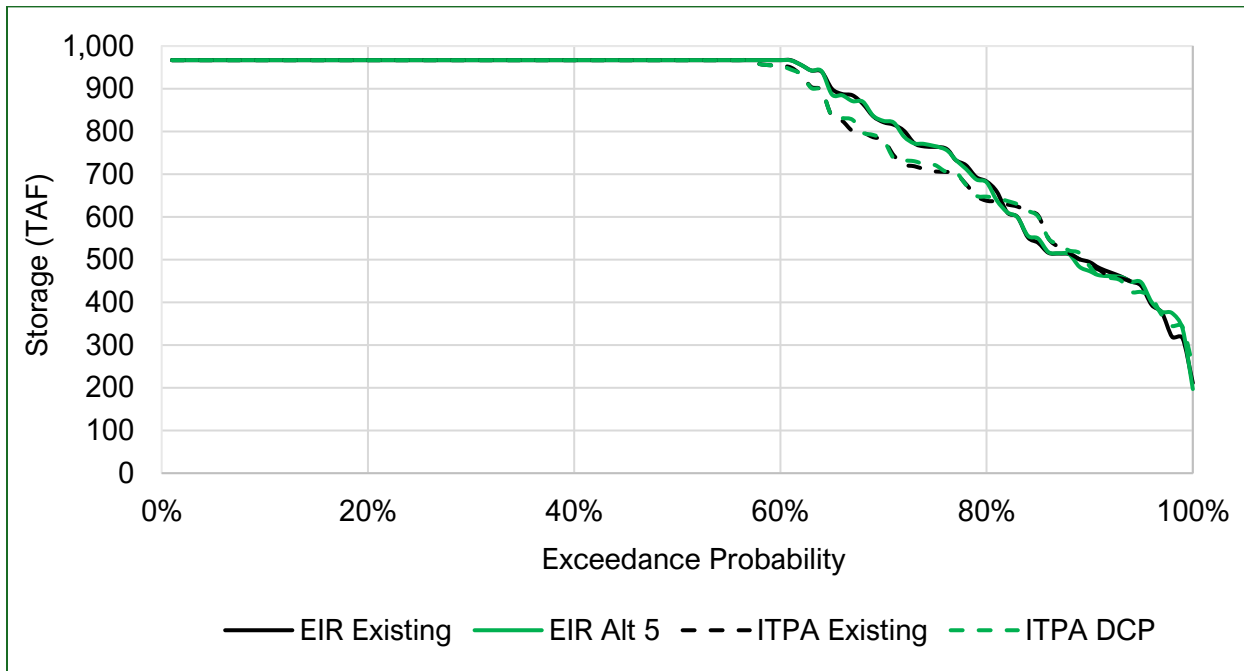


Figure 20. Folsom End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for May, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

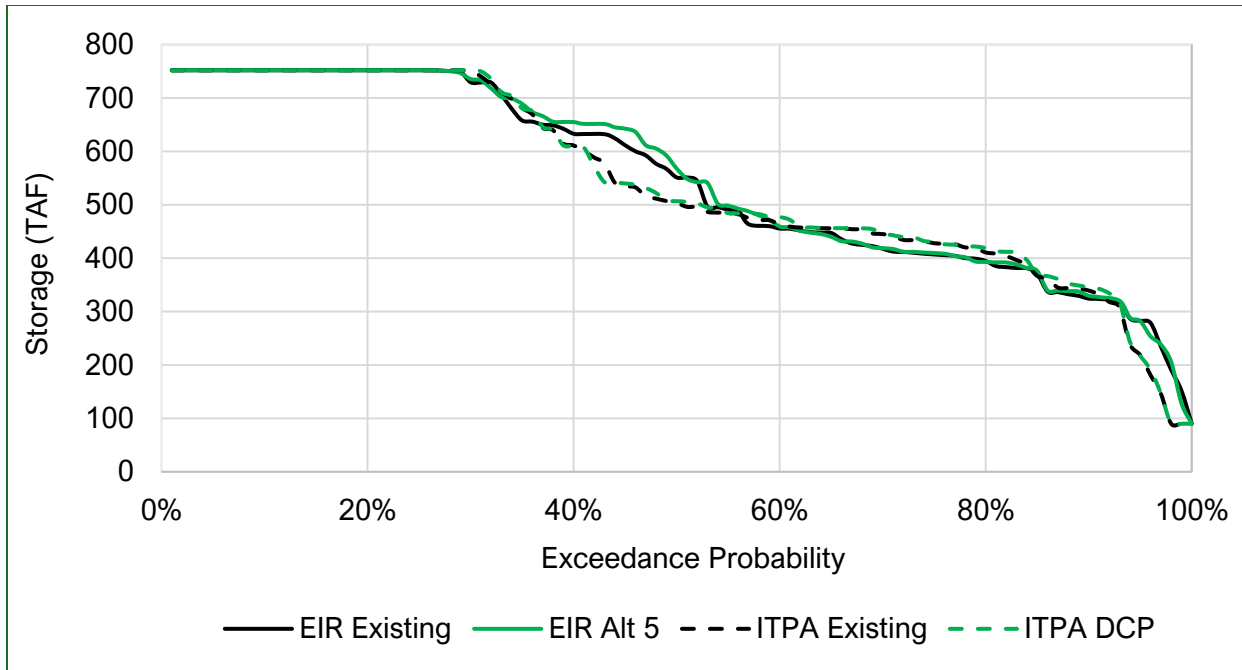


Figure 21. Folsom End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for September, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

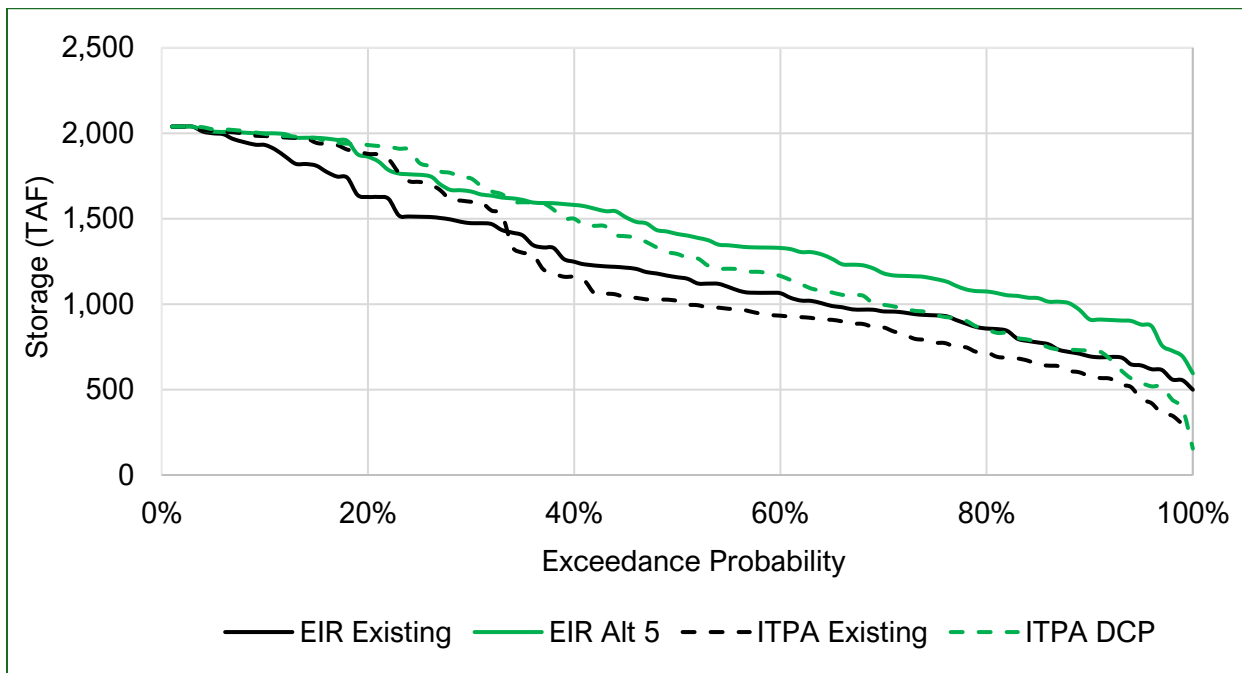


Figure 22. San Luis End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for May, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

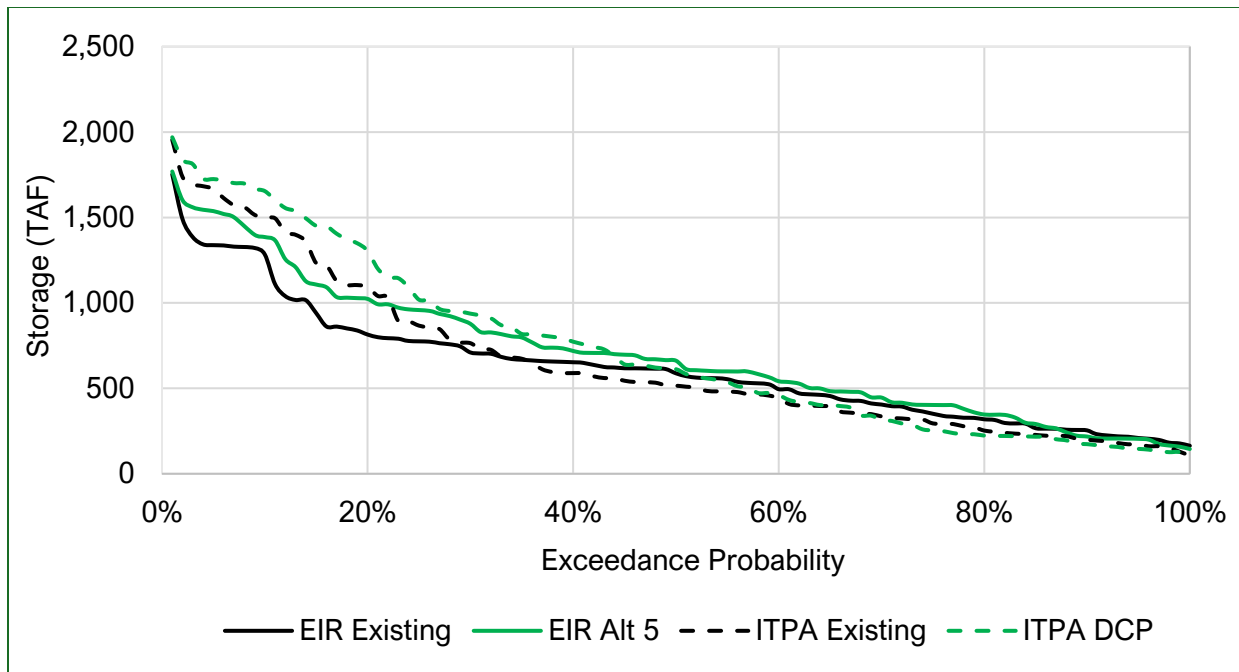


Figure 23. San Luis End-of-Month Storage, Exceedance Probability for Monthly Average End-of-Month Storage (thousand acre-feet) for September, EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

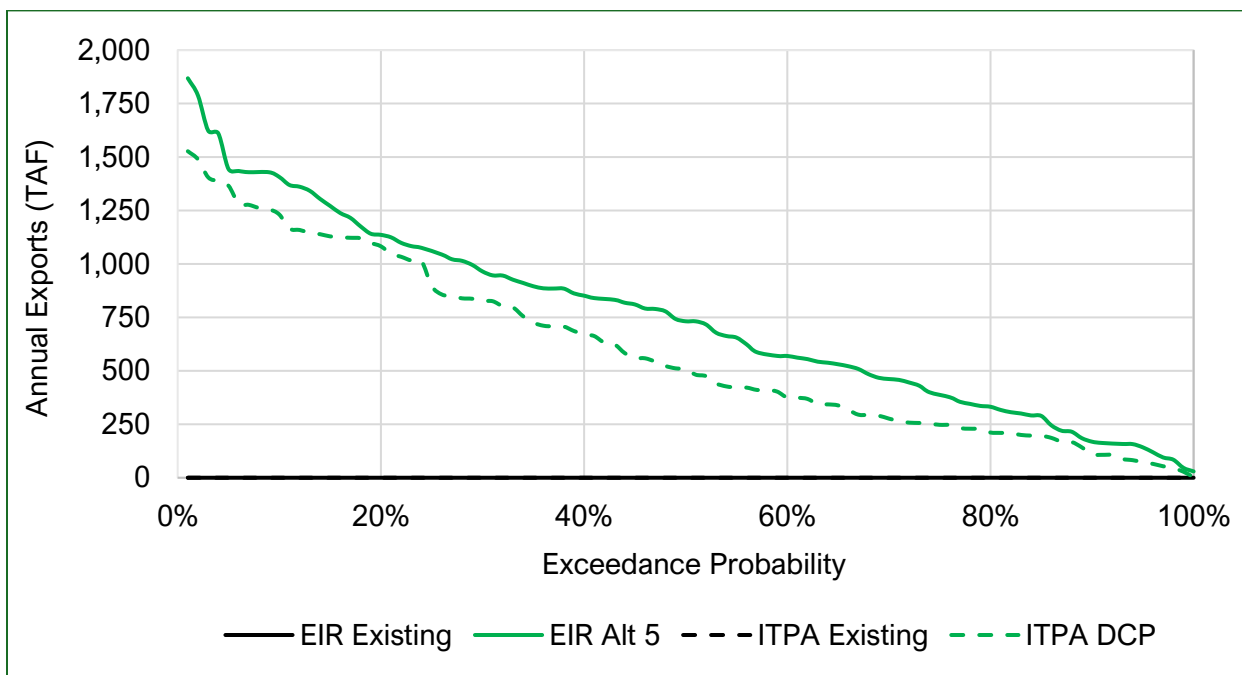


Figure 24. NDD Delta Exports, Exceedance Probability for Annual Water Year Exports (thousand acre-feet), EIR Existing Condition and Alternative 5 compared to ITP Application scenarios

Attachment B
Water Supply Tables

Data pasted in, sources are: EIR data Tables 6-5 and 6-7 WaterSupplySummaryTable_2020_120621.xlsm
 ITPA data Tables 6-5 and 6-7 WaterSupplySummaryTable_2020_120621_update_021025_YH_TF_PK.xlsm

Table 1. Water Supply Summary, Changes to Water Supply by the Project Alternatives, Geographic Area, and User, Shown in Thousand Acre-Feet and Resulting Percentages

Below from EIR Table 6-5. Water Supply Summary, Changes to Water Supply by the Project Alternatives, Geographic Area, and User, Shown in Thousand Acre-Feet and Resulting Percentages, as Compared to Existing Conditions (2020 Hydrology)				Below are from updated models in ITP Application		
Parameter/Location	EIR Existing (TAF)	EIR Alt 5		ITPA Existing (TAF)	ITPA DCPOn	
		(TAF)	(% change)		(TAF)	(% change)
End of September Storage (Long-Term Average)						
Trinity Lake	1438	1443	0%	1390	1393	0%
Shasta Lake	2827	2837	0%	2702	2711	0%
Lake Oroville	1964	1983	1%	1838	1854	1%
Folsom Lake	546	551	1%	541	543	1%
Total San Luis Reservoir	619	700	13%	653	727	11%
CVP San Luis Reservoir	193	193	0%	207	213	3%
SWP San Luis Reservoir	426	506	19%	446	514	15%
Annual SWP Deliveries, Long-Term Average (SWP Contract Year; January - December)						
Total SWP Contractor Deliveries (FRSA, Table A, A56, A21)	3509	4050	15%	3559	4027	13%
SWP FRSA	1081	1079	0%	1098	1098	0%
SWP Table A	2110	2392	13%	2069	2314	12%
SWP A56	226	252	11%	245	269	10%
SWP A21	93	328	254%	147	346	135%
Annual SWP Deliveries, Average of Dry and Critical Water Years (SWP Contract Year; January - December)						
Total SWP Contractor Deliveries (FRSA, Table A, A56, A21)	2375	2686	13%	2328	2615	12%
SWP FRSA	1059	1053	-1%	1046	1046	0%
SWP Table A	1145	1412	23%	1074	1309	22%
SWP A56	166	215	29%	200	249	24%
SWP A21	6	6	3%	8	11	51%

Below from EIR Table 6-5. Water Supply Summary, Changes to Water Supply by the Project Alternatives, Geographic Area, and User, Shown in Thousand Acre-Feet and Resulting Percentages, as Compared to Existing Conditions (2020 Hydrology)				Below are from updated models in ITP Application		
Parameter/Location	EIR Existing (TAF)	EIR Alt 5		ITPA Existing (TAF)	ITPA DCPOn	
		(TAF)	(% change)		(TAF)	(% change)
Annual CVP Deliveries, Long-Term Average (CVP Contract Year; March-February)						
Total CVP Deliveries	2161	2209	2%	2049	2054	0%
Total CVP Deliveries North-of-Delta	575	576	0%	565	566	0%
CVP North-of-Delta Agriculture	309	310	0%	320	320	0%
CVP North-of-Delta M&I	140	140	0%	149	149	0%
CVP North-of-Delta Refuge Level 2	125	125	0%	97	97	0%
Total CVP Deliveries South-of-Delta	1587	1633	3%	1484	1488	0%
CVP South-of-Delta Agriculture	1168	1213	4%	1078	1083	0%
CVP South-of-Delta M&I	141	143	1%	134	135	0%
CVP South-of-Delta Refuge Level 2	278	278	0%	271	271	0%
CVP Settlement Contractors	1503	1503	0%	1606	1606	0%
CVP Exchange Contractors	818	818	0%	816	816	0%
Annual CVP Deliveries Average of Dry and Critical Water Years (CVP Contract Year; March-February)						
Total CVP Deliveries	1355	1378	2%	1262	1264	0%
Total CVP Deliveries North-of-Delta	411	415	1%	448	450	0%
CVP North-of-Delta Agriculture	131	134	2%	201	202	1%
CVP North-of-Delta M&I	156	156	0%	156	156	0%
CVP North-of-Delta Refuge Level 2	124	124	0%	92	92	0%
Total CVP Deliveries South-of-Delta	945	963	2%	813	814	0%
CVP South-of-Delta Agriculture	571	588	3%	452	452	0%
CVP South-of-Delta M&I	112	113	1%	105	105	0%
CVP South-of-Delta Refuge Level 2	261	261	0%	257	257	0%
CVP Settlement Contractors	1492	1491	0%	1602	1602	0%
CVP Exchange Contractors	772	772	0%	779	779	0%

Note: Final EIR Table 6-5 included footnotes relative to the EIR columns in this table. Please refer to Final EIR Table 6-5 for these footnotes.

Table 2. Summary of Annual Delta Outflow and Exports October–September

Below from EIR Table 6-7. Summary of Annual Delta Outflow and Exports October–September under the Project Alternatives as Compared to Existing Conditions (2020 5 Hydrology)				Below are from updated models in ITP Application		
Parameter/Location	EIR Existing (TAF)	EIR Alt 5		ITPA Existing (TAF)	ITPA DCPOn	
		(TAF)	(% change)		(TAF)	(% change)
Annual Delta Outflow/Exports October - September						
Outflow	15216	14626	-4%	15774	15297	-3%
Total Delta Export	4939	5532	12%	4818	5291	10%
SWP Delta Export Total	2401	2944	23%	2423	2885	19%
SWP Delta Export at North Delta Diversion Intakes	0	746	N/A	0	595	N/A
SWP Delta Exports at South Delta Intakes	2401	2198	-8%	2423	2290	-6%
CVP Delta Export Total	2538	2588	2%	2395	2406	0%
CVP Delta Export at North Delta Diversion Intakes	0	0	N/A	0	0	N/A
CVP Delta Exports at South Delta Intakes	2538	2588	2%	2395	2406	0%

Note: Final EIR Table 6-7 included footnotes relative to the EIR columns in this table. Please refer to Final EIR Table 6-7 for these footnotes.

Attachment C Groundwater Figures

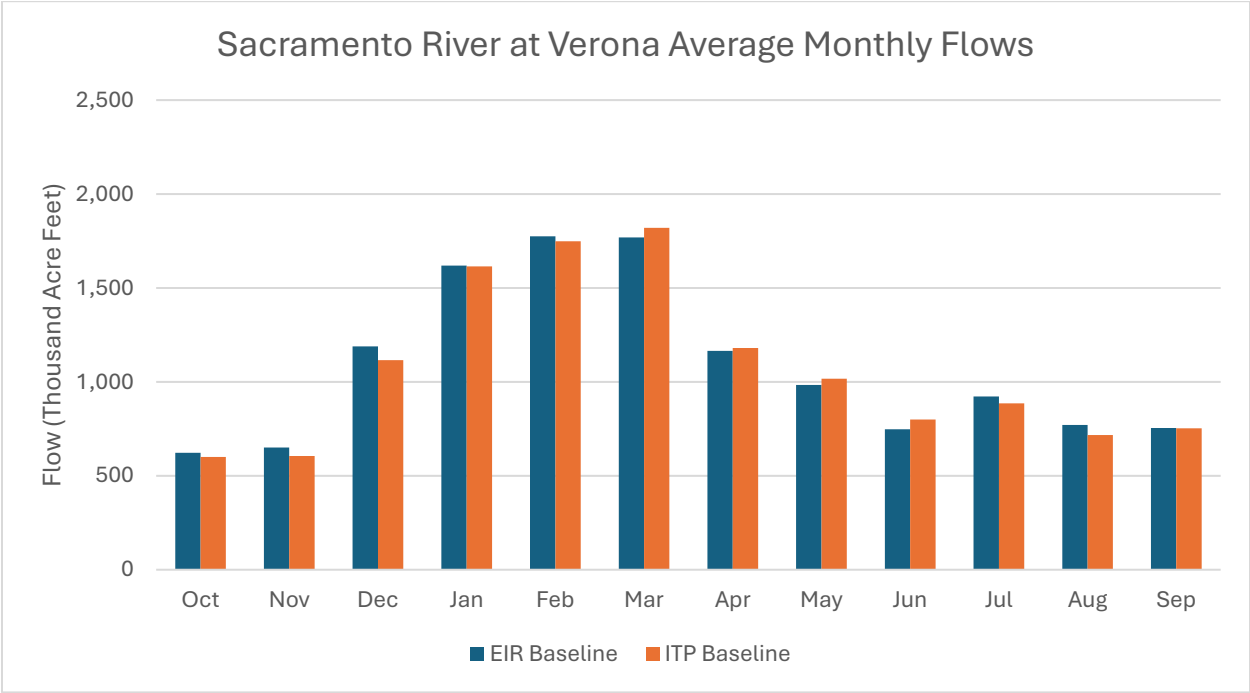


Figure 1. Sacramento River at Verona Average Monthly Flows

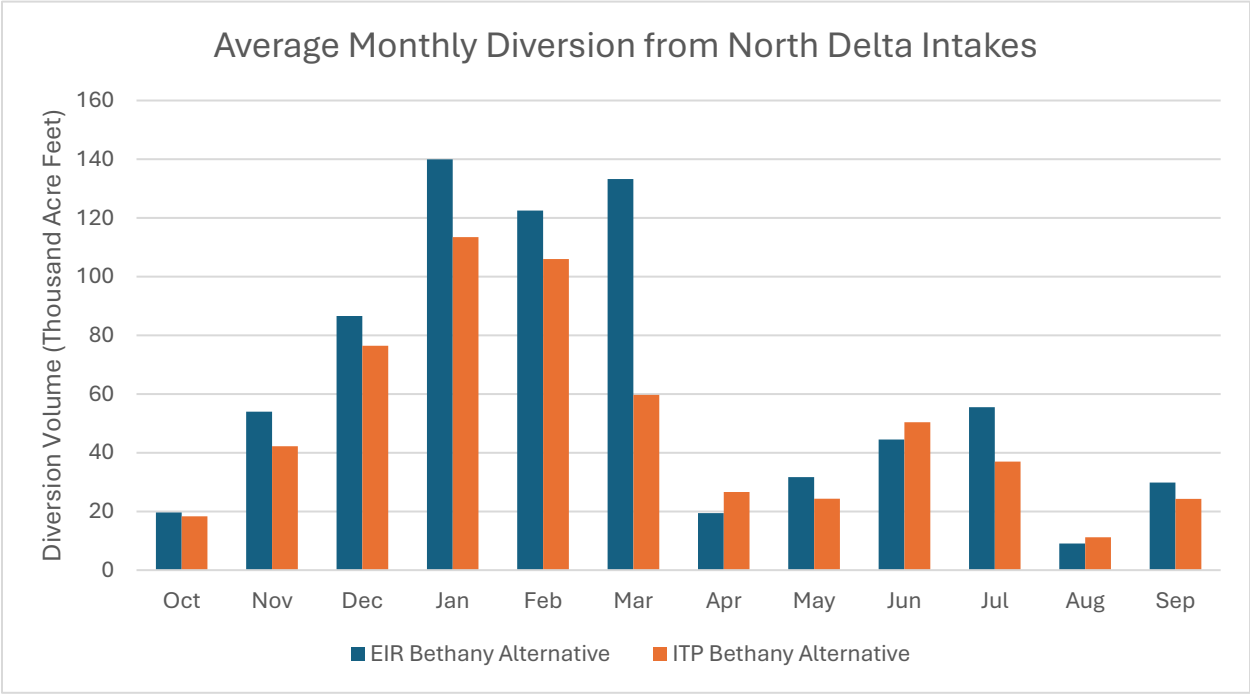


Figure 2. Average Monthly Diversion from North Delta Intake

Attachment D
Water Quality Figures

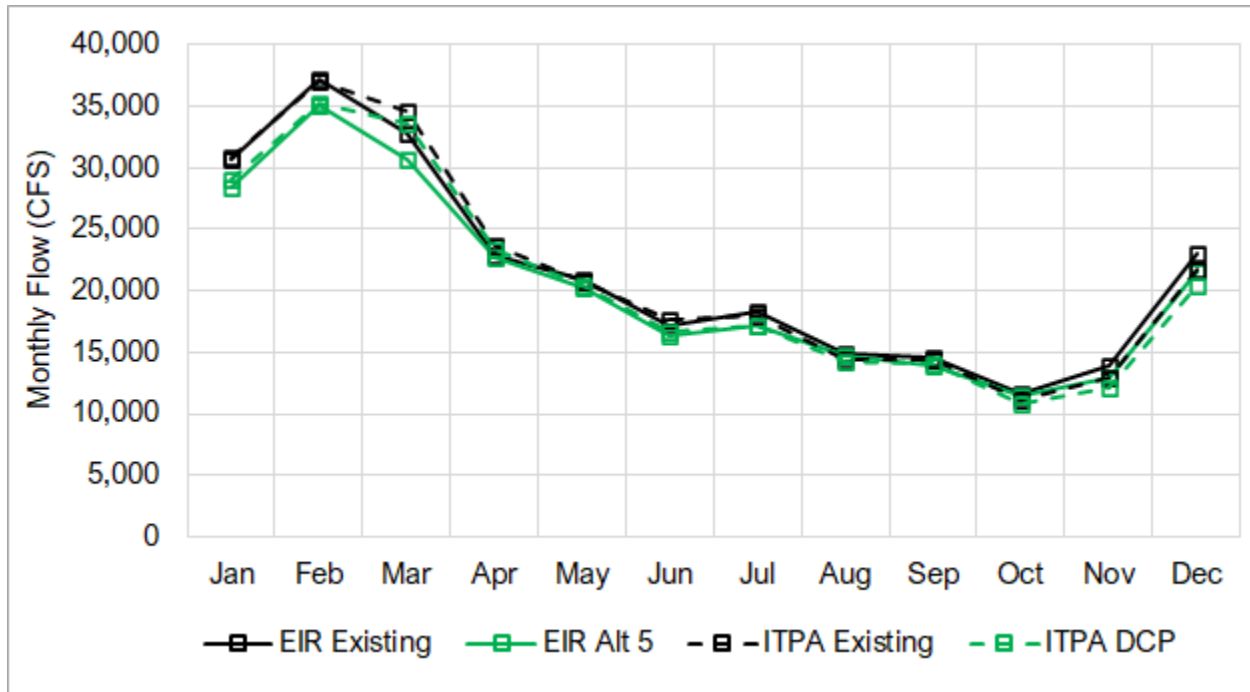


Figure 1. Sacramento River at Downstream of North Delta Diversion, Monthly Average Flow (cubic feet per second)

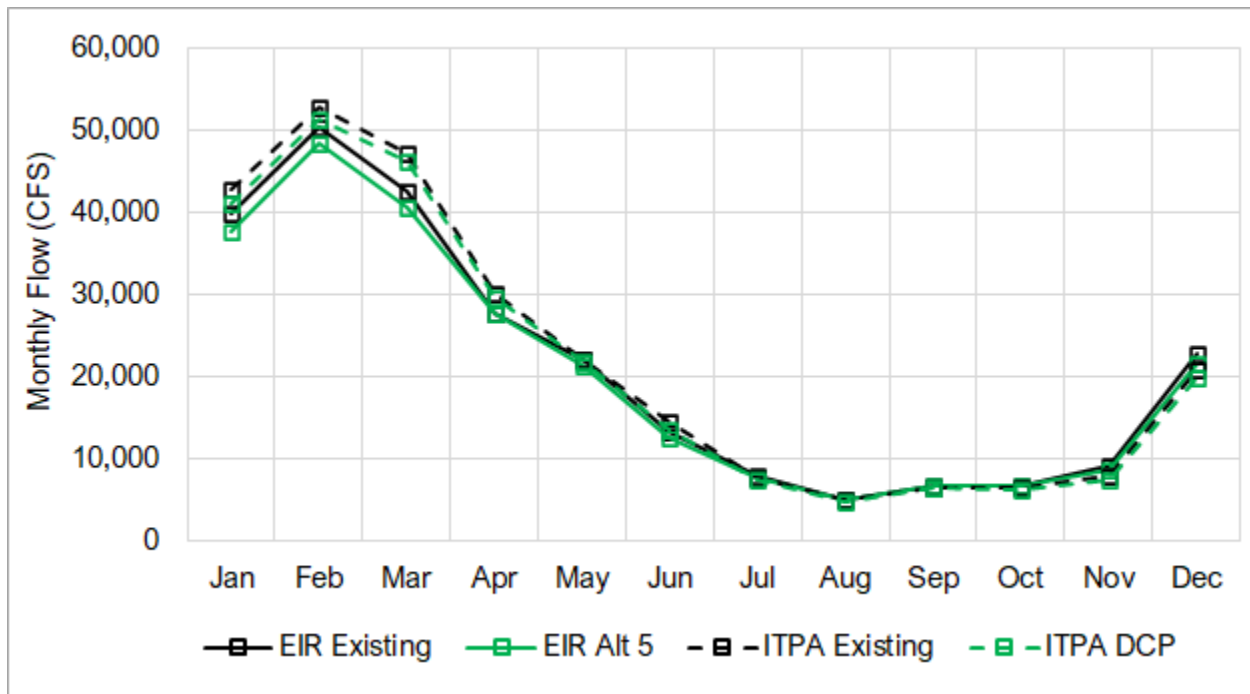


Figure 2. Delta Outflow, Monthly Average Flow (cubic feet per second)

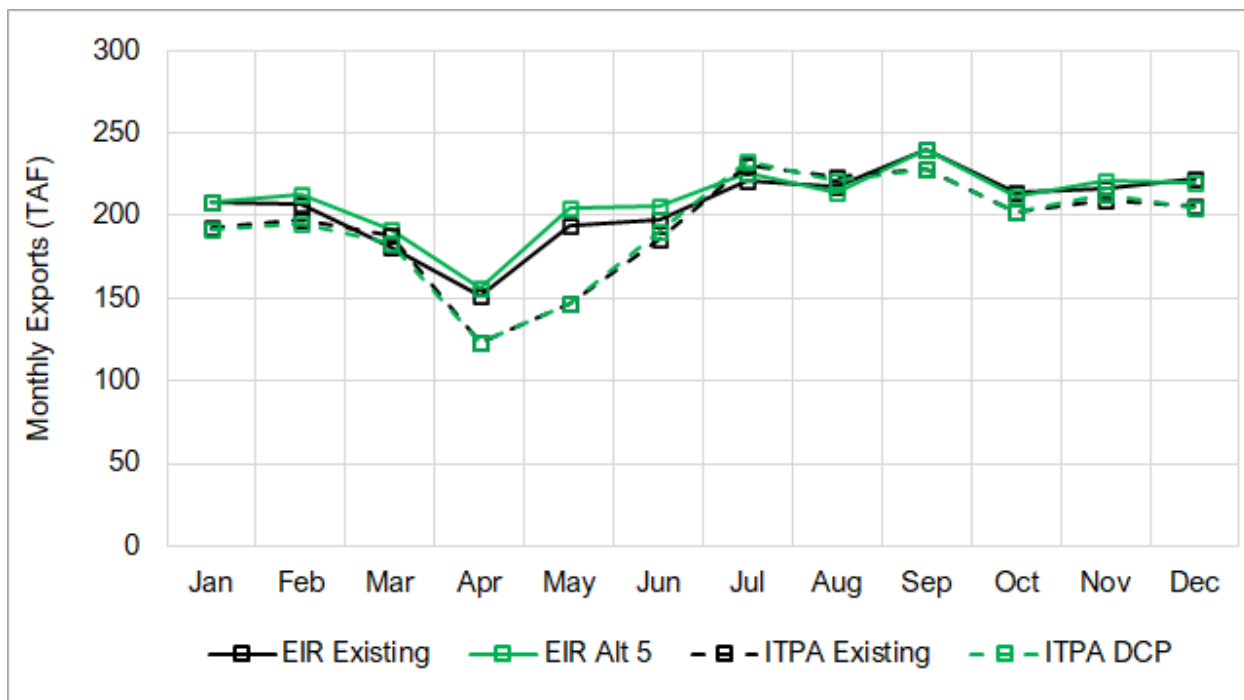


Figure 3. Jones Pumping Plant Exports, Monthly Average Flow (thousand acre-feet)

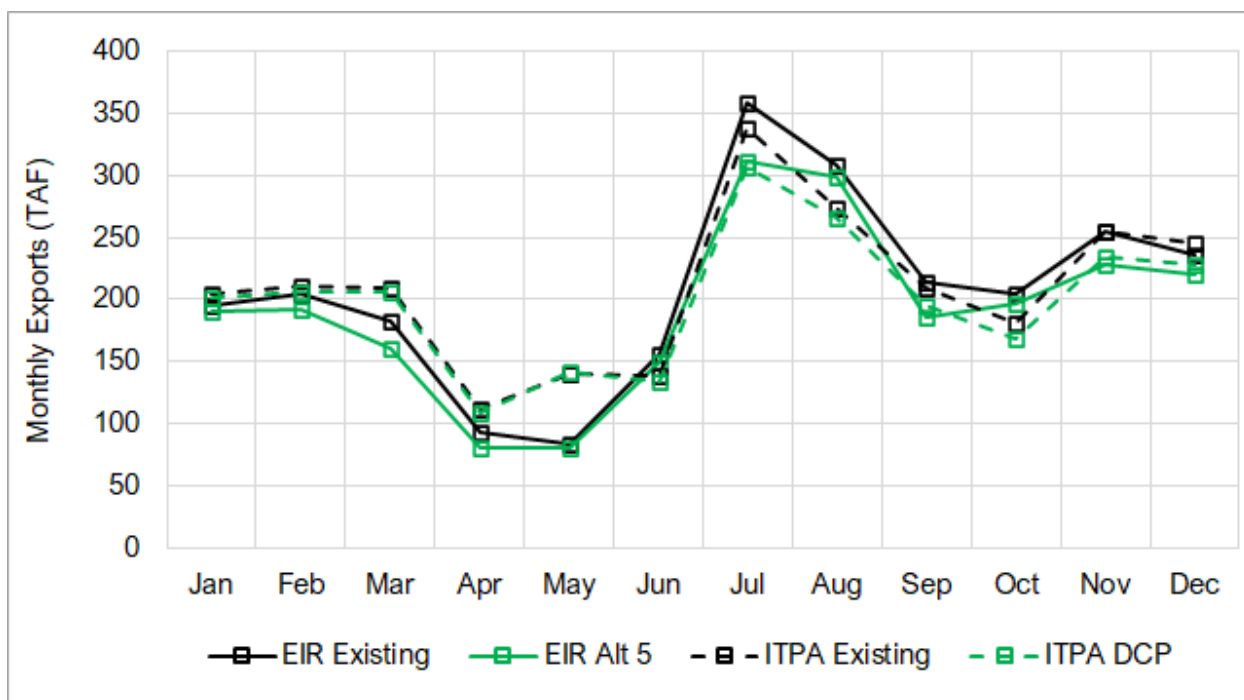


Figure 4. Banks Pumping Plant Exports, Monthly Average Flow (thousand acre-feet)

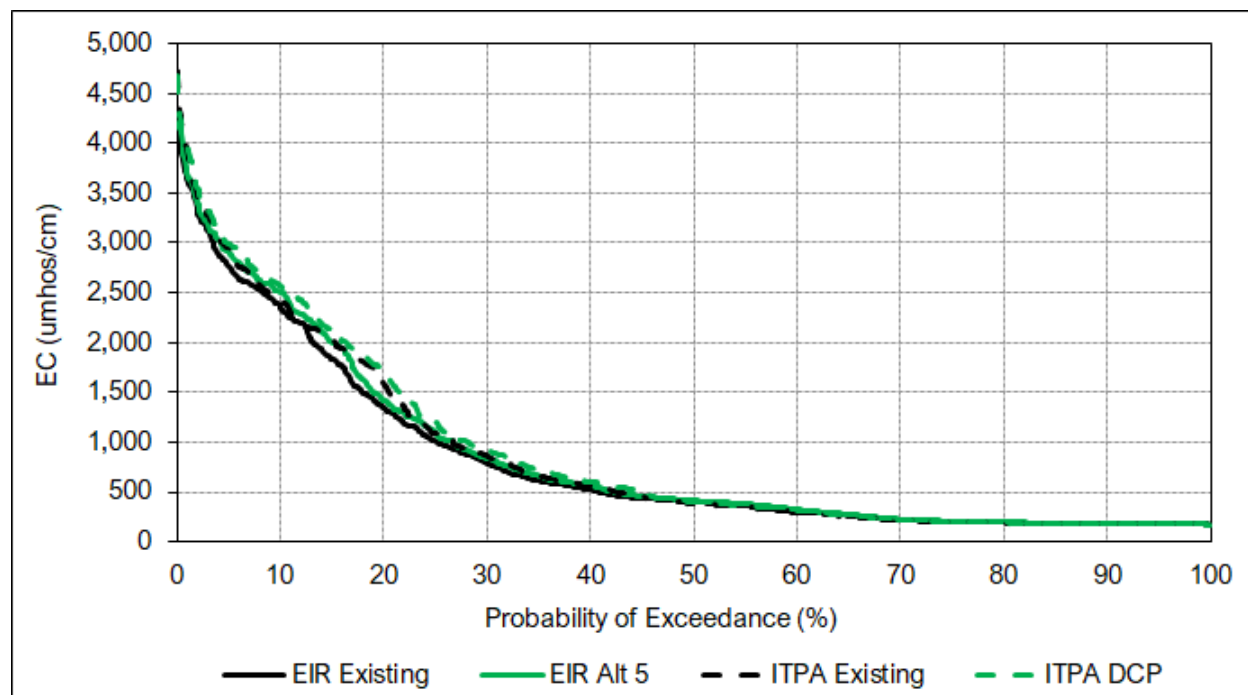


Figure 5. Probability of Exceedance of Monthly Average Electrical Conductivity in the Sacramento River at Emmaton (micromhos per centimeter)

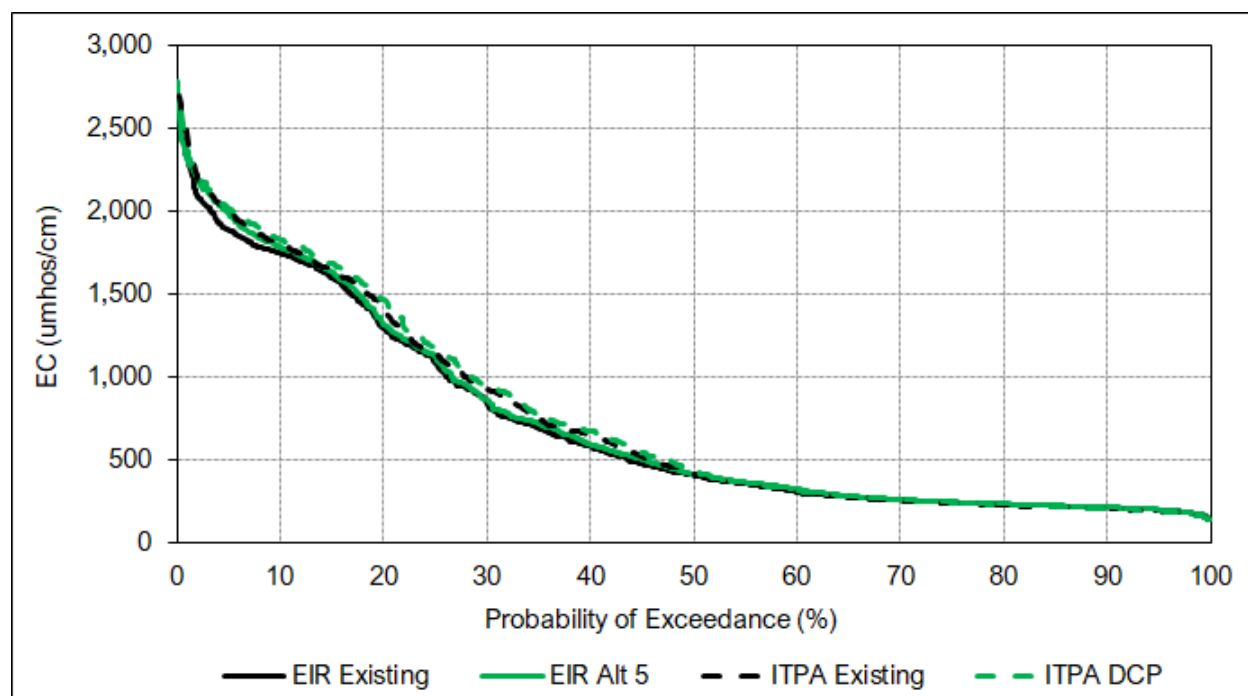


Figure 6. Probability of Exceedance of Monthly Average Electrical Conductivity in the San Joaquin River at Jersey Point (micromhos per centimeter)

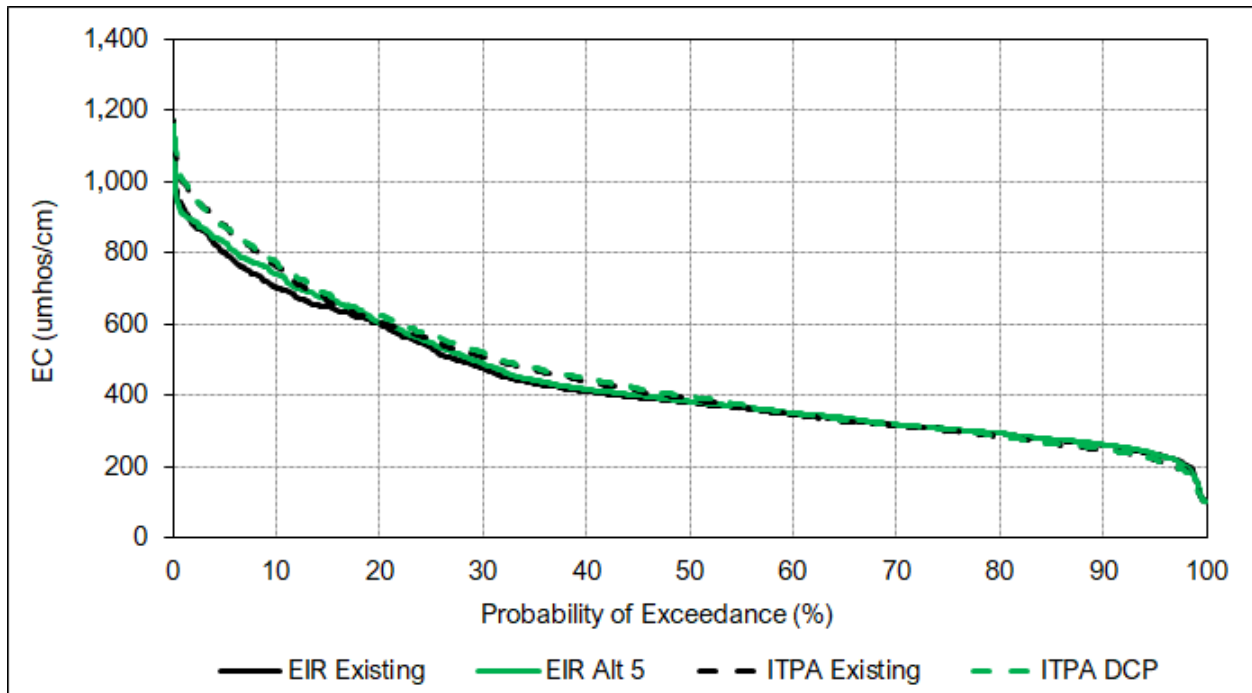


Figure 7. Probability of Exceedance of Monthly Average Electrical Conductivity in Old River at Highway 4 (micromhos per centimeter)

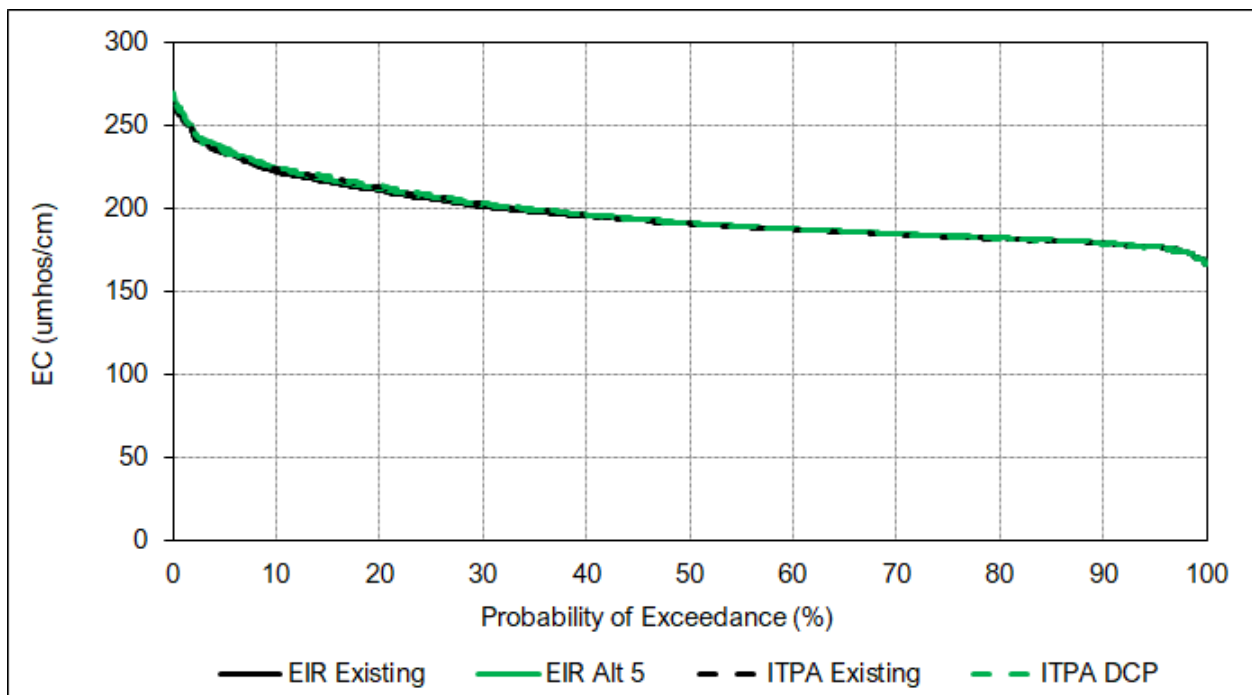


Figure 8. Probability of Exceedance of Monthly Average Electrical Conductivity in the South Fork Mokelumne River at Terminous (micromhos per centimeter)

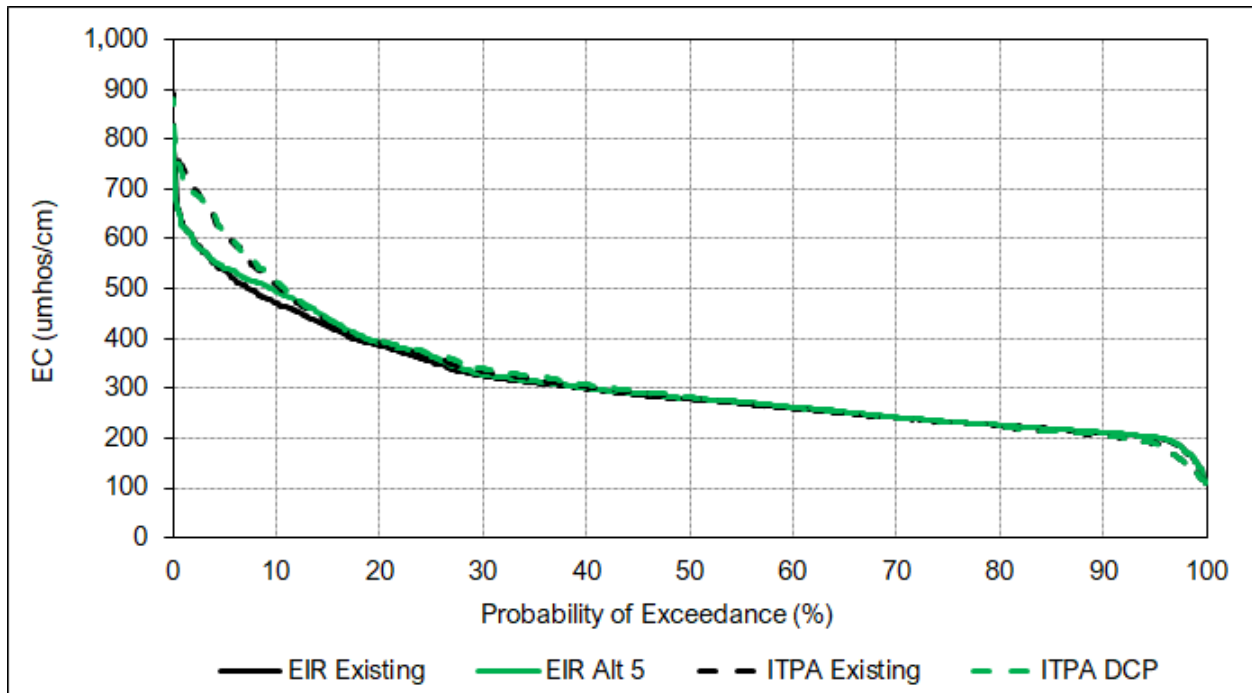


Figure 9. Probability of Exceedance of Monthly Average Electrical Conductivity in the San Joaquin River at Prisoners Point (micromhos per centimeter)

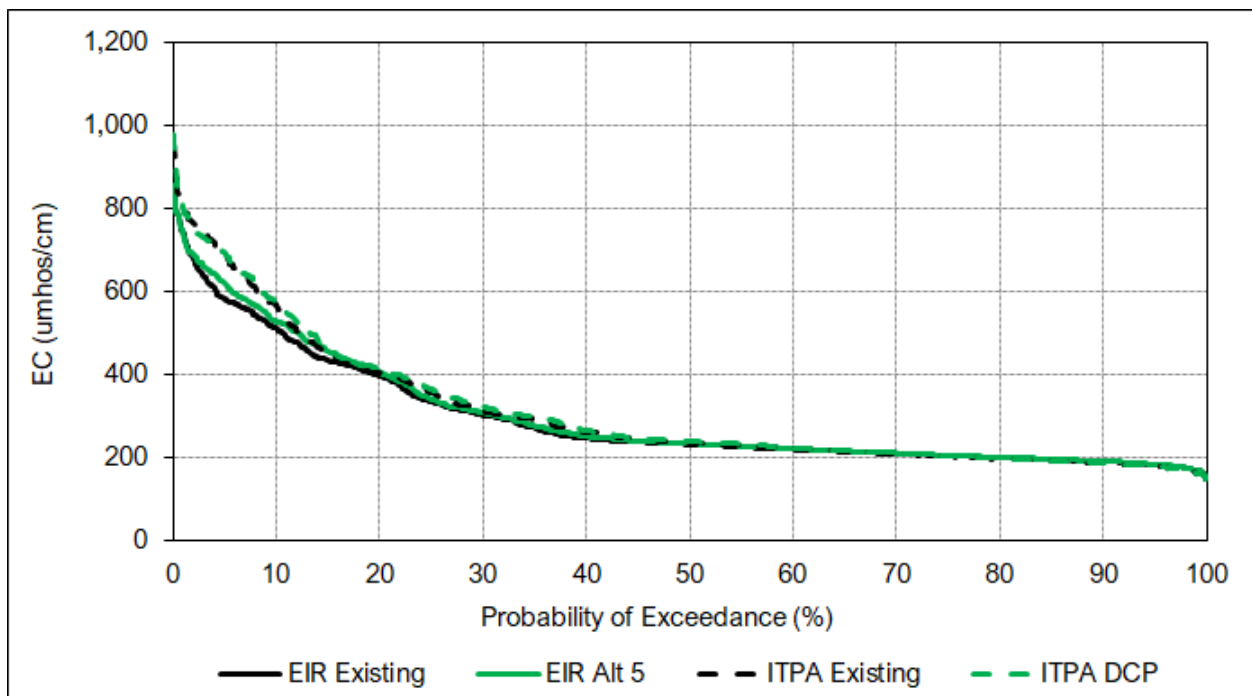


Figure 10. Probability of Exceedance of Monthly Average Electrical Conductivity in the San Joaquin River at San Andreas Landing (micromhos per centimeter)

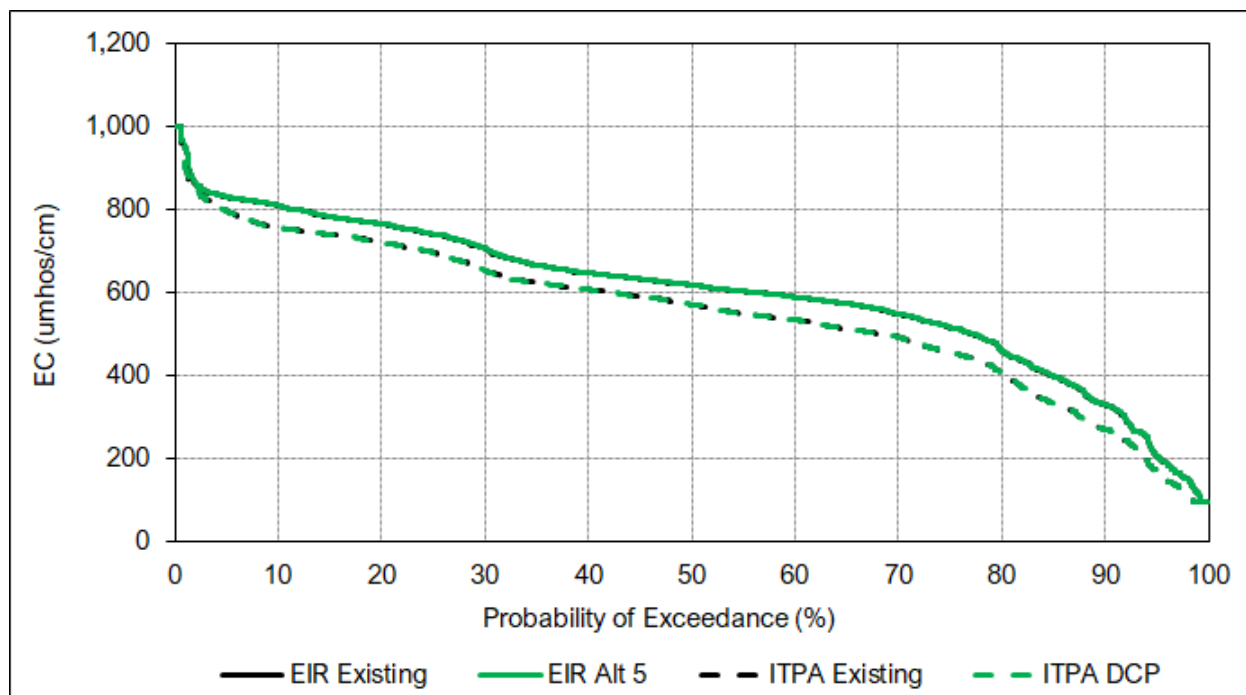


Figure 11. Probability of Exceedance of Monthly Average Electrical Conductivity in the San Joaquin River at Vernalis (micromhos per centimeter)

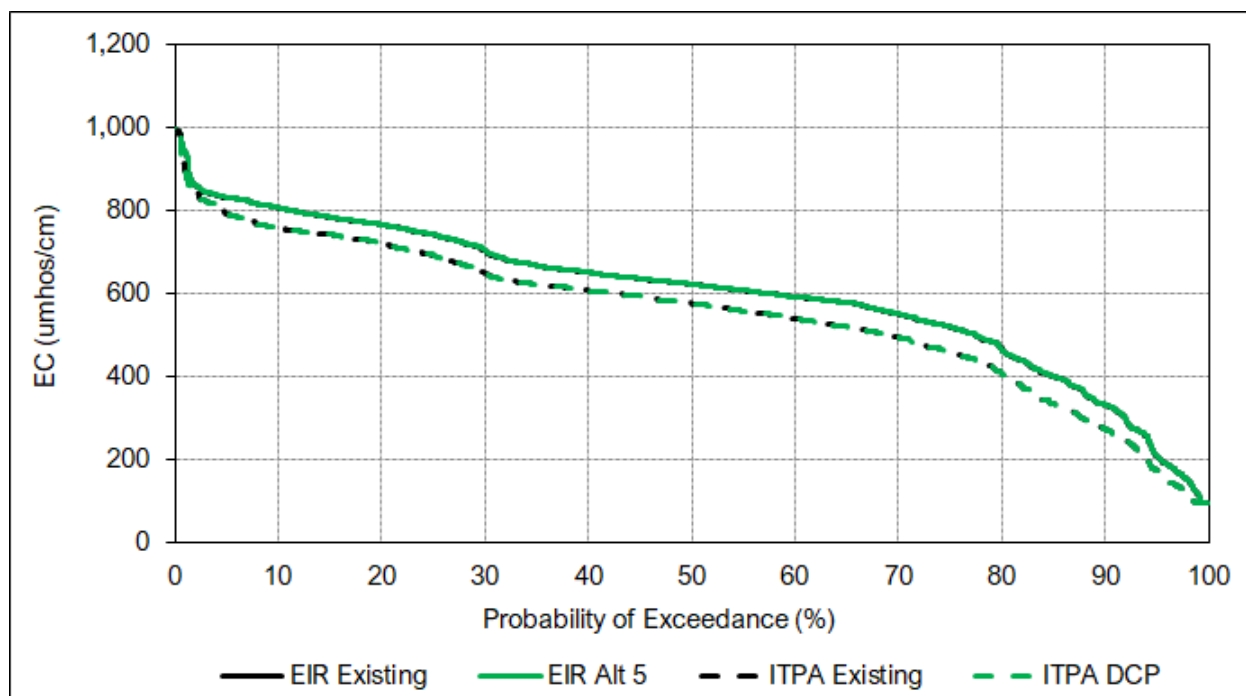


Figure 12. Probability of Exceedance of Monthly Average Electrical Conductivity in the San Joaquin River at Brandt Bridge (micromhos per centimeter)

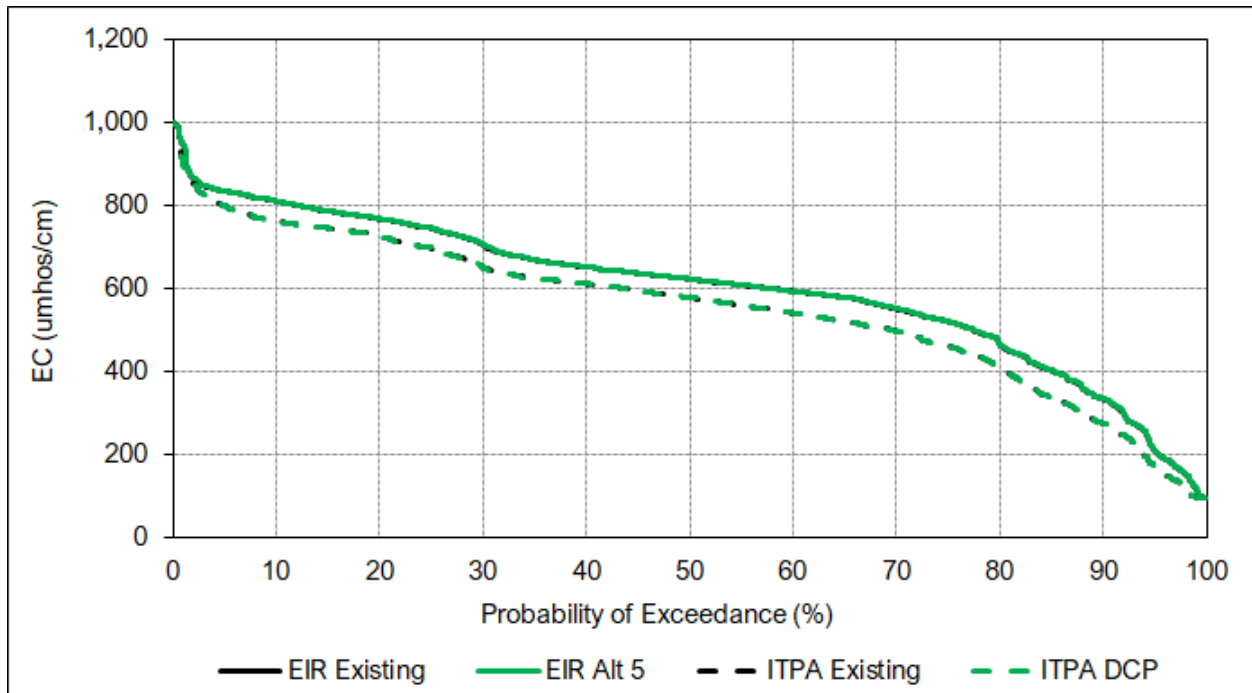


Figure 13. Probability of Exceedance of Monthly Average Electrical Conductivity in Old River near Middle River (micromhos per centimeter)

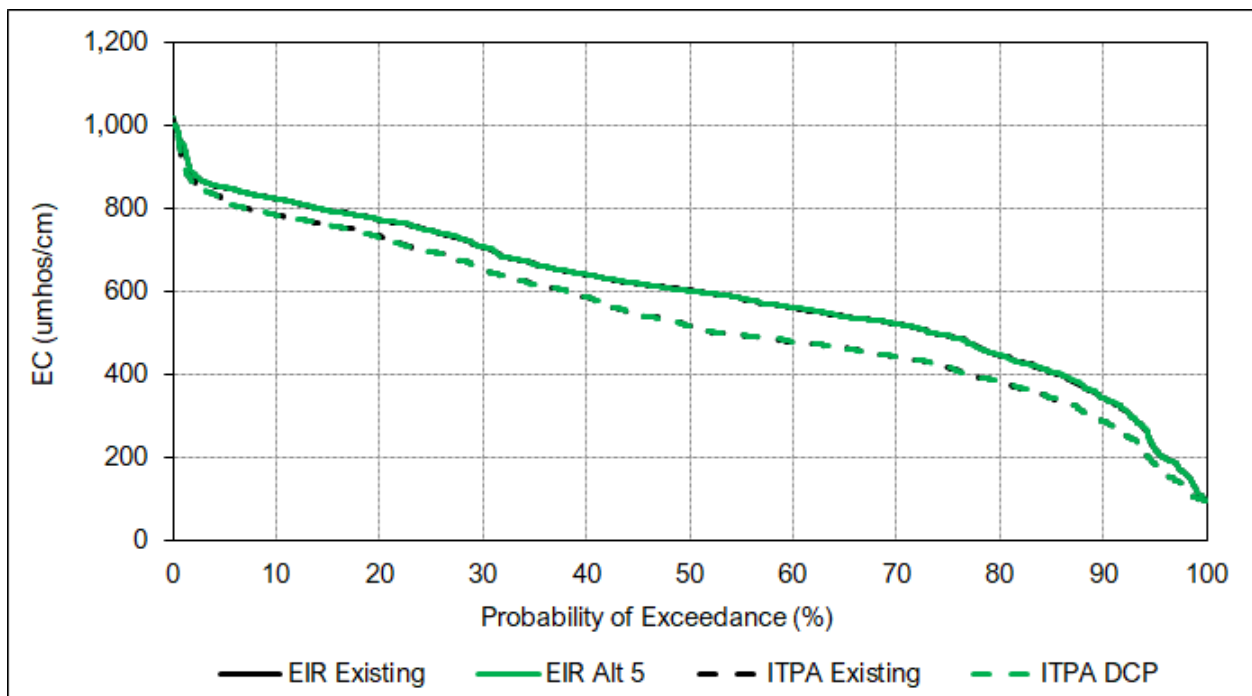


Figure 14. Probability of Exceedance of Monthly Average Electrical Conductivity in Old River at Tracy Bridge (micromhos per centimeter)

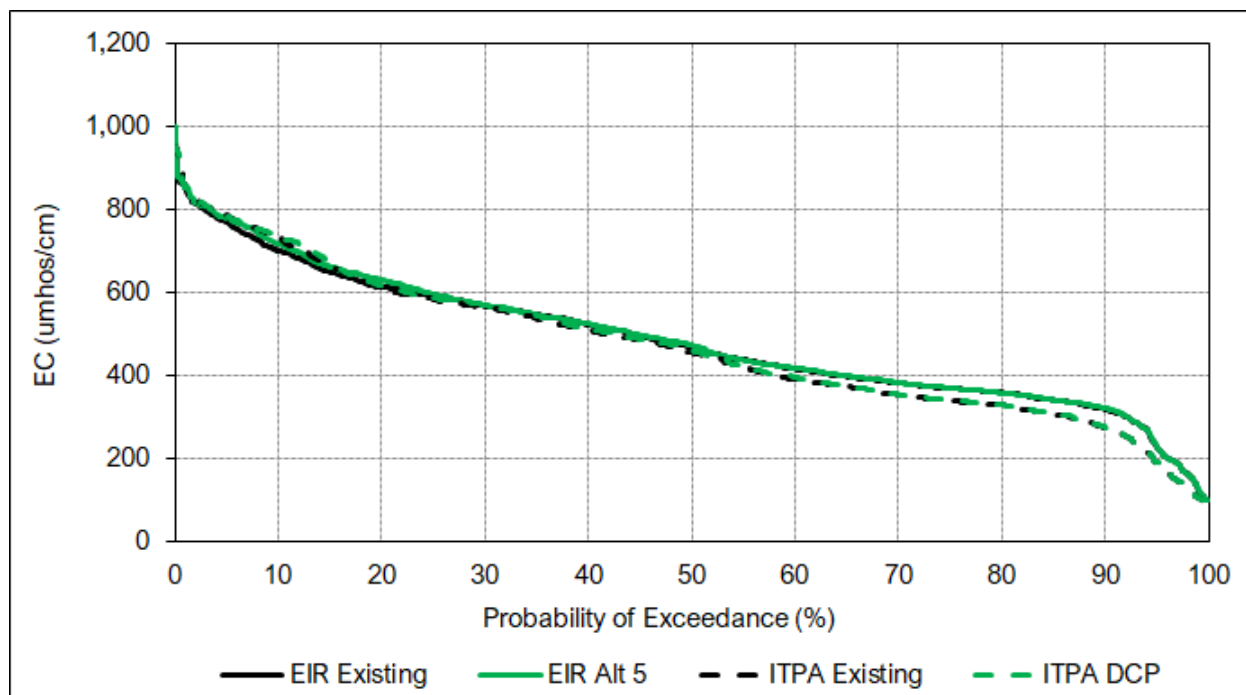


Figure 15. Probability of Exceedance of Monthly Average Electrical Conductivity at Jones Pumping Plant (micromhos per centimeter)

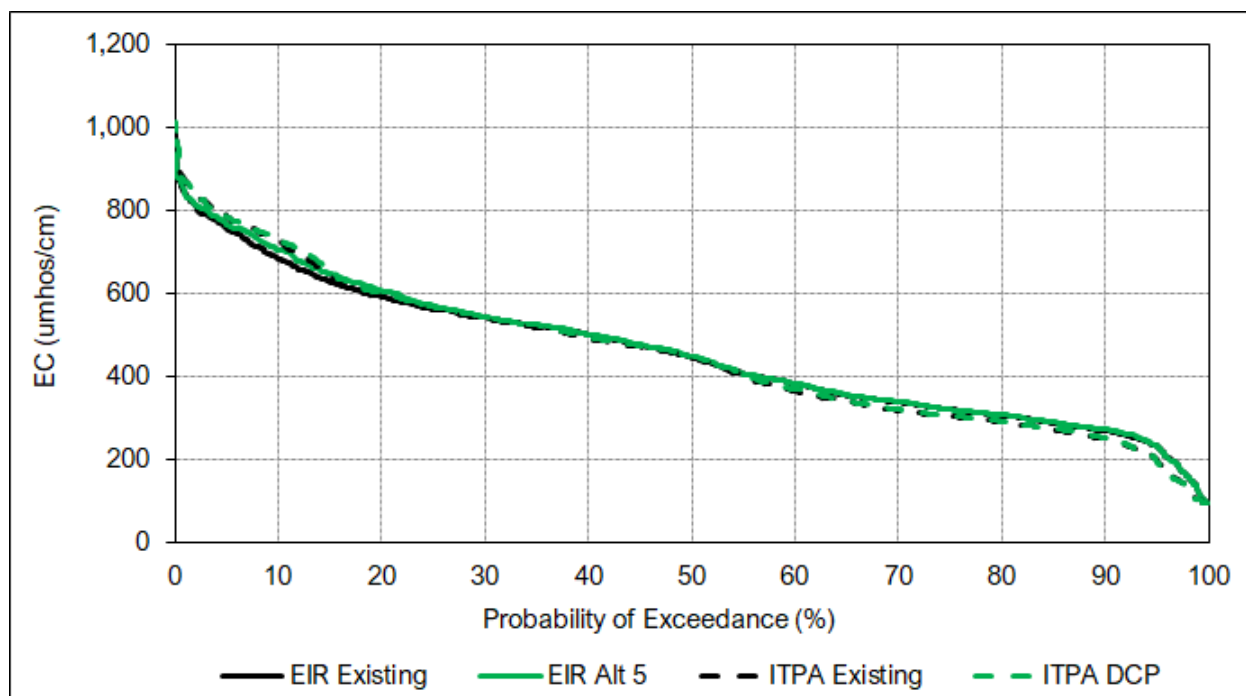


Figure 16. Probability of Exceedance of Monthly Average Electrical Conductivity at Banks Pumping Plant (micromhos per centimeter)