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Via Certified Mail (Priority), Return Receipt Requested

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Secretary of the Interior
Department of the Interior
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Washington, D.C. 20240

Wilbur Ross
Secretary of Commerce
Department of Commerce
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Brenda Burman
Commissioner
Bureau of Reclamation
1849 C St., NW
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RE: Potential Reclamation Action Following Final Environmental Impact Statement Regarding Reinitiation of Consultation on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project

Dear Secretary Bernhardt, Secretary Ross, and Commissioner Burman:

This letter provides written notice that the California Natural Resources Agency, the California Environmental Protection Agency, and the California Attorney General intend to initiate litigation against the Bureau of Reclamation (Reclamation) for violating the Endangered Species Act in its proposed operation of the Central Valley Project. *See* 16 U.S.C. § 1540(g)(1)(A), (2)(A). This decision is not made lightly. We appreciate the fruitful discussions concerning our many shared interests in the Bay-Delta in which we have been engaged and which we continue to hope will yield a final agreement concerning this complex matter. Rest assured, the State of California remains committed to this productive process. Nevertheless, on February 19, 2020, Reclamation issued a Record of Decision adopting the fatally flawed biological opinions issued by the U.S. Fish and Wildlife Service (USFWS) and the National

Marine Fisheries Service (NMFS) on October 21, 2019.[1] With the impending implementation of these deficient biological opinions, we send this letter to preserve the State's rights.

In evaluating the final product of Reclamation's consultation with the federal fisheries agencies, it is critical to recall the purpose of that consultation. The 2016 request for reinitiation sought to update system-wide operating criteria to account for new information regarding both impacts to the species and available measures to lessen those impacts. Rather than ensuring a prominent role for expert fish agencies in guiding updated operations, defining clear guardrails for those operations, and describing definite measures to enhance species' health, the 2019 Biological Opinions are heavily caveated and include many unbounded off-ramps, making it impossible to know how, if at all, project operations will avoid further harm to the species.

Because of these and other deficiencies, the biological opinions are arbitrary and capricious under the Administrative Procedure Act. *See* 5 U.S.C. § 706; 16 U.S.C. § 1536. Likewise, Reclamation's issuance of the Record of Decision adopting the biological opinions is arbitrary and capricious, violating Reclamation's independent duty to avoid "jeopardiz[ing] the continued existence of any endangered species or threatened species" or taking an action that would "result in the destruction or adverse modification of habitat," and to "use the best scientific and commercial data available" in its efforts. *See* 16 U.S.C. § 1536(a)(2); *see also Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1128 (9th Cir. 2012). Moreover, the incidental take statements provided by the biological opinions fail to articulate lawful, specific standards for Reclamation to meet. *See* 16 U.S.C. § 1536(b)(4); *see also Arizona Cattle Growers' Ass'n v. U.S. Fish & Wildlife*, 273 F.3d 1229, 1239 (9th Cir. 2001). Therefore, Reclamation's operations will result in the take of endangered and threatened species in violation of Section 9 of the Endangered Species Act. *See* 16 U.S.C. § 1538(a)(1)(B), (G).

The California Natural Resources Agency, the California Environmental Protection Agency, and the California Attorney General respectfully request that Reclamation reconsider its decision to adopt the defective 2019 Biological Opinions.

FACTUAL BACKGROUND

I. COORDINATED LONG-TERM OPERATIONS OF THE CENTRAL VALLEY PROJECT AND STATE WATER PROJECT

The Central Valley Project and the State Water Project are the two largest water projects in California. The Central Valley Project began in 1933, when the California Legislature

[1] NMFS, Biological Opinion on Long-term Operation of the Central Valley Project and the State Water Project (NMFS BiOp); USFWS, Biological Opinion for the Reinitiation of Consultation on the Coordinated Operations of the Central Valley Project and the State Water Project (USFWS BiOp); together "the 2019 Biological Opinions."

approved a plan to divert Sacramento River water for use by the drier San Joaquin Valley. *United States v. State Water Res. Control Bd.*, 182 Cal. App. 3d 82, 98-99 (1986). Due to the Great Depression, the federal government assumed control of the efforts and completed the project in 1945. It has been operated by the federal government ever since. *Id.* After World War II, the state broke ground on the State Water Project, which was intended to deliver water throughout California as part of a "comprehensive statewide water plan." *Id.* at 99.

In 1960, the federal and state governments entered into an initial agreement to coordinate project operations. In 1986, the two formalized an agreement entitled, "Agreement Between the United States of America and the State of California for Coordinated Operations of the Central Valley Project and the State Water Project" (COA). Congress authorized the COA in Pub. L. 99-546, 100 Stat. 3050 (1986). Since then, existing "virtually side-by-side," the projects convey water to their users at a level that "is constantly changing" with the demands of hydrology, chronology, and biology. *Friant Water Auth. v. Jewell,* 23 F. Supp. 3d 1130, 1151 (E.D. Cal. 2014).

The Central Valley Project now consists of 20 dams and reservoirs, the Jones Pumping Plant, and the Delta Mendota Canal, which deliver water to 29 of California's 58 counties for agricultural, municipal, and industrial uses, primarily in the Central Valley and the San Francisco Bay Area. On average, the project delivers 5.6 million acre-feet of water a year to 270 water supply contractors.

The State Water Project spans over 700 miles and is operated by the California Department of Water Resources (DWR). The project's main facilities are the Oroville Dam, the Harvey O. Banks Pumping Plant, and the San Luis Reservoir. DWR operates these facilities, along with connecting canals and aqueducts, to deliver water to the Feather River Area, North Bay Area, South Bay Area, San Joaquin Valley, Central Coast, and Southern California for agricultural, municipal, and industrial uses. The State Water Project delivers 2.6 million acre-feet of water a year on average to 29 public water agencies.

The Central Valley Project and the State Water Project share responsibility for meeting "Sacramento Valley in-basin uses," meaning providing water for environmental regulations and local users of water. The projects jointly operate the San Luis Reservoir and share export capacity, with the Central Valley Project often directing its water through State Water Project pumps and the Delta-Mendota Canal/California Aqueduct Intertie. The projects share costs for actions needed to meet joint responsibilities under the Endangered Species Act.

II. THREATENED AND ENDANGERED FISH SPECIES AFFECTED BY THE CENTRAL VALLEY PROJECT

The Central Valley Project exports water from "an important habitat for thousands of river and anadromous fish, many of which are endangered." *San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 980-81 (9th Cir. 2014). Project operations impact the endangered

Sacramento River winter-run Chinook salmon, threatened Central Valley spring-run Chinook salmon, threatened California Central Valley steelhead, and threatened Delta smelt.

A. Sacramento River Winter-Run Chinook Salmon

The adult winter-run salmon typically migrate upstream through the Sacramento-San Joaquin Delta from November through July, with the peak presence from February through April. The winter-run salmon spawn during the spring and summer months in the upper Sacramento River. Emigrating juvenile winter-run salmon occur in the Sacramento-San Joaquin Delta primarily in November through early May. The ocean life cycle of the Chinook salmon lasts between 1 and 5 years. Shasta Dam blocks the winter-run salmon's access to its historical spawning and rearing area in the upper Sacramento River. Salmon that had previously spawned upstream of Shasta Dam have been forced to spawn downstream of Keswick Dam on the Sacramento River. The cold-water management of Shasta Dam presently supports a single winter-run salmon population below the dam.

In 1989, NMFS took emergency action to designate the winter run of Chinook salmon in the Sacramento River as a threatened species under the Endangered Species Act, following the emergency rule with a more permanent one in 1990 designating the species as endangered. Endangered and Threatened Species, Critical Habitat, Winter-run Chinook Salmon, 54 Fed. Reg. 32085 (Aug. 4, 1989) (emergency rule); Endangered and Threatened Species; Sacramento River Winter-run Chinook Salmon, 55 Fed. Reg. 46515-01 (Nov. 5, 1990). By that time, the species had declined by more than 97 percent over a period of less than two decades. *Id.* Subsequently, in 1994, NMFS listed the species as endangered. Endangered and Threatened Species; Status of Sacramento River Winter-run Chinook Salmon, 59 Fed. Reg. 440-01 (Jan. 4, 1994). NMFS first designated critical habitat for winter-run salmon as part of its 1989 emergency rule; subsequent rules have expanded the habitat throughout the Sacramento River watershed and the Bay-Delta. The species was classified as endangered under the state California Endangered Species Act (CESA) in 1989. Cal. Code Regs. tit. 14, § 670.5(a)(2)(M).

The drought of 2014-2016 hit the winter-run population particularly hard. In 2014 and 2015, around 95 percent of brood year egg and fry died. Although returns improved in 2018, the winter-run Chinook salmon remain at a high risk of extinction.

B. Central Valley Spring-Run Chinook Salmon

The adult spring-run Chinook salmon typically begin their upstream migration in the Bay-Delta region in January and February and are present in the Sacramento River and its tributaries from March through October.[2] Spawning occurs in the Sacramento River and its

[2] The spring-run Chinook salmon is an evolutionarily significant unit. Historically, it was the second-most abundant salmon run in the Central Valley.

tributaries from mid-August through October. Juvenile spring-run salmon generally are found in the Bay-Delta region between December and May but can be present year-round. Like winter-run salmon, the ocean life cycle of the spring-run Chinook salmon lasts between 1 and 5 years.

This run was originally proposed for listing as endangered, but NMFS instead listed it as threatened in 1999, following extensive meetings, hearings, and peer review. Endangered and Threatened Species; Threatened Status for Two Chinook Salmon Evolutionarily Significant Units (ESUs) in California, 64 Fed. Reg. 50394-01. The State of California listed the "spring-run chinook salmon of the Sacramento River drainage" as threatened under CESA in 1999. NMFS reaffirmed its "threatened" listing and designated spring-run critical habitat in 2005. 70 Fed. Reg. 37160 (reaffirming listing); 70 Fed. Reg. 37204 (hatchery fish); 70 Fed. Reg. 52488 (critical habitat).

Spring-run abundance dropped in 2015 as a result of the drought, according to a five-year study released by NMFS in 2016. NMFS, 5-Year Review: Summary and Evaluation of Central Valley Spring-run Chinook Salmon Evolutionarily Significant Unit (April 2016). The 5-year study cites high egg and fry mortality during the drought, poor ocean conditions, and straying as among the lingering threats to the population. *Id.* at 18.

C. California Central Valley Steelhead

The majority of Central Valley steelhead originate in the Sacramento River basin, although a small population exists in tributaries to the San Joaquin River. Spawning adult steelhead generally enter the San Francisco Bay estuary and Delta from August through April. Spawning occurs from December through April. In the Sacramento River, steelhead generally migrate to the ocean from early winter to early summer, but can be present year-round. In the San Joaquin River, emigration of steelhead generally occurs from February to June.

Central Valley steelhead were listed as threatened by NMFS on March 18, 1998, and confirmed as a distinct population segment in 2006. 63 Fed. Reg. 13347 (1998); 71 Fed. Reg. 834 (2006). NMFS delineated and designated critical habitat in 2005. 70 Fed. Reg. 52488.

At their population's peak, an estimated 1 to 2 million spawning adults returned to the Sacramento River. Now, only a few thousand females spawn. 71 Fed. Reg. 834, 852. Estimates of juvenile steelhead abundance based on results of the USFWS Chipps Island midwater trawl surveys showed a declining trend in juvenile abundance between 1995 and 1997 with consistently low abundance (densities) every year between 1998 and 2007. *Pac. Coast Fed'n of Fishermen's Associations v. Gutierrez*, 606 F. Supp. 2d 1195, 1223 (E.D. Cal. 2008).

D. Delta Smelt

The Delta smelt (*Hypomesus transpacificus*) is a small fish that does not typically exceed 4.5 inches (approximately 120 mm) in length, with the majority living only one year. Delta

smelt generally spawn from February through May in various locations from Suisun Bay and Marsh and eastward into the Sacramento-San Joaquin Delta. Smelt larvae hatch and enter the juvenile life stage by June or early July. Most of the juvenile fish continue to rear in habitats from Suisun Bay and Marsh, while smaller subsets of the population rear in more eastward areas, principally along the Sacramento River-Cache Slough corridor. The fish develop into maturing adults in the fall, at which time their spatial distribution expands.

In March 1993, the USFWS listed the species as threatened. 50 C.F.R. § 17.11. Subsequently, in 1994, USFWS designated the Delta as critical habitat for the Delta smelt, designating the "physical habitat, water, river flow, and salinity concentrations required to maintain delta smelt habitat for spawning, larval and juvenile transport, rearing, and adult migration" to be the primary constituent elements of that habitat. 50 C.F.R. § 17.95 (e). The species further declined throughout the 1990s and into the 2000s. *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 596 (9th Cir. 2014). The California Department of Fish and Wildlife (CDFW) classified the Delta smelt as threatened under CESA in 1993 (Calif. Dept. of Fish and Game, Report to the Fish and Game Commission: a Status Review of the Threatened Delta Smelt (*Hypomesus Transpacificus*) In California (2008) at 5), and then reclassified the Delta smelt as endangered in 2010 (Cal. Code Regs. tit. 14, § 670.5). In 2010, USFWS found that listing the Delta smelt as an endangered species was "warranted, but precluded by other higher priority listing actions." Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to Reclassify the Delta Smelt From Threatened to Endangered Throughout Its Range, 75 Fed. Reg. 17667-01 (Apr. 7, 2010). USFWS found that "[o]peration of upstream reservoirs, increased water exports, and upstream water diversions" negatively impacted the Delta smelt's habitat. *Id.*

Delta smelt populations have significantly declined in recent years. In 2017, the CDFW Fall Midwater Trawl captured just two individual Delta smelt. It captured zero Delta smelt in 2018 and in 2019. Similarly, the Spring Kodiak Trawl detected the decline in smelt abundance, with the 2019 Spring Kodiak Trawl also capturing just two fish. This once-abundant species "is … in imminent danger of extinction." *Jewell*, 747 F.3d at 595-96.

LEGAL AND PROCEDURAL BACKGROUND

I. THE REQUIREMENTS OF THE ENDANGERED SPECIES ACT

Congress enacted the Endangered Species Act (ESA) nearly 45 years ago in a bipartisan effort "to halt and reverse the trend toward species extinction, whatever the cost." *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978); *see also* 16 U.S.C. § 1531(a). The ESA reflects a national policy of "institutionalized caution" in recognition of the "overriding need to *devote whatever effort and resources [are] necessary* to avoid further diminution of national and worldwide wildlife resources." *Hill*, 437 U.S. at 177, 194 (internal quotation omitted, emphasis in original). The ESA constitutes "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Id.* at 180.

Section 9 of the ESA prohibits any person from "taking" any listed fish or wildlife species. 16 U.S.C. § 1538(a)(1)(B), (G). "Take" is broadly defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." *Id.* § 1532(19).

Section 7 of the ESA requires all federal agencies to ensure that any actions they authorize, fund, or carry out are "not likely to jeopardize the continued existence of any listed species or destroy or adversely modify their designated critical habitat." 16 U.S.C. § 1536(a)(2). "Jeopardize the continued existence of" an endangered species "means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02.[3]

An agency proposing an action that may affect a listed species must consult with either NMFS or USFWS, depending on the species involved. The consulting agency reviews the proposed action and prepares a biological opinion that evaluates whether the proposed action will jeopardize the continued existence of the species or adversely modify its critical habitat. *See Turtle Island Restoration Network v. U.S. Dep't of Commerce*, 878 F.3d 725 (9th Cir. 2017) (citing 16 U.S.C. § 1536(b); 50 C.F.R. § 402.12). If the biological opinion finds that the proposed action would not jeopardize a listed species' continued existence, NMFS or USFWS can issue a statement permitting the incidental "take" of a certain number of protected animals. *Id.* (citing 16 U.S.C. § 1539(a)(1)(B)). The incidental take statement must provide "an articulated, rational connection" between the condition and the take of the species. *Arizona Cattle Growers' Ass'n v. U.S. Fish & Wildlife*, 273 F.3d 1229, 1251 (9th Cir. 2001). The statement must specify how the action agency is to monitor and report the effects of the action on listed species. *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010). And the incidental take statement must provide "a meaningful trigger for renewed consultation after the take exceed[s] authorized levels." *Id.* Only compliance with a valid Section 7 incidental take statement exempts a federal agency from the Section 9 take prohibition. *Ramsey v. Kantor*, 96 F.3d 434, 441 (9th Cir. 1996).

Each federal agency has its own independent duty—regardless of the findings of a biological opinion—to avoid jeopardy or adverse modification of critical habitat. *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1128 (9th Cir. 2012). If an

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[3] On August 27, 2019, the USFWS and NMFS published a final rule (84 Fed. Reg. 44976-01) to revise portions of the regulations that implement section 7 of the ESA. The rule became effective on October 28, 2019, a week after the Services issued the 2019 Biological Opinions on October 21, 2019. *See* 84 Fed. Reg. 50333-01. Numerous states, including California, have joined to file a complaint challenging the revised regulations in federal court, *State of California et. al, v. Bernhardt*, No. 3:19-cv-06013 (N.D. Cal.). The 2019 Biological Opinions expressly apply the previous regulations to the consultation.

agency's action would jeopardize the species or harm critical habitat, "then the agency must terminate the action, implement an alternative proposed by the Secretary, or seek an exemption from the Cabinet-level Endangered Species Committee." *Weyerhaeuser Co. v. U.S. Fish and Wildlife Service*, 139 S.Ct. 361, 366 (2018).

II. CONSULTATION HISTORY

On August 2, 2016, Reclamation and DWR wrote to USFWS and NMFS requesting reinitiation of consultation under section 7 of the Endangered Species Act regarding the coordinated long-term operations of the Central Valley Project and State Water Project. Reclamation and DWR requested the new consultation "based on new information related to multiple years of drought and recent data demonstrating low Delta smelt populations," and noted that additional scientific information was "available and expected to become available." At the time, the two projects had incidental take authorization for the projects' take of ESA-listed species through a 2008 USFWS biological opinion and a 2009 NMFS biological opinion. These biological opinions concluded that the proposed project operations would jeopardize ESA-listed fish species and would adversely affect the species' critical habitat. The opinions therefore required the projects to meet additional fishery protection requirements known as reasonable and prudent alternatives. *See* 16 U.S.C. § 1536(b)(3)(A).

On August 3, 2016, USFWS, which has jurisdiction over the Delta smelt, responded to the request for reinitiation of consultation, noting, "We recognize that this new information is demonstrating the increasingly imperiled state of the Delta Smelt and its designated critical habitat, and that emerging science shows the importance of outflows to all life stages of Delta Smelt and to maintaining the primary constituent elements of designated critical habitat." The letter further commended the projects for their "efforts towards providing additional protections for the imperiled Delta Smelt and its designated critical habitat."

On August 17, 2016, NMFS, which has jurisdiction over the salmonid species, responded to the request for reinitiation of consultation, stating, "Reasons for the reinitiation include new information related to the effects of multiple years of drought, recent data demonstrating extremely low abundance levels for endangered Sacramento River winter-run Chinook salmon and threatened Central Valley spring-run Chinook salmon, and new information resulting from ongoing scientific collaboration."

On December 29, 2017, Reclamation published a Notice of Intent to Prepare a Draft Environmental Impact Statement, Revisions to the Coordinated Long-Term Operation of the Central Valley Project and State Water Project, and Related Facilities in the Federal Register, noting that it "propose[d] to evaluate alternatives that maximize water deliveries and optimize marketable power generation." 82 Fed. Reg. 61789.

On October 19, 2018, President Donald J. Trump issued a "Presidential Memorandum on Promoting the Reliable Supply and Delivery of Water in the West" (Presidential Memo). 83

Fed. Reg. 53961. The Presidential Memo required completion of the final biological opinions for the long-term coordinated operations of the projects by June 15, 2019. *Id.*

On January 31, 2019, Reclamation sent its Biological Assessment to NMFS and USFWS, which included a description of proposed project operations (Proposed Action). Reclamation submitted revisions to the Proposed Action in April, July, and October 2019. NMFS BiOp at 12-13.

On or about June 6, 2019, USFWS completed its draft biological opinion for the Delta smelt. On or about July 1, 2019, NMFS completed its draft biological opinion for the salmonid species. The draft salmonid biological opinion found jeopardy and adverse modification of critical habitat for winter-run Chinook salmon and included "reasonable and prudent alternatives" designed to avoid jeopardizing the species.

On August 21, 2019, CDFW submitted its "Comments on the Reinitiation of Consultation on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project Draft Environmental Impact Statement." Letter to David Mooney from CDFW Water Branch Chief Joshua Grover (Aug. 21, 2019) (CDFW ROC Comments).

On October 21, 2019, NMFS and USFWS issued their final biological opinions. Unlike the 2008 USFWS and 2009 NMFS opinions and the draft salmonid opinion, the 2019 Biological Opinions concluded that the Proposed Action would not jeopardize any ESA-listed species and would not adversely affect the species' critical habitat.

On December 19, 2019, Reclamation issued its final environmental impact statement proposing to adopt the 2019 Biological Opinions. Reclamation issued the Record of Decision adopting the 2019 Biological Opinions on February 19, 2020.

DEFICIENCIES IN THE BIOLOGICAL OPINIONS

A biological opinion is a final agency action subject to judicial review under the federal Administrative Procedure Act (APA), 5 U.S.C. § 702; *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.,* 524 F.3d 917, 925 (9th Cir. 2008). This standard requires the agency to "examine the relevant data and articulate a satisfactory explanation for its action, including a 'rational connection between the facts found and the choice made.'" *Motor Vehicle Mfrs. Ass'n v. State Farm Mut.*, 463 U.S. 29, 43 (1983); *Pac. Coast Fed'n of Fisherman's Ass'n. v. U.S. Bureau of Reclamation*, 426 F.3d 1082, 1090 (9th Cir. 2005). Under the APA, a federal agency decision must be based "on consideration of the relevant factors" and cannot "entirely fail to consider an important aspect of the problem." *State Farm Mut.*, 463 U.S. at 43. The agency must "use the best scientific and commercial data available." 16 U.S.C. § 1536(a)(2). Moreover, the Ninth Circuit has held that mitigation measures applied in fishery protections must be "under agency control or otherwise reasonably certain to occur." *Nat'l Wildlife Fed'n,* 524 F.3d at 936 n.17; *see also Rock Creek All. v. U.S. Fish & Wildlife Serv.,* 663 F.3d 439, 444 (9th

Cir. 2011). Finally, a federal agency cannot divide a project into "incremental steps" for purposes of the ESA analysis, but must instead consider the whole project. *Conner v. Burford*, 848 F.2d 1441, 1455 (9th Cir. 1986); *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 525 (9th Cir. 2010).

The 2019 Biological Opinions fail to meet the requirements of the ESA and are therefore arbitrary and capricious under the APA, as follows:

I. **Rational Connection and All Relevant Factors**: The 2019 Biological Opinions acknowledge that the populations of listed species have declined precipitously and are perilously close to extinction or extirpation, but the opinions do not account for that status in concluding that the Proposed Action will not jeopardize the species.

II. **Not "Reasonably Certain to Occur"**: The 2019 Biological Opinions provide "off-ramps" and other loopholes that allow Reclamation to avoid the constraints in the operational criteria. Further, although most conservation measures will not be implemented for several years, the USFWS BiOp does not account for near-term impacts.

III. **All Aspects of the Project**: The 2019 Biological Opinions fail to analyze key components of the Proposed Action, including a proposal to raise the Shasta Dam.

IV. **Recovery**: The 2019 Biological Opinions fail to meet the requirement that a biological opinion address not just impacts to the continued survival of listed species, but also the potential to reduce appreciably the likelihood of their recovery. *See Nat'l Wildlife Fed'n*, 524 F.3d at 931-32.

V. **Incidental Take Statements**: The 2019 Biological Opinions' incidental take statements fail to provide adequate parameters to ensure species protection.

Each of these deficiencies is discussed in greater detail below.

I. THE 2019 BIOLOGICAL OPINIONS FAIL TO CONSIDER ALL RELEVANT FACTORS AND DO NOT SHOW A RATIONAL CONNECTION BETWEEN THE FACTS FOUND AND CONCLUSIONS REACHED.

A biological opinion must articulate a "rational connection between the facts found and the choice made," using the best available science. *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962); *Center for Biological Diversity v. Zinke*, 900 F.3d 1053, 1068 (9th Cir. 2018). A biological opinion must also consider all relevant factors and cannot "entirely fail to consider ... important aspect[s] of the problem," *Motor Vehicle Mfrs. Ass'n v. State Farm Mut.*, 463 U.S. 29, 43 (1983). The 2019 Biological Opinions fail to meet these requirements.

As a preliminary matter, both opinions fail to apply the correct standard under the ESA. Rather than evaluating whether the Proposed Action will jeopardize the listed species' survival and recovery as the law requires, the opinions simply compare the effects of the Proposed Action to the Current Operating Scenario. Further, after describing the increasingly precarious state of the species, including the real possibility of species' imminent extinction, the opinions fail to account for the species' significant abundance declines when evaluating the effects of the Proposed Action.

The opinions ultimately allow increased pumping based on nebulous operational criteria that largely offer no better, and in some cases much worse, protection than the Current Operating Scenario, while relying on conservation measures that will not ameliorate conditions in the near term. The opinions conclude without evidence that, despite causing greater entrainment of listed species and reducing or degrading their habitat, increased exports will not jeopardize the species or adversely affect their critical habitats. Thus, the opinions do not consider all relevant factors, and their no-jeopardy conclusions are not rationally connected to the facts found.

A. The Biological Opinions Improperly Focus on a Comparison of the Proposed Action to the Current Operating Scenario in the Effects Analysis.

The 2019 Biological Opinions both conclude that the Proposed Action will not jeopardize the continued existence of listed species, based on a finding that impacts would be similar to the Current Operating Scenario set forth in the 2008 and 2009 biological opinions. *See* USFWS BiOp at 220-21; NMFS BiOp at 797. But the question that the Services were legally required to answer is not whether the Proposed Action is similarly protective of the listed species as the Current Operating Scenario. The question is whether, based on the best scientific and commercial information available now, some ten years after those earlier opinions were adopted, the Proposed Action will jeopardize the continued existence of the species or adversely affect their critical habitat.

It is not reasonably subject to dispute that listed species have continued to decline while the Current Operating Scenario has been in effect. *See* USFWS BiOp at 84, 86, 87 (noting that in 2018, the Fall Midwater Trawl survey found zero Delta smelt for the first time, while the Summer Townet Survey has found zero Delta smelt four times since 2015); NMFS BiOp at 75 (noting the "continued low abundance, a negative growth rate over two complete generations, [and] significant rate of decline since 2006" for winter-run Chinook salmon). This continued decline was one of the reasons for reinitiating consultation in 2016.

Despite these facts, the NMFS BiOp finds that the Proposed Action keeps "risks comparable to risks under the NMFS 2009 Opinion." NMFS BiOp at 543. This approach ignores the relevant factor of the significant declines in listed salmon population abundances and the fact that the listed salmon populations remain at risk of extinction. Similarly, the USFWS BiOp concludes that entrainment risks for Delta smelt are minimized because the risks are

purportedly no greater than the risks that would occur under the prior 2008 Biological Opinion. USFWS BiOp at 219-220. However, if species abundance has materially declined since 2008, adopting measures that provide equivalent protection as provided in the 2008 Biological Opinion, absent additional measures or further evidence, fails to consider the subsequent decline in species abundance and the causes of that decline, and thus does not consider "all relevant" factors.

Relying solely on protections that are similar to the current situation ignores the possibility that the previous protections were not protective enough or that other stressors require different protective measures. Without undertaking that additional analysis, the opinions cannot reasonably conclude that the Proposed Action would not jeopardize the continued existence of listed species. They therefore fail to articulate a rational connection between the facts found and the conclusions reached.

B. The Biological Opinions Fail to Properly Analyze Whether the Proposed Action Would Tip the Species into Extinction.

The 2019 Biological Opinions fail to adequately explain why the additional detrimental effects caused by the Proposed Action (discussed in further detail below) would not jeopardize the listed species when added to the degraded baseline conditions. In *National Wildlife Federation v. National Marine Fisheries Service*, 524 F.3d 917, 930 (9th Cir. 2008), the Ninth Circuit rejected the argument that NMFS "may satisfy the ESA by comparing the effects of proposed ... operations on listed species to the risk posed by baseline conditions," such that a "full jeopardy analysis" is required "[o]nly if those effects are 'appreciably' worse than baseline conditions." The court explained that the ESA "seeks to prevent" the "type of slow slide into oblivion" that would occur under this approach, where "a listed species could be gradually destroyed, so long as each step on the path to destruction is sufficiently modest." *Id.* Thus, agencies may not take actions that would "tip a species from a state of precarious survival into a state of likely extinction." *Id.; see also Turtle Island Restoration Network v. U.S. Dep't of Commerce*, 878 F.3d 725, 737-738 (9th Cir. 2017).

According to the 2019 Biological Opinions, "Reclamation established a without action scenario as part of the Environmental Baseline to isolate and define potential effects of the Proposed Action apart from effects of non-Proposed Action causes." *See* USFWS BiOp at 63. The NMFS BiOp notes that "the without action scenario is a useful analytical tool to separate some of the effects related to the existence of CVP and SWP facilities and provides context for how these facilities have shaped and continue to affect the species and critical habitat in the action area." NMFS BiOp at 137. But after identifying effects attributable to other causes for inclusion in the baseline, the biological opinions fail to take the crucial additional step of evaluating whether, in light of that baseline, the Proposed Action will increase the likelihood of species extinction.

A thorough description of the environmental baseline is not a substitute for actual analysis of whether the effects of the Proposed Action added to baseline conditions would or would not tip a species into extinction. As the Ninth Circuit has explained, "even when baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy by causing additional harm." *Nat'l Wildlife Fed'n*, 524 F.3d at 930. The opinions' no-jeopardy conclusions are unlawful because they are not based on an analysis of the Proposed Action in its "actual context." *See id.*

C. NMFS BiOp Modeling Reveals Higher Extinction Risk from the Proposed Action.

The NMFS BiOp notes that many of the listed salmonid species have experienced troubling population declines, with winter-run Chinook salmon perilously close to extirpation. And the opinion's modeling demonstrates that the Proposed Action will decrease through-Delta survival for juvenile salmon and is more likely to cause deeper population declines than the Current Operating Scenario. Thus, the opinion's no-jeopardy conclusion is not rationally connected to the facts found.

1. Winter Run Model

The Winter-Run Chinook Salmon Life Cycle Model (Winter Run Model)—used to estimate key population characteristics for winter-run Chinook salmon—shows that rather than addressing the declining winter-run population, the Proposed Action will likely increase the extinction risk that the species faces. The Winter Run Model shows that mean winter-run abundance will be 3.05 percent less under the Proposed Action relative to the Current Operating Scenario. This mean is derived from the combination of model runs that demonstrate that for all water-year types other than Wet, "the estimates of survival to Chipps Island for Delta-reared winter-run Chinook salmon smolts is consistently higher" for the Current Operating Scenario compared to the Proposed Action. NMFS BiOp at 384-85.

Over the long record of historical conditions it analyzes, the Winter Run Model also shows higher relative probability of a 10 percent or greater decline in spawner abundance for the Proposed Action than the Current Operating Scenario. Fisheries biologists have identified such an event as an important predictor of extinction. As shown in the table from the NMFS BiOp below, the probability that the Proposed Action will have more 10 percent declines over a single year than the Current Operating Scenario is 45.6 percent. NMFS BiOp at 706-07. The probability that there will be an equal number of these events is 27.9 percent, and the probability that the Current Operating Scenario will have more 10 percent declines over a single year is 26.5 percent. *Id.* In other words, the most likely outcome is that the Proposed Action will lead to more extinction-risk events than the Current Operating Scenario, a fact that points toward a jeopardy finding.

NMFS also uses the results of the Winter Run Model to analyze the probability of a 10 percent or greater spawner abundance decline over 4, 12, and 20 years. For each time period, the probability that the Proposed Action has more of these longer-term declines in spawner abundance is always higher than 44 percent, and the Proposed Action's most likely result for each measured time period is also a more significant decline. *Id.* The Winter Run Model iterations show particularly troublesome results over the 20-year time period. The probability that the Proposed Action will result in relatively more 10 percent abundance declines over 20-year time lags within the model's 75-year timeframe is 58.9 percent. *Id.*

Table 133. Relative probability of events in which there is a decline in spawner abundance of greater than ten percent at time lags of 1, 4, 12, or 20 years for the current operating scenario and proposed action.

	1 Year	4 Years	12 Years	20 Years
Pr (current operating scenario has more events)	0.265	0.235	0.296	0.171
Pr (equal number of events)	0.279	0.234	0.26	0.24
Pr (PA has more events)	0.456	0.531	0.444	0.589

NMFS concludes that the Proposed Action will not increase abundance or productivity of winter-run Chinook salmon, "but assumes that *results would be similar to those of current operations*." NMFS BiOp at 707 (emphasis added). As the results of the modeling described (and pictured) above show, NMFS's no-jeopardy conclusion, based on the assertion that the results of the Proposed Action would be similar to the current operations, does not follow from the evidence, to the detriment of the species' chances of survival.

Additionally, the Winter Run Model predicts higher variance in spawner abundance than currently. A higher variance in the average spawner abundance of one scenario relative to another is described by larger swings in the spawner abundance with higher peaks and lower lows. NMFS BiOp at 707. Lower lows are especially dangerous for endangered and threatened populations because if that "low" dips below the critical threshold, the species will be extirpated. For winter-run Chinook salmon, the Winter Run Model estimates that variance will be 6.23 percent higher under the Proposed Action than in the Current Operating Scenario. *Id.* As a result, dangerous lows in spawner abundance will become more frequent and the possibility of species extirpation more likely.

2. Delta Passage Model

The Delta Passage Model estimates the mean through-Delta survival for each Chinook salmon population. Over the past ten years of operations under the Current Operating Scenario, ESA-listed salmon populations have continued to face high risks of extinction. In comparative model runs, Delta Passage Model estimates generally demonstrate that the Proposed Action will

lead to either similar or lower through-Delta survival rates than the Current Operating Scenario, which has not reduced the extinction risk for the salmon species.

- For winter-run Chinook salmon, the largest difference in survival rates occurs in Dry and Critical years, where the Proposed Action lowers the survival rates by 0.24 percent and 0.21 percent, respectively. NMFS BiOp at 382. In the other water-year types, the modeled median survival reflected a relative change of 0.02 percent or less. *Id.*

- For spring-run Chinook salmon, the largest difference occurs during Wet water years, for which the model estimates that the Proposed Action will result in a survival rate that is 0.98 percent lower than the survival rate under the Current Operating Scenario. NMFS BiOp at 382-83. In Dry years, the modeled change in relative survival rates is 0.11 percent. NMFS BiOp at 383.

Given the precarious condition of the populations of these species, even these relatively minor decreases in survival could have significant impacts on the listed salmon populations. A rational connection cannot be drawn between the "no-jeopardy" finding and these results showing that the Proposed Action is likely to lower through-Delta survival below the already challenging Delta environment facing the species under the Current Operating Scenario.

3. Perry Survival Model

The Perry Survival Model simulates the effects of operations and hydrology on daily cohorts of juvenile Chinook salmon migrating through the Delta from the Sacramento River. Based on the results of this model, early-arriving "winter-run Chinook salmon juveniles and yearling spring-run Chinook salmon are the two groups of salmonids that will be affected most by the proposed action." NMFS BiOp at 402.

- Early-arriving winter-run Chinook salmon risk being routed into the interior Delta through open Delta Cross Channel gates in October and November, which reduces the survival of early-arriving winter-run Chinook juveniles by up to 10 percent, depending on water-year type. NMFS BiOp at 400. In November specifically, through-Delta survival drops from 45 percent under the Current Operating Scenario to 30 percent under the Proposed Action. NMFS BiOp at 390. Although these "early-arriving" winter-run Chinook are a relatively small portion of the population (~5 percent), it is important to the likelihood of species survival to maintain the greatest possible lifecycle diversity. NMFS BiOp at 33 (importance of lifecycle diversity), 400 (population estimates).

- Yearling spring-run Chinook salmon that enter the Delta in October and November would face higher risks of being routed into the interior Delta. NMFS BiOp at 400. This leads to longer travel routes, which reduces survival. As with winter-run Chinook

salmon, maintaining life history diversity is an important factor in the resilience of the species, and the model's results demonstrate that for October and November, the Proposed Action will decrease through-Delta survival compared to the Current Operating Scenario, increase the number of fish routed into the interior Delta, and increase the through-Delta travel time of fish. NMFS BiOp at 402.

4. Salvage Density Modeling Results

The NMFS biological opinion discloses results from salvage density modeling that also directly conflict with the opinion's no-jeopardy finding. Salvage of ESA-listed salmonid species occurs when the projects' South Delta pumping operations draw out-migrating salmonids into the pumping facilities. The salvage density modeling conducted by NMFS demonstrates that in all water-year types the Proposed Action results in higher salmonid loss than under the Current Operating Scenario. NMFS BiOp at 489 (Table 69), 500 (Table 79), 509-10 (Table 89). NMFS may contend that the September 19, 2019 revisions to the Proposed Action address these adverse model results. However, NMFS admits that under the final Proposed Action, "it is uncertain how exactly exports and Old and Middle River flows under the final proposed action will change in a given month and year type compared to the original proposed action." NMFS BiOp at 542. Given this admission, NMFS cannot conclude with any certainty that the Proposed Action will alter the adverse salvage results set forth in the modeling of the original proposed action. NMFS's modeling findings that the Proposed Action will increase salmonid salvage loss when compared to the Current Operating Scenario therefore are not rationally connected to the opinion's no-jeopardy conclusion.

D. The USFWS BiOp Fails to Address the Proposed Action's Negative Impacts to the Delta Smelt.

The USFWS BiOp acknowledges that the Delta smelt are on the verge of extinction in the wild, yet it proposes to increase exports—likewise increasing the likelihood of smelt entrainment—and to reduce suitable habitat, while relying on uncertain measures to mitigate these negative effects. Despite previously acknowledging that the Delta smelt require additional protections over those provided in the Current Operating Scenario, the USFWS BiOp allows increased pumping based on operational criteria and conservation measures that largely offer no better, and in some cases much worse, protection than the Current Operating Scenario, and ultimately concludes that the Proposed Action will not jeopardize the survival and recovery of the Delta smelt or adversely affect its critical habitat. This no-jeopardy conclusion does not follow from the evidence, and it is therefore arbitrary and capricious.

Specific examples of the USFWS BiOp's inadequate analysis of negative impacts on Delta smelt are discussed below.

1. Entrainment

The USFWS BiOp finds that entrainment of adult Delta smelt will be similar to the Current Operating Scenario, while entrainment of larval and juvenile Delta smelt will increase. USFWS BiOp at 212. Setting aside the fact that the Delta smelt have precipitously declined under the Current Operating Scenario, the BiOp's modeling to determine entrainment risk is based on assumptions that are not reflected in the Proposed Action: "Important assumptions that were used in the CalSim II model . . . differ from what is described in the [Proposed Action]." USFWS BiOp at 140. In fact, exports may significantly increase under the Proposed Action because of multiple off-ramps—discussed in further detail in section III(B)(1) below—that render actual operations difficult if not impossible to ascertain. The effects of the significantly increased exports, which are not only possible but probable, have not been modeled or even discussed. Such increased exports would likely result in increased entrainment of Delta smelt at all life stages. The BiOp fails to articulate a rational connection between the facts found and its no-jeopardy conclusion.

2. Fall X2

X2 "represents the number of kilometers the salt water has moved into the Delta from the Golden Gate Bridge," and increases as the amount of fresh water in the Delta decreases. *Westlands Water Dist. v. U.S. Dep't of Interior*, 376 F.3d 853, 876 (9th Cir. 2004). Current measures protect Delta smelt by maintaining X2 at 74 km in wet years and 81 km in above-normal years in September and October, known as Fall X2.

The Summer-Fall Habitat Action proposes to maintain X2 at 80 km from the Golden Gate in Above Normal and Wet water years in September and October, up from 74 km in the Current Operating Scenario. USFWS BiOp at 51. Just before the release of the BiOp, USFWS conceded that elimination of the 74 km Fall X2 requirement would adversely affect the Delta smelt's critical habitat. Bureau of Reclamation Fall X2 Mem. at 3 (Sept. 4, 2019) (admitting that "the proposed action would adversely affect Delta Smelt designated critical habitat"); USFWS Fall X2 Mem. at 6 (Sept. 18, 2019) (approving modification while conceding that the proposed action would likely result in a percentage loss of low salinity zone habitat for the Delta smelt of between 7.7 and 13 percent); CDFW Fall X2 Letter at 2 (Sept. 24, 2019) (notifying Reclamation of its conclusion that implementing the Fall X2 modifications "would undermine necessary species protections even as Delta Smelt decline to record-low abundance."). The BiOp's no-jeopardy conclusion does not follow from the fact that the Proposed Action would likely reduce the Delta smelt's critical habitat, to the detriment of the fish, without providing sufficient measures to off-set the habitat loss.

II. THE 2019 BIOLOGICAL OPINIONS IMPERMISSIBLY RELY ON OPERATIONAL CRITERIA AND CONSERVATION MEASURES THAT ARE NOT REASONABLY CERTAIN TO OCCUR.

While agencies may rely on mitigation and conservation measures in reaching a no-jeopardy conclusion, such measures, must be "under agency control or otherwise reasonably certain to occur." *Nat'l Wildlife Fed'n*, 524 F.3d at 936 n.17. "Reasonably certain" measures are those with "specific and binding plans" that include "a clear, definite commitment of resources." *Id.* at 935-936. Relied-on measures must also be "subject to deadlines or otherwise-enforceable obligations; and most important, they must address the threats to the species in a way that satisfies the jeopardy and adverse modification standards." *Ctr. for Biological Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1152 (D. Ariz. 2002). "Where one cannot determine what will happen when [conservation or] mitigation measures are implemented, they may not be relied upon to avoid jeopardy." *AquAlliance v. U.S. Bureau of Reclamation*, 287 F. Supp. 3d 969, 1072 (E.D. Cal. 2018), *appeal dismissed sub nom. AquAlliance v. U.S. Bureau of Reclamation*, No. 18-16666, 2019 WL 4199912 (9th Cir. June 25, 2019). Similarly, a "BiOp may not rely on future mitigation to support a no adverse modification conclusion without discussing the interim effects on the species." *S. Yuba River Citizens League v. Nat'l Marine Fisheries Serv.*, 723 F. Supp. 2d 1247, 1279 (E.D. Cal. 2010).

The 2019 Biological Opinions rely on operational criteria and other conservation measures that are not reasonably certain to occur, are of questionable effectiveness, or post-date implementation of the Proposed Action, as discussed below. *See Nat'l Wildlife Fed'n*, 524 F.3d at 936.

A. NMFS BiOp

1. Delta Cross Channel Gates Operation

When the Delta Cross Channel (DCC) gates are open, the water moving from the Sacramento River into the interior Delta provides false migration cues for juvenile and adult salmon, steelhead and sturgeon. These cues cause juvenile fish to move into the central Delta rather than the western Delta and San Francisco Bay. NMFS BiOp at 415.

Conditions for closing the DCC gates to protect fishery resources were first instituted by the California State Water Resources Control Board (State Water Board) in 1978. The NMFS BiOp considers proposed alterations to these fishery protections that will allow the DCC gates to be opened more frequently and only closed when endangered fish are captured at either Knights Landing or Sacramento. But the water quality criteria imposed by the State Water Board's Decision 1641 may require the DCC gates to be open to provide high-quality water to the interior Delta. The Proposed Action does not offer any certainty on whether the DCC will be open or closed in the event that fish are emigrating but the interior Delta water quality is too low. Instead, NMFS accepts that "Reclamation and DWR will determine what to do with a risk

assessment." NMFS BiOp at 417. Without more, this allowance renders the DCC gate closure protective measure uncertain. Thus, NMFS cannot rely on that protective measure in making its conclusions.

2. Shasta Cold Water Pool Management

NMFS approves a tiered system for managing Shasta cold water such that each water year will be designated one of four different "tiers." NMFS BiOp at 234. "The initial determination of operational tier for an upcoming summer is based on the available storage on May 1 and temperature modeling of conditions at that time." NMFS BiOp at 233. "Based on the 82-year historical hydrologic sample set[4] used in the CalSim II modeling of the proposed action, Shasta storage conditions" would result in:

- Tier 1 operations in 68 percent of years
- Tier 2 operations in 17 percent of years
- Tier 3 operations in 7 percent of years
- Tier 4 operations in 7 percent of years

NMFS BiOp at 235. How often each Tier type is selected is critical because Tier 3 operations are projected to result in a 28 to 34 percent egg-to-fry mortality rate, while Tier 4 would cause temperature-dependent egg-to-fry mortality of 79 to 81 percent. NMFS BiOp at 276, Table 25. In the July 1, 2019 Draft BiOp, NMFS suggested a Reasonable and Prudent Alternative (RPA) that would have required Reclamation to operate to Tier 1 in at least 2 out of 3 years, Tier 2 or 3 in no more than 1 out of every 4 years, and Tier 4 operations no more than 1 out of every 10 years. NMFS Jeopardy BiOp, July 1, 2019, at 945. This required distribution of Tier years is not included in the final NMFS BiOp. Instead, as described below, the final NMFS BiOp adopts a tier system that offers essentially no protection to the fish.

The tier selection is purportedly designed such that Reclamation's operations should not cause Shasta cold water pool management to shift into a warmer tier. NMFS BiOp at 233. The tier system, however, eliminates reasonable and prudent protective measures that NMFS previously concluded are necessary to avoid jeopardy, and even the measures that it does require are uncertain. Absent protective measures that are reasonably certain to occur, the biological opinion violates the ESA.

[4] Additionally, the modeling's focus on historical data rather than incorporating likely changes in year-type frequency as a result of climate change result in further uncertainty.

a. The BiOp Eliminates Carryover Storage Targets and No Longer Requires NMFS Risk-Management Consultation on the Annual Temperature Plan

In 2009, NMFS developed a reasonable and prudent alternative (RPA) for Shasta Operations that targeted end of September (EOS) storage behind Shasta at 2.4 million acre feet (MAF) of water. 2009 NMFS Jeopardy BiOp, at 593. This target was chosen to ensure a sufficient cold-water pool to provide suitable temperatures for winter-run Chinook salmon spawning in most years, without sacrificing the potential for cold-water management in a subsequent year. *Id.* at 591. In the event that the 2.4 MAF EOS target was not met, NMFS required modified release schedules, including limiting releases to 3,250 cfs in very low water years. *Id.* at 595. Another RPA in the 2009 BiOp required Reclamation to develop a final Temperature Management Plan for releases from May 15 to October 31. *Id.* at 601. The development of this plan required Reclamation to submit multiple risk-management options to NMFS for review and comment before the plan was adopted. *Id.* at 602.

The 2019 BiOp approves the elimination of the quantified EOS carryover storage targets and the required risk-management consultation with NMFS on the annual plan. Reclamation's description of the proposed action includes that the Bureau will not operate to specific end-of-water-year storage targets. U.S. Bureau of Reclamation, *Proposed Action*, at 4-16 (Oct. 21, 2019). And summer cold water management will be based on the tier system described above. *Id.* at 4-30–33. Reclamation will still develop an annual temperature management plan which will identify the "forecasted" tier for that year's summer temperature management. *Id.* at 4-35. NMFS involvement, however, is described as "provid[ing] technical assistance through the" Sacramento River Temperature Task Group. If monitored water temperatures exceed the target temperature identified in the annual plan, Reclamation will "notify NMFS of what actions, if any, are being taken to address the exceedances." *Id.* at 4-35.

The dramatic mortality events of 2014 and 2015 for winter-run Chinook salmon (4% and 3% egg-to-fry survival, respectively) underscore the importance of Shasta cold-water management. NMFS BiOp at 69. Yet, instead of strengthening the protective measures of the 2009 RPA's, the Proposed Action proposes, and NMFS approves, a cold water management plan that does not have defined carryover storage targets and allows Reclamation to avoid NMFS oversight in drafting the annual temperature management plan. These species protections therefore are not reasonably certain to occur and NMFS should not have been relied on them in the BiOp.

b. Midyear Tier Changes Are Permitted

While the tier system is designed not to allow for shifts between tiers within a single year, Reclamation can shift into a warmer tier "in the event of responding to emergency and/or unforeseen conditions." NMFS BiOp at 233. NMFS does not explain how this exception can be reconciled with the requirement that species protections be reasonably certain to occur. Instead,

NMFS acknowledges that the projection of Tier 4 (the warmest) operations occurring in only 7 percent of years may not be an accurate characterization of tier probability, and that operations *can change* from one tier to a higher tier, which "introduces uncertainty into the determination of effect of summer cold water pool management." NMFS BiOp at 243. In the revised Proposed Action, Reclamation concludes that an independent panel will be chartered in the event that Reclamation switches tiers mid-year, but as NMFS notes, post-hoc evaluations do not result in real-time protection to the species. NMFS BiOp at 257.

c. Intervention Measures Are Not Described

Further, the interventional protection measures in the tiers are not mandatory. Although the tier system sets temperature targets that depend on the tier year type,[5] NMFS notes that a lifestage-specific target is not explicitly defined, meaning that the Proposed Action "has a notable uncertainty in its effect to species." NMFS BiOp at 242-43. And no such target temperature is described for Tier 4 years; instead, Reclamation will provide a temperature plan to the Sacramento River Temperature Task Group for review, and NMFS assumes that this review would be the means by which NMFS would provide technical assistance to the development of this plan. NMFS BiOp at 243. The HEC-5Q modeling of the Proposed Action predicts that during Tier 4 years, the critical 53.5°F temperature is exceeded 86 percent of days. NMFS BiOp at 252. This exposure corresponds to a temperature-dependent mortality of 79 to 81 percent. *Id.*

The NMFS BiOp also considers non-temperature-related protective measures that may be implemented in Tier 3 and 4 years. For example, in a Tier 3 year, if temperatures are projected to lead to high mortality, NMFS expects that intervention measures will be implemented. But these intervention measures, along with those to be implemented in a Tier 4 year, are still to be developed through collaboration. NMFS BiOp at 14, 249. The intervention measures reportedly under consideration include: increased production at Livingston Stone National Fish Hatchery, rescues of adult salmon, and juvenile trap and haul operations. NMFS BiOp at 271-74. But NMFS notes that not enough certainty about increased hatchery production is provided for an assessment of its effects to be included, and NMFS does not provide an ESA exemption for take associated with either adult rescues or juvenile trap and haul, so those interventions could not proceed without further consultation. NMFS BiOp at 273-74.

[5] For example, in Tier 3 years, temperatures will be targeted between 53.5°F and 56°F.

3. Cumulative Loss Thresholds

The NMFS BiOp provides cumulative and single-year loss thresholds to trigger protective management of Old and Middle River flows. The cumulative loss thresholds are based on cumulative historical loss from 2010 through 2018.[6] NMFS BiOp at 534.

After the cumulative loss thresholds are calculated, the Proposed Action does not require definitive action to address unexpected losses. For example, if 50 percent of the calculated cumulative loss threshold is exceeded before 2024, the Proposed Action requires an independent panel to review the actions, but the panel can only issue recommendations. NMFS BiOp at 534. Meanwhile, the Proposed Action only requires Reclamation to seek the technical assistance of NMFS after the cumulative loss threshold has already been exceeded, and it is not clear whether NMFS may then impose new requirements on Reclamation. *Id.*

For single-year loss thresholds, the Proposed Action directs Old and Middle River Flows to be reduced if certain loss limits are exceeded, but these reductions are subject to the caveat that the restrictions can be lifted, or not implemented at all, if "Reclamation and DWR determine that Old and Middle River restrictions are not required to benefit fish movement because a risk assessment shows that the risk is no longer present based on real-time information." NMFS BiOp at 534. This risk assessment involves Reclamation and DWR sharing their technical analysis with NMFS, but ultimately NMFS does not have authority to modify pumping levels.

The structure of these proposed protective measures concerning Old and Middle River flows leads NMFS to conclude that it "is uncertain how exactly exports and Old and Middle River flows under the final proposed action will change in a given month and year type." NMFS BiOp at 542. Old and Middle River flows are a critical factor in the entrainment risk faced by ESA-listed salmonid populations. Because of this identified uncertainty, NMFS could not and did not consider all relevant factors in making its no-jeopardy determination.

Instead, NMFS does an analysis based on assumptions and concludes that "the multiple process steps in the final proposed action provide *some assurance* that species risks will be conservatively managed." NMFS BiOp at 543 (emphasis added). These multiple process steps replace defined "species-specific off-ramps" that were originally included in the Proposed

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[6] The proposed loss thresholds for triggering protective management of Old and Middle River flows highlights NMFS's failure to acknowledge the relevant factor of the listed species' decline. The Proposed Action's performance objectives "will set a trajectory such that this cumulative loss threshold (measured as the 2010–2018 average cumulative loss multiplied by 10 years) will not be exceeded by 2030." *Id.* This means that the Proposed Action's loss thresholds are calculated based on the time period covered by the Current Operating Scenario, a time period during which the listed salmon populations have continued to face population declines and increasing risk of extinction.

Action. NMFS BiOp at 546-48, Table 105. These replacements make the protective measures less certain, despite the fact that NMFS found that the Proposed Action, as originally proposed with defined species-specific off-ramps, would lead to substantially higher mean loss at the export facilities compared to the Current Operating Scenario in all water-year types for spring-run Chinook salmon. NMFS BiOp at 501.

Protective measures for salmon, especially winter-run Chinook salmon, will be most critical to the population's continued viability during the challenging water-year types. Yet, it is during these drought years that the Proposed Action's proposed intervention measures are the most nebulous and uncertain to occur. The NMFS BiOp's reliance on these uncertain protective measures in reaching a no-jeopardy conclusion is legally unsupportable.

B. USFWS BiOp

The USFWS BiOp likewise impermissibly relies on operational criteria and conservation measures that are not reasonably certain to occur and/or post-date the project start date with no discussion of interim effects, as discussed below.

1. Off-Ramps and Uncertainty in OMR Management

a. Storm-Related Flexibility

The Proposed Action relies on OMR Management to protect adult, larval, and juvenile Delta smelt from entrainment at the pumping facilities. OMR Management means limiting exports to maintain an OMR index of no more negative than a 14-day moving average of -5,000 cfs in the winter and spring. USFWS BiOp at 41. But the Proposed Action includes a major off-ramp that would allow significantly increased exports during "storm-related events," when exports could increase to pumping capacity of 14,900 cfs. *Id.* at 47-48. According to the USFWS BiOp, a "storm related event" occurs when "precipitation falls in the Central Valley and Delta watersheds and Reclamation and DWR determine that the Delta outflow index indicates a higher level of flow available for diversion." *Id.* at 48. "Storm-related events" will not be further defined until the first year after the proposed action is implemented. *Id.* In the meantime, the BiOp acknowledges that exports up to 14,900 cfs could result in a "range of OMR values." *Id.* The BiOp does not attempt to predict what the OMR values would be because this action was not modeled; instead, the modeling described in the BiOp assumed a no more negative OMR than
-6000 cfs and assumed a relatively low frequency for these events. *Id.* at 141, 143. As a result, the duration and trigger criteria for this storm-related exemption from the OMR requirements are

essentially undefined. *Id.* at 47-48. It is therefore unknown how operations would actually be managed during "storm-related events," and how those operations would affect the Delta smelt.[7]

The BiOp does limit the use of Storm-Related OMR flexibility in some circumstances, including during periods when Additional OMR Management Restrictions are triggered, such as the Turbidity Bridge Avoidance Action, the Larval and Juvenile Delta Smelt action, and salmonid loss thresholds. But, as discussed below, none of these measures are reasonably certain to occur and, thus, the USFWS BiOp is legally inadequate for relying on them.[8]

b. Turbidity Bridge Avoidance Action

The Turbidity Bridge Avoidance action may occur after First Flush or February 1, whichever comes first, until April 1 or when a "ripe or spent" female Delta smelt is detected, whichever comes first.[9] USFWS BiOp at 41. This action requires Reclamation and DWR to manage exports to achieve an OMR no more negative than -2000 cfs if the daily average turbidity in Old River at Bacon Island (OBI) exceeds 12 NTU, until the daily average turbidity drops below 12 NTU. USFWS BiOp at 42. This action is intended to minimize entrainment of adult Delta smelt.

The Turbidity Bridge Avoidance action has two significant off-ramps. First, even when conditions appear to trigger the action, Reclamation may determine that action is not warranted. Specifically, the BiOp allows Reclamation and DWR to "consider and review data from other locations" to "avoid triggering an OMR flow action during a sensor error or a localized turbidity spike that might be caused by local flows or a wind-driven event." *Id.* at 42. The BiOp does not identify the "other locations" from which data may be obtained, explain how data from these unidentified locations might inform the decision-making process, explain how a decision on whether to implement the action would be reached, or provide scientific support for the conclusions that would be reached and implemented based on that data. After determining that the protective action is not warranted, the BiOp authorizes Reclamation and DWR to take no further action beyond notifying the USFWS of their decision within 24 hours. The BiOp does not require USFWS to do anything with that information. *Id.*

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[7] The BiOp also does not discuss or account for the probability that Reclamation would seek waivers of OMR Management in critically dry years, which similarly impedes analysis of operations as they would actually occur.

[8] The operating criteria for OMR Management are the same for the USFWS BiOp and the NMFS BiOp. Most of the deficiencies described here apply to both opinions.

[9] There is no scientific consensus on the anatomical definition of "ripe" for female Delta smelt. And "ripe" females have not yet spawned. Precluding the action before spawning has occurred could substantially limit its protectiveness.

Second, and more significantly, after accepting the trigger and initiating the action, the BiOp allows Reclamation to abandon this protective action if "5 consecutive days of OMR less negative than -2000 cfs do not reduce turbidity at Bacon Island below a daily average 12 NTU in a given month. *Id.* at 42. At that point, Reclamation may decide that the additional OMR restrictions are "infeasible, and will instead implement an OMR target that is deemed protective, based on turbidity, adult delta smelt distribution and salvage, but not more negative than -5000 cfs." *Id.* The BiOp does not indicate what a new "protective" OMR target might be or how such a decision would be reached, nor does it state how turbidity, smelt distribution, and salvage would be identified, evaluated, or used to identify a protective OMR flow. *Id.* As a practical matter, if a less negative OMR did not quickly decrease the turbidity level, Reclamation could simply decide to cease protective operations altogether.

Because of these two off-ramps, it is unclear how frequently or for how long the Turbidity Bridge Avoidance action would actually be implemented. As described in the USFWS BiOp, this protective action is not reasonably certain to occur.

c. Larval and Juvenile Smelt Action

The second protective action under the Additional OMR Restrictions is the Larval and Juvenile Smelt action, which proposes to use life-cycle modeling and real-time data to manage the annual entrainment levels of larval and juvenile smelt. USFWS BiOp at 42. But this action has multiple deficiencies. First, the USFWS has not yet completed development of the life cycle models on which this action relies. Without a life cycle model, this action does not yet exist. Second, the BiOp does not set a target recruitment level that would inform pumping restrictions because that level has not yet been identified. *Id.* Third, the BiOp does not provide sufficient detail of how the life cycle models would be "operationalized" with real-time monitoring to protect the fish, particularly given the difficulty in using observation to identify the "spatial distribution" of smelt. *Id.* at 43. Finally, the Proposed Action includes a significant off-ramp for this action: "In the event the life cycle models cannot be operationalized in a manner that can be used to inform real-time operations then Reclamation, DWR, and the Service will coordinate to develop an alternative plan to provide operational actions protective of this life stage." *Id.* The BiOp offers no information on what such an "alternative plan" might look like, nor does it include interim protective measures or propose to cease operating under the BiOp pending completion of such plan.

d. Salmonid Loss Thresholds

The third protective action in OMR Management consists of cumulative and annual loss thresholds for threatened or endangered salmonid species. USFWS BiOp at 43-44. The BiOp fails to demonstrate that this action will provide a specific and tangible benefit to Delta smelt. Instead, the BiOp assumes that the Delta smelt might see some incidental benefit if the salmonid loss threshold is triggered—leading to the operation of OMR to a less negative flow—but the action does not purport to monitor or respond to impacts on the Delta smelt. The BiOp does not

describe how often the loss thresholds might be triggered or discuss the implications for Delta smelt if the thresholds are not triggered.

e. Off-Ramp from the Application of Any Additional OMR Restrictions

Even accepting the questionable premise that the Additional OMR Restrictions would be protective for Delta smelt, the BiOp contains a significant off-ramp from the application of any restriction: "When real-time monitoring demonstrates that criteria in 'Additional Real-Time OMR Restrictions and Performance Objectives' are not supported, then Reclamation and DWR may confer with the Directors of NMFS, the Service, and CDFW if they desire to operate to a more negative OMR than what is specified . . . . Upon mutual agreement, the Directors of NMFS and the Service may authorize Reclamation and DWR to operate to a more negative OMR than the Additional Real-Time OMR Restrictions, but no more negative than -5000 cfs." USFWS BiOp at 49.

In sum, the purported protective measures as presented in the biological opinions are not reasonably certain to occur because of significant off-ramps and ambiguity in OMR management.

2. Summer-Fall Habitat Action—Fall X2 Management

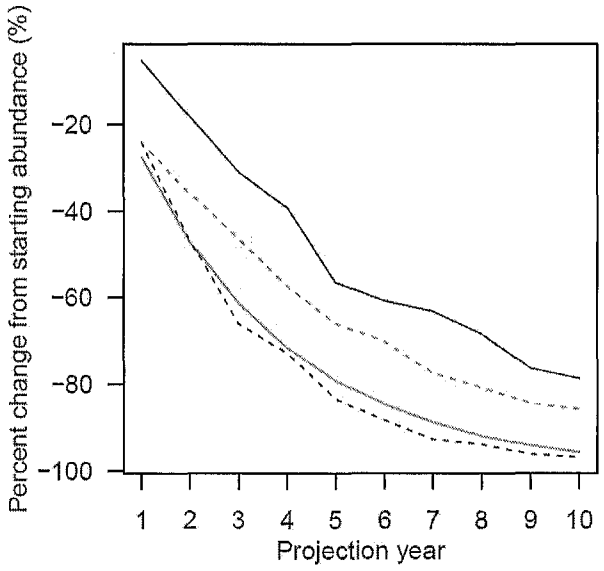
As part of its proposed Summer-Fall Habitat Action, the BiOp sets a Fall X2 standard in Above Normal and Wet years of 80 km in September and October. However, the new BiOp allows for modification of the 80 km requirement "[i]f the measures above (or others developed through collaborative science processes) result in benefits that are determined to provide similar or better protection than the 80 km X2 salinity management action." USFWS BiOp at 52. Furthermore, the BiOp only mandates that the 80 km requirement be met by reduction in project exports from the South Delta. If the 80 km requirement cannot be met by export reductions and will require releases of water from upstream storage, then "Reclamation . . . will meet with NMFS and the Service to discuss alternate potential approaches that improve habitat conditions." *Id.* at 53. These and other provisions in the BiOp demonstrate that the Proposed Action's fishery protection measures are not reasonably certain to occur.

3. Delta Smelt Population Supplementation

In reaching a no-jeopardy conclusion, the USFWS BiOp relies, in part, on Reclamation's proposal to fund a two-phase process that would lead to annual supplementation of the wild Delta smelt population with propagated fish. First, Reclamation proposes to begin supplementing the wild population of Delta smelt with captive fish within 3-5 years from issuance of the biological opinion. USFWS BiOp at 57, 171. Second, Reclamation proposes to begin operating a "Delta Fish Species Conservation Hatchery" by 2030. *Id.* at 172.

But USFWS fails to address the 3- to 5-year interim period during which no supplementation of the Delta smelt population occurs. A biological opinion must consider near-term habitat loss to populations with short life cycles. *Pac. Coast Fed'n*, 426 F.3d at 1094. USFWS's analysis is therefore impermissibly unclear as to whether the supplementation efforts will be "too little, too late" because of the near-term effects of increased pumping during the interim period.

Likewise, the hatchery plan fails to account for near-term impacts because it will not be completed until 2030. Relying on species decline data summarized in the graph below, the June 2019 draft of the USFWS BiOp concluded that the Delta smelt will be at or near extinction by 2025, five years before the estimated completion date for the proposed Delta smelt fish hatchery. The final biological opinion deleted these passages, but retained data such as Figure 5-14 that predict the material decline of the species. USFWS BiOp at 91, Figure 5-14. However, if it is reasonably likely that the species will become extinct by 2025, then the utility of the proposed smelt hatchery is in considerable doubt.



Further, it is unclear whether the hatchery, even if it does come online before the Delta smelt become extinct, will be effective. As currently designed, the hatchery plan requires the capture of 100 wild smelt each year, a process that has become "increasingly difficult" as the smelt population has declined. CDFW ROC Comments at 13. Compounding the problem, hatchery fish may have difficulty breeding and surviving in the wild. *Id.* Additionally, permitting for hatcheries is very intensive, due to the number of regulatory restrictions. For these reasons, the hatchery is not reasonably certain to occur.

4. Habitat Restoration

The 2008 USFWS BiOp required Reclamation to complete some 8,000 acres of intertidal and associated subtidal habitat restoration in the Delta and Suisun Marsh within 10 years. The 2019 USFWS BiOp now says this effort will be completed by 2030.

The new USFWS BiOp relies on habitat restoration to offset the harm caused by increased exports: "This habitat restoration is a reasonable means of minimizing the adverse effects of the loss of individuals, on the species as a whole, and may benefit the recovery of delta smelt." USFWS BiOp at 220. It "would be expected to improve the availability of food for delta smelt for all life stages." *Id.* at 180. However, there is no discussion of whether the habitat efforts will be able to offset the harmful effects of increased pumping in the interim 10-year period.

Despite this significant analytical gap, USFWS relies on the Proposed Action's habitat restoration plan in reaching its no-jeopardy conclusion. *Id.* at 220-21. This reliance is inappropriate because USFWS fails to address interim effects until the habitat restoration is complete.

III. THE 2019 BIOLOGICAL OPINIONS FAIL TO ANALYZE KEY COMPONENTS OF THE PROPOSED ACTION.

Both biological opinions fail to analyze a key proposal to raise the Shasta Dam, in contravention of the requirement that a biological opinion assess all aspects of a project. *See Conner v. Burford,* 848 F.2d 1441, 1457 (9th Cir. 1988). The NMFS BiOp specifically states that it "cannot further evaluate the Shasta Dam raise in this opinion" as a result of the absence of operational scenarios in the BA that include the dam raise. NMFS BiOp at 203 n.8. The USFWS BiOp notes that the "effects of the construction of this dam raise are being addressed under a separate section 7 consultation." USFWS BiOp at 404.

Despite this lack of analysis, the biological opinions potentially provide incidental take coverage not only for current dam operations, but also for operations after the dam raise has been completed. Specifically, after construction is complete, the USFWS BiOp allows Reclamation to modify its operations to account for the increased reservoir storage, even though the impacts of such modifications were not considered in the BiOp. *Id.* at 404-05.

The assumption is that Reclamation's compliance with the proposed operational criteria will be adequate, even though no detailed analysis of the effect of the enlarged Shasta project is set forth in the BiOp. This violates the "whole project" review requirement set forth in *Conner v. Burford.*

IV. THE 2019 BIOLOGICAL OPINIONS FAIL TO PROPERLY ANALYZE THE RECOVERY OF LISTED SPECIES.

As discussed above, Section 7(a)(2) of the ESA requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of an ESA-listed species. 16 U.S.C. § 1536(a)(2). "Jeopardize the continued existence of" means to engage in an action that reasonably would be expected, directly or indirectly, *to reduce appreciably the likelihood* of both the survival and *recovery* of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. 50 C.F.R. § 402.02 (emphasis added).

Survival and recovery are "intertwined needs that must both be considered in a jeopardy analysis, and an agency's decision to de-emphasize recovery is entitled to "less deference than we might usually give." *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 524 F.3d 917, 932-33 (9th Cir. 2008). A proposed measure that is only "slightly less harmful to the listed species than previous operations" or that proposes "incremental improvements" in lieu of survival and recovery does not comply with the ESA. *Aluminum Co. of Am. v. Adm'r, Bonneville Power Admin.*, 175 F.3d 1156, 1162 n.6 (9th Cir. 1999). "Because a species can often cling to survival even when recovery is far out of reach," recovery means more than simply avoiding extinction. *Nat'l Wildlife Fed'n*, 524 F.3d at 931; *see also NRDC v. Rodgers*, 381 F. Supp. 2d 1212, 1229 n.30 (E.D. Cal. 2005) ("'recovery' means [Endangered Species Act] protections are 'no longer necessary'") (quoting 16 U.S.C. § 1532(3)). For species on the brink of extinction, the agency must determine "when the tipping point precluding recovery ... is likely to be reached," and then determine whether it will be reached "as a result" of the proposed action. *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 527 (9th Cir. 2010).

The 2019 Biological Opinions do not undertake the necessary analysis.

A. NMFS BiOp

Rather than analyze whether the Proposed Action would tip the listed species into extinction, the NMFS BiOp simply identifies certain "recovery action goals" from a salmon recovery plan it released in 2014 and states that the Proposed Action is consistent with, or does not preclude, those goals. *See* Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-Run Chinook Salmon and Central Valley Spring-Run Chinook Salmon and the Distinct Population Segment of California Central Valley Steelhead; NMFS BiOp at 755-56. Based on this limited discussion, the BiOp concludes that the Proposed Action "is not likely to appreciably reduce the likelihood of both the survival and recovery of the Sacramento River winter-run Chinook salmon ESU." *Id.* at 756. But a bullet-point list of existing recovery goals, without evidence of actual implementation of measures to improve the species' health, does not substitute for an analysis of whether the Proposed Action will or will not tip the species into extinction. The ESA requires more.

B. USFWS BiOp

The USFWS BiOp's recovery analysis is also flawed. The BiOp cites the same uncertain mitigation measures and operations management that are deficient for the reasons discussed above in analyzing the effects of the Proposed Action on the Delta smelt's likelihood of recovery. The BiOp then reaches a conclusion that applies the incorrect standard, stating, "Therefore, the [Proposed Action] is not likely to preclude recovery of the delta smelt." USFWS BiOp at 204, 220. But the regulations require the agency to consider whether the Proposed Action will "reduce appreciably the likelihood of ... recovery of a listed species. *See* 50 C.F.R. § 402.02. Because "not likely to preclude" is a far lower standard than "reduce appreciably the likelihood," USFWS has not undertaken the required recovery analysis.[10]

V. THE 2019 BIOLOGICAL OPINIONS FAIL TO PROVIDE SUFFICIENT PARAMETERS FOR INCIDENTAL TAKE STATEMENTS.

An incidental take statement must specify the impact of the incidental taking on the species. 50 C.F.R. § 402.14(i)(1)(i). The statement may use a surrogate to "express the amount or extent of anticipated take," but must describe the causal link between the surrogate and take of the species and explain why a surrogate is necessary. *Id.* The statement must also "set[] a clear standard for determining when the level of anticipated take has been exceeded." *Id.* If an exceedance occurs, the agency must reinitiate consultation immediately. *Id.* § 402.14(i)(4).

A. NMFS BiOp

The incidental take statement in the NMFS BiOp violates the ESA because it does not set meaningful triggers for reinitiation of consultation. For example, the winter-run Chinook salmon could experience three consecutive years of zero egg-to-fry survival before reinitiation would be required under the BiOp. For a species on the brink of extirpation, this is potentially catastrophic. Additionally, the statement permits an increased incidental take limit for steelhead, despite continuing population declines.

B. USFWS BiOp

Smelt incidental take limits in the previous BiOps had been measured by salvage at the pumps compared to a take limit generated by a formula based on the Fall Midwater Trawl Survey. This has created a very low take limit in recent years, so the BiOp uses surrogates instead. For instance, "the level of turbidity present in the South Delta" is a surrogate for the incidental take of adult Delta smelt. USFWS BiOp at 395.

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[10] Both the NMFS BiOp and the USFWS BiOp also fail to explain how evolving climate change projections will be incorporated into the analysis to improve the accuracy of each BiOp's effects analysis.

USFWS also uses diversion rates as the incidental take limit surrogate for Rock Slough (*id.* at 396) and North Bay Aqueduct (*id.* at 397), and uses the surrogate of approach velocity at Roaring River and Morrow Island Distribution systems (*id*). The appropriateness of using diversion rates and approach velocities as incidental-take-limit surrogates is unclear and unjustified in the BiOp. If turbidity, diversion rates, and approach velocities are not adequate surrogates, there will essentially be no incidental take limit for adult Delta smelt in the BiOp.

THE RECORD OF DECISION

The 2019 Biological Opinions are arbitrary and capricious and violate the ESA. Reclamation's Record of Decision adopting the 2019 Biological Opinions is itself arbitrary and capricious, and does not constitute compliance by Reclamation with its "independent duty" to obey the ESA. 16 U.S.C. § 1536(a)(2); *see also Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1128 (9th Cir. 2012). Compliance with the flawed incidental take permit would not protect Reclamation from the prohibition against "taking" any endangered fish or wildlife species. *See* 16 U.S.C. § 1538 (a)(1)(B), (G); *see also Arizona Cattle Growers' Ass'n v. U.S. Fish & Wildlife*, 273 F.3d 1229, 1239 (9th Cir. 2001); *Ramsey v. Kantor*, 96 F.3d 434, 441 (9th Cir. 1996).

CONCLUSION

For the reasons stated above, if Reclamation operates the Central Valley Project in reliance on the legally deficient 2019 Biological Opinions, the California Natural Resources and Environmental Protection Agencies and the California Attorney General intend to file litigation to compel Reclamation to comply with the Endangered Species Act. 16 U.S.C. § 1540(g)(1)-(2)(A).

Sincerely,

Daniel Fuchs
Deputy Attorney General

For XAVIER BECERRA
Attorney General

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