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**Re: Notice of Violations of the Endangered Species Act in Connection with the U.S. Fish and Wildlife Service's June 17, 2016 Biological Opinion for the Moffat Collection System Project, and the U.S. Army Corps of Engineers' Unlawful Reliance on the Legally Deficient Biological Opinion**

On behalf of Save The Colorado, The Environmental Group of Coal Creek Canyon, WildEarth Guardians, Living Rivers, Waterkeeper Alliance, and Sierra Club (the "Conservation Coalition"), I hereby notify you of violations of the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531-1544, and its implementing regulations, regarding the U.S. Fish and Wildlife Service's ("Service") June 17, 2016 Biological Opinion ("2016 BiOp") for green lineage cutthroat trout ("cutthroat trout") issued to the U.S. Army Corps of Engineers ("Corps") in connection with the Moffat Collection System Project ("Moffat"). As explained below, there are several major deficiencies in the 2016 BiOp, which require reinitiation of consultation (and a halt of all project activities in the meantime) until and unless these legal violations have been adequately addressed under the ESA and its regulations. If the Service and the Corps do not reinitiate consultation within 60 days of receiving this letter, the Conservation Coalition will consider all options, including litigation, to protect the cutthroat trout and its habitat.



## BACKGROUND

### I. STATUTORY AND REGULATORY FRAMEWORK

The ESA “represent[s] the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978). Section 9 of the ESA prohibits any “person” from “taking” any member of an endangered or threatened species. 16 U.S.C. § 1538(a).<sup>1</sup>

Pursuant to Section 7 of the ESA, before undertaking any action that may have direct or indirect effects on any listed species, an action agency must engage in consultation with the FWS in order to evaluate the impact of the proposed action. *See id.* § 1536(a). The Service has defined the term “action” for the purposes of Section 7 broadly to mean “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies,” 50 C.F.R. § 402.02, “in which there is discretionary federal involvement or control.” *Id.* § 402.03. An agency may only avoid this consultation requirement for a proposed action if it determines that its action will have “no effect” on threatened or endangered species or critical habitat. *Id.* § 402.14(a).

The purpose of consultation is to ensure that the action at issue “is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [designated] habitat of such species.” 16 U.S.C. § 1536(a)(2). As defined by the ESA’s implementing regulations, an action will cause jeopardy to a listed species if it “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. The evaluation of the effects of the proposed action on listed species during consultation must use “the best scientific . . . data available.” 16 U.S.C. § 1536(a)(2). Moreover, after the initiation of consultation, the action agency (or any project proponent utilizing the action agency’s incidental take coverage) is prohibited from making “any irreversible or irretrievable commitment[s] of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures.” *Id.* § 1536(d).

At the conclusion of the formal consultation process, the Service prepares a biological opinion. When preparing a biological opinion, the Service must (1) “review all relevant information,” (2) “evaluate the current status of the listed species,” and (3) “evaluate the effects of the action and cumulative effects on the listed species,” 50 C.F.R. § 402.14, using “the best

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<sup>1</sup> The term “take” is defined broadly to include “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect.” *Id.* § 1532(19). FWS has further defined “harass” to include “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, including breeding, feeding, or sheltering.” 50 C.F.R. § 17.3. In addition, “harm” is defined to “include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” *Id.*

scientific and commercial data available,” 16 U.S.C. § 1536(a)(2). Additionally, a biological opinion must include a description of the proposed action, a review of the status of the species and critical habitat, a discussion of the environmental baseline, and an analysis of the direct and indirect effects of the proposed action and the cumulative effects of reasonably certain future state, tribal, local, and private actions. *See* Consultation Handbook at 4-14 to 4-31.

At the end of the formal consultation process, the Service must determine whether the proposed action is likely to jeopardize the continued existence of a listed species or destroy or adversely modify any designated critical habitat. If the FWS determines that the proposed action is not likely to jeopardize the continued existence of listed species, but that the proposed action will nevertheless result in the incidental taking of listed species, then the FWS must provide the action agency with a written Incidental Take Statement (“ITS”) specifying the “impact of such incidental taking on the species” and “any reasonable and prudent measures [(“RPMs”)] that the [Service] considers necessary or appropriate to minimize such impact,” and setting forth “the terms and conditions . . . that must be complied with by the [action] agency or applicant (if any), or both, to implement [those] measures.” 16 U.S.C. § 1536(b)(4)((ii), (iv).

Importantly, an ITS must set a clear threshold for triggering reinitiation of consultation in the event that an action’s impacts exceed those anticipated in a biological opinion. Unless it is genuinely impractical to do so, the Service must set a numerical take threshold in the ITS that would trigger reinitiation of consultation if exceeded. *See* 50 C.F.R. § 402.14(i)(1)(i). Only if setting such a threshold is impractical may the Service use a surrogate and in that event the Service must clearly explain how the surrogate reasonably substitutes for measuring direct take of the listed species, and the surrogate serves the same functions of a numerical take threshold such as providing a clear and measurable trigger for reinitiation of consultation. *Id.*

Pursuant to 50 C.F.R. § 402.16, there are four distinct events that require reinitiation of consultation between FWS and the action agency: (a) “[i]f the amount or extent of taking specified in the [ITS] is exceeded”; (b) [i]f new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered”; (c) “[i]f the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion”; or (d) “[i]f a new species is listed or critical habitat designated that may be affected by the identified action.”

Without an adequate biological opinion and ITS in place, any activities likely to result in incidental takes of members of listed species are unlawful. *Id.* §§ 1538(a)(1)(B), 1536(o)(2). Accordingly, anyone who undertakes such activities, or who authorizes such activities, *id.* § 1538(g), may be subject to criminal and civil federal enforcement actions, as well as civil actions by citizens for declaratory and injunctive relief, *see id.* § 1540.

## **II. FACTUAL BACKGROUND**

The 2016 BiOp contains an adequate description of the proposed action, as well as an adequate description of the “Current Conditions,” “Full Use,” and “Moffat Project” water diversion scenarios, none of which (including pre-existing water diversions) has ever been

subject to consultation with the Service under Section 7 of the ESA. *See* 2016 BiOp at 3-5. Accordingly, the Conservation Coalition does not replicate that discussion here.

As the 2016 BiOp acknowledges, the actions analyzed as part of this consultation will negatively affect *thousands* of federally protected cutthroat trout over the next few decades as these same trout populations are also strained by climate change and other natural and anthropogenic stressors. Although the 2016 BiOp discusses two conservation measures being adopted by Denver Water, *see* BiOp at 5-9, 35-40—i.e., the project proponent that will undertake the water diversions at issue as authorized by the Corps—the Conservation Coalition focuses in this letter on *other* aspects of the 2016 BiOp that are scientifically and legally indefensible.

In the 2016 BiOp, the Service acknowledged that “[w]ater diversions can . . . result in entrainment of fish at diversion sites that are not screened, generally resulting in the loss of the fish from the population,” and also that “[w]ater depletions could become a greater threat in the future [to the cutthroat trout] under expanded drought cycles and climate change.” 2016 BiOp at 16. Elsewhere in the 2016 BiOp, the Service explained in more detail the ongoing threats to cutthroat trout posed by climate change and drought cycles, explaining that reductions in precipitation, increased wildfires, and other climate-related events will increase the vulnerability of these trout populations. *See id.* at 20.

Nevertheless, in attempting to quantify the impact of these water diversions on the cutthroat trout populations located in the four streams that will be impacted—Bobtail Creek and Steelman Creek in the Upper Williams Fork Drainage, and Hamilton Creek and Little Vazquez Creek in the Fraser River Drainage—the Service ignored or downplayed the ongoing climate change and drought risks in estimating the current baseline population of cutthroat trout, instead assuming that outdated and incomplete survey data represented *current* population numbers. For example, Bobtail Creek was last surveyed in 2003, Steelman Creek in 2004, Little Vazquez Creek in 2006, and Hamilton Creek in 2009. *See id.* at 22-25. Not only are the survey data outdated—in some cases more than a decade stale—but from survey to survey the population estimates fluctuated wildly and demonstrated significant variability even in the same creek. *Id.*

The Service (and the Corps) then relied upon a simplistic three-model averaging approach developed by a third-party consultant (GEI), as the Service’s means of estimating “take” of cutthroat trout via entrainment. *Id.* at 27-35. However, not only are the modeling inputs (i.e., population estimates in these creeks) likely significant overestimates given that they are based on outdated surveys with large variability in their confidence intervals, but there is also no scientific support for the modeling output (i.e., that no more than 10% of the cutthroat trout will be entrained by the combined water diversions analyzed in the 2016 BiOp), *see id.* at 27. As a result, the Corps’ (and GEI’s) assertions that the model’s inputs and outputs are “conservative” is not grounded in any reasonable factual support set forth in the 2016 BiOp.

After applying GEI’s modeling to this project, the Service issued the following Incidental Take Statement (“ITS”):

Take is anticipated due to entrainment of approximately 341 fish per year resulting from the implementation of the proposed action under the Current, Full, and Moffat

Project water diversion levels. Take is also anticipated due to disturbance, habitat degradation, and potential injuries that would harm up to 16 fish per year as a result of Denver Water's operation and maintenance activities. Collectively, we anticipate that these impacts would result in an annual incidental take of 357 fish for the combined green lineage cutthroat trout streams within the action area.

*Id.* at 49. Although the Service's annual take authorization of 341 cutthroat trout from entrainment was based entirely on modeling (with suspect inputs and outputs), the Service did not require as a term or condition of the 2016 BiOp that the Corps or Denver Water install screens on the diversion structures to reduce the level of entrainment, despite acknowledging that "[d]iversion of water from streams within the action area, including the green lineage cutthroat trout streams, is believed to be resulting in entrainment of fish *due to the lack of screens on the diversion structures.*" *Id.* at 26 (emphasis added). Nor did the Service even require the Corps or Denver Water to actually count or survey the number of cutthroat trout entrained by the action to determine whether it is consistent with the modeling estimates, instead merely stating "it is difficult to evaluate the project's potential entrainment impacts *in the absence of an entrainment study.*" *Id.* at 49 (emphasis added).

On that basis, the Service concluded that the action—including the entrainment of up to 341 cutthroat trout *every year*, which "generally result[s] in the loss of the fish from the population," *id.* at 16—"is not likely to result in jeopardy to the species." *Id.* at 49. At the same time, the Service did not impose any binding RPMs, terms, or conditions in the BiOp that would assess whether the modeling-based entrainment estimate of 341 cutthroat trout is accurate, and instead stated that the Service "would consider that the amount of extent of incidental take resulting from entrainment is exceeded if project diversions are greater than those analyzed by the Corps' EIS and the Corps' BA (2015) and consulted for in this biological opinion." *Id.* In other words, so long as Denver Water diverts the amount of water evaluated in the 2016 BiOp, there is no mechanism for reinitiating Section 7 consultation even if *in fact* far more than 341 cutthroat trout are entrained by the actions analyzed in the 2016 BiOp.

## **LEGAL VIOLATIONS**

Before turning to the specific legal violations contained in the 2016 BiOp, the Conservation Coalition relies on and incorporates by reference the attached expert report from Dr. Brett M. Johnson, who holds a Ph.D. in Zoology and has conducted research on fisheries-related matters in Colorado and elsewhere for three decades. Dr. Johnson is currently a Professor at Colorado State University in the Department of Fish, Wildlife, and Conservation Biology, and his credentials and professional opinions are further explained in his expert report and CV. The Conservation Coalition requested that Dr. Johnson review the 2016 BiOp and provide his expert opinions and conclusions, which he did for no compensation to maintain his independence in evaluating these matters.

## **I. THE SERVICE'S 2016 BiOp VIOLATES THE ESA'S BEST AVAILABLE SCIENCE STANDARD**

As explained above, the Service's evaluation of the effects of the proposed action on listed species during consultation must use "the best scientific . . . data available." 16 U.S.C. § 1536(a)(2). Here, the Service's 2016 BiOp violates that standard in several distinct ways.

First, the population estimates relied upon by the Service as modeling inputs to quantify the amount of cutthroat trout entrainment are not supported by the best available scientific evidence. To the contrary, the Service acknowledges that the most recent surveys for the four affected streams date as far back as 2003, and also recognizes the wide variability in confidence intervals for the number of trout present when those surveys were conducted many years ago. *See* 2016 BiOp at 22-25. Yet, despite the poor predictive value of those outdated surveys even at the time the data was collected, the Service nevertheless assumed—without explanation—that these population estimates are currently accurate.

Second, neither the Service's cutthroat trout population estimates for these streams nor its jeopardy analysis accounts for the serious threats of climate change, drought, wildfires, and other climate-related events that have been occurring since the most recent surveys were conducted in these streams (and which will only worsen in the future). Taking into account those highly relevant developments would indicate that the climatic changes over the past decade (or longer in some cases) have *decreased* the cutthroat trout population in these streams, which would magnify the impacts of taking any one trout out of the population in a given year due to entrainment. Thus, had the 2016 BiOp adequately accounted for climate change—both in past years and in the future during Moffat-related diversion events—it would have analyzed whether climate change, in conjunction with the entrainment and loss of 341 cutthroat trout each year from these already small populations will jeopardize the species. The BiOp is silent on that question, in violation of the ESA's best available science standard.

Third, as explained in more detail in Dr. Johnson's expert report, the overly simplistic modeling prepared by GEI—and relied upon by the Service in issuing the 2016 BiOp—does not comport with elementary scientific principles. *See* Johnson Expert Report at 3. For example, there are a number of major uncertainties inherent in GEI's modeling approach that are not incorporated to increase confidence in the model's outcome, including abundance uncertainty, temporal variation, and size/age heterogeneity. In addition, because of the massive range of variability in both the model's inputs and outputs, GEI's repeated assertions that a 10% entrainment figure is "conservative" is not supported by any actual scientific evidence presented by GEI or the 2016 BiOp. Therefore, the Service's unsupported assumption that no more than 10% of these streams' cutthroat trout will be entrained by these water diversions contravenes the best available science and underscores the need for a stringent monitoring protocol during the project implementation phase counting the actual number of fish entrained to verify the real-world impacts of these diversions.

## **II. THE SERVICE’S FAILURE TO ADOPT ANY RPMs, TERMS, OR CONDITIONS TO REDUCE THE AMOUNT OF ENTRAINMENT, OR EVEN TO MEASURE THE NUMBER OF ENTRAINMENT TAKES, VIOLATES THE ESA**

Even assuming that the population estimates and modeling projections relied upon by the Service were accurate, current, and supported by compelling evidence in the 2016 BiOp (which they are not), the Service has not set forth any explanation—let alone a coherent rationale—for why the Service did not require the Corps and/or Denver Water to take *any* steps to reduce the high levels of annual entrainment anticipated by this project (i.e., 341 cutthroat trout removed annually from these populations via entrainment). This glaring omission violates the ESA’s requirements that the Service must “specif[y] any [RPMs] that the [Service] considers necessary or appropriate to minimize such impact [of any incidental take associated with the action]” and “set[] forth the terms and conditions (including, but not limited to, reporting requirements) that must be complied with by the [action] agency or applicant (if any), or both, to implement [those] [reasonable and prudent] measures.” 16 U.S.C. § 1536(b)(4)(ii), (iv).

To begin with, the Service acknowledges throughout the 2016 BiOp that entrainment will occur as a result of the proposed action entirely (or at least primarily) due to the lack of screens on the diversion structures. *See, e.g.*, 2016 BiOp at 26 (“Diversion of water from streams within the action area, including the green lineage cutthroat trout streams, is believed to be resulting in entrainment of fish *due to the lack of screens on the diversion structures.*” (emphasis added)). Yet, nowhere in the 2016 BiOp—including in the BiOp’s “Reasonable and Prudent Measures” section or its “Terms and Conditions” section—does the Service require the Corps or Denver Water to install screens, although the BiOp itself concedes that this is a well-established method for drastically reducing entrainment as a result of water diversions. *See id.* at 16 (“Water diversions can . . . result in entrainment of fish *at diversion sites that are not screened*, generally resulting in the loss of the fish from the population.” (emphasis added)). Thus, in light of the 2016 BiOp’s express acknowledgement that entrainment occurs due to *the lack of screens on these diversion structures*, it was arbitrary and capricious for the Service not to impose as an RPM, term, or condition of the BiOp the requirement that the Corps or Denver Water install screens on the diversion structures to significantly reduce the amount of entrainment—i.e., a measure that is “necessary or appropriate to minimize such impact” of the action. Hence, by failing to require installation of screens, and by failing even the more elementary step of explaining *why* it was not requiring this common-sense measure to minimize take by entrainment, the Service violated the ESA and its regulations.<sup>2</sup>

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<sup>2</sup> Although the Service did not even purport to explain why it was not requiring the installation of screens on the diversion structures at issue here, it is beyond legitimate dispute that screens are routinely used to substantially reduce entrainment of fish at diversion structures, power plants, and many other types of facilities. Indeed, even a cursory review of the scientific literature demonstrates that there are common, well-established, and cost-effective means of installing screens to conserve fish species. *See, e.g.*, Gale, et al., *Effectiveness of Fish Screens to Prevent Entrainment of Westslope Cutthroat Trout into Irrigation Canals*, 28 N. Am. J. of Fisheries Mgmt. 5 (May 2008), available at <https://afspubs.onlinelibrary.wiley.com/doi/full/10.1577/M07-096.1> (finding that “[f]ish screens installed at the Highline, Ward, and Hughes canals were effective management tools that reduced or eliminated entrainment of westslope cutthroat trout at

Compounding the Service’s failure to require the installation of screens or other well-established measures to minimize entrainment take to less than the Service’s estimate of 341 cutthroat trout each year, the Service did not even require the Corps or Denver Water to take the basic step of counting or measuring the number of cutthroat trout *actually* entrained each year by these diversions (in the absence of any screens) to determine whether the Service’s modeling estimate of 341 takes by entrainment bears any resemblance to the actual number of trout entrained and permanently taken out of these already low populations. Rather, the Service merely stated that “it is difficult to evaluate the project’s potential entrainment impacts in the absence of an entrainment study.” 2016 BiOp at 49. That tautological rationale for not counting the number of trout actually entrained—which is tantamount to asserting that “without counting the fish taken, the number of fish can’t be counted”—is arbitrary and capricious on its face. The pertinent question, of course, is *why* has the Service not taken the elementary step of requiring an “entrainment study”? The 2016 BiOp is barren of any explanation whatsoever.<sup>3</sup>

The absence of such an explanation is especially glaring in view of the fact that an entrainment study or survey—and reporting requirements on the findings of such surveys—is exactly what the Service routinely requires to confirm that a take estimate based on modeling is an accurate prediction in the real world. *See, e.g., San Luis & Delta-Mendota Water Auth. v. Salazar*, 2009 WL 1575169, at \*\*3-4 (E.D. Cal. May 29, 2009) (explaining that the biological opinion required “physical and biological real-time monitoring data” to determine whether water diversions would be causing a “low-entrainment scenario” or a “high-entrainment scenario”). Indeed, the ESA itself contemplates that the Service will require such actions to ensure the accuracy of the Service’s take estimates given the underlying purposes of the ESA to *conserve* listed species. *See* 16 U.S.C. 1536(b)(iv) (directing the Service to “set[] forth the terms and conditions (*including, but not limited to, reporting requirements*) that must be complied with by the [action] agency or applicant (if any), or both, to implement [those] [reasonable and prudent]

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Skalkaho Creek,” and concluding that “[f]ish screens should be recognized as viable management tools for eliminating entrainment of potamodromous inland salmonids and possibly assisting in their recovery”).

<sup>3</sup> Similar to the screening issue described above, *see supra* note 2, even a brief review of the applicable literature refutes the Service’s conclusory assertion that it is somehow “difficult to evaluate the project’s potential entrainment impacts.” 2016 BiOp at 49. In reality, scientists, researchers, and companies *regularly* utilize well-established science-based sampling and survey techniques to quantify with reasonable statistical confidence the number of fish entrained by water diversion structures and other facilities similar to those at issue here. *See, e.g.,* Carlson & Rahel, *A Basinwide Perspective on Entrainment of Fish in Irrigation Canals*, 136 Transactions of the Am. Fisheries Soc’y 5 (Sept. 2007, available at <http://www.uwyo.edu/frahel/pdfs/carlson-2007-1.pdf>); Walters, et al., *Quantifying Cumulative Entrainment Effects for Chinook Salmon in a Heavily Irrigated Watershed*, 141 Transactions of the Am. Fisheries Soc’y 5 (Sept. 2012), available at <https://afspubs.onlinelibrary.wiley.com/doi/full/10.1080/00028487.2012.679019>; Roberts & Rahel, *Irrigation Canals as Sink Habitat for Trout and other Fishes in a Wyoming Drainage*, 137 Transactions of the Am. Fisheries Soc’y 4 (July 2008), available at <https://www.glerl.noaa.gov/pubs/fulltext/2008/20080016.pdf>.

measures” (emphasis added)). Simply put, there is nothing “difficult” about counting the number of fish entrained by diversion structures of this kind so long as the Corps and/or Denver Water actually *endeavor to adopt an appropriate means of actually counting them*. Nor has the Service provided any rationale for why it would be genuinely impractical for the Corps and/or Denver Water to directly measure the number of fish entrained by these diversions. Accordingly, the Service’s failure to impose as a term or condition of the 2016 BiOp that the Corps and/or Denver Water must at least count the number of cutthroat trout entrained on an annual basis and report those results to the Service violates the ESA and is arbitrary and capricious.

For all of these reasons, the Service’s failure to specify any RMPs to minimize entrainment in the four affected cutthroat trout streams and/or to impose any terms and conditions for monitoring and reporting the number of cutthroat trout entrained by these diversions cannot be reconciled with the ESA.

### **III. THE SERVICE’S INCIDENTAL TAKE STATEMENT FOR THIS ACTION VIOLATES THE ESA IN NUMEROUS WAYS**

As explained above, the ITS serves a vital function in the ESA’s protective scheme by estimating the amount of the take that will result from an action, and setting a clear and measurable trigger for reinitiating formal consultation if the actual amount of take exceeds the estimated amount, thus ensuring that the action’s real-world effects do not jeopardize the survival or recovery prospects of these cutthroat trout populations. There are serious legal flaws in the Service’s ITS for the diversions analyzed in the 2016 BiOp.

As explained above, the Service provided an ITS estimating that 341 cutthroat trout will be entrained each year by the action based entirely on modeling estimates that lack any real-world support. *See* 2016 BiOp at 49. Then, as explained, the ITS simply assumed that the 341-fish entrainment threshold will not be exceeded, asserting that “it is difficult to evaluate the project’s potential entrainment impacts in the absence of an entrainment study.” *Id.* at 49. In other words, rather than requiring any surveys, sampling, or studies to determine whether, in fact, the 341-fish threshold has any real-world validity, the Service instead placed all of the risk *on the threatened species* in the event that entrainment ultimately far exceeds the 341-fish take estimate. And, again, the Service adopted this patently arbitrary approach in the face of voluminous evidence that monitoring and reporting the level of entrained fish is routine in this field, without even attempting to explain the Service’s unsupported view that it is “difficult” to evaluate these real-world impacts. This is a legally and scientifically improper use of an ITS, and it also contravenes the “institutionalization of caution” that is supposed to guide federal agencies’ implementation of section 7 of the ESA. *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 178, 194 (1978).

Moreover, the Service’s ITS for this action also fails to serve the important function of setting a clear and measurable trigger for reinitiation of consultation in the event that the take threshold is exceeded. Rather, the Service’s ITS states that “we would consider that the amount or extent of incidental take resulting from entrainment is exceeded if project diversions are greater than those analyzed by the Corps’ EIS and the Corps’ BA.” 2016 BiOp at 49. This formulation fails under the law for four reasons.

First, the Service has implicitly adopted a surrogate for entrainment take of cutthroat trout—rather than setting a numerical take limit subject to real-world verification as a term or condition of the 2016 BiOp—and the surrogate is the amount of water diverted as part of the actions analyzed in the 2016 BiOp. *Id.* Hence, so long as Denver Water does not divert more than 363,000 acre feet of total water—which means 76,797 acre feet of water being diverted through the Moffat Tunnel—then the Service *assumes* that the 341-fish annual entrainment threshold has not been exceeded (whether or not it has actually been exceeded in the real world). *Id.* at 4, 49. But the Service’s own regulation addressing the propriety of take surrogates rejects this formulation. The regulation states that a surrogate “may be used to express the amount or extent of anticipated take provided [in] the biological opinion or incidental take statement,” but that a surrogate should be “similarly affected species or habitat or ecological conditions.” 50 C.F.R. § 402.14(i)(1)(i). Whereas another species, habitat indicator, or ecological condition is a substitute for the effects to a relatively rare endangered or threatened species that will experience similar effects from an action as the listed species (albeit at a larger scale due to their relative abundance), all of those examples of proper surrogates exist *independent of the action* and thus the effects of the action can be measured *against the surrogates*. Here, in sharp contrast, the surrogate adopted by the Service in the ITS is *the action itself*, and thus there is no yardstick by which to measure the effects of the action on the cutthroat trout, similar species, or ecological conditions in these streams. Thus, the ITS violates the ESA and its implementing regulations by using an inappropriate surrogate that fails to “[d]escribe[] the causal link between the surrogate and take of the listed species.” 50 C.F.R. § 402.14(i)(1)(i).

Second, in adopting the action itself as a surrogate for cutthroat trout entrainment, the Service has not “explain[ed] why it is not practical to express the amount or extent of anticipated take or to monitor take-related impacts in terms of individuals of the listed species.” *Id.* As explained above, there are well-established methods in the scientific community for sampling, surveying, monitoring, and reporting the actual number of fish entrained by non-screened diversion structures. Thus, the Service’s conclusory statement that it is “difficult to evaluate the project’s potential entrainment impacts,” 2016 BiOp at 49, does not withstand scrutiny. In any event, because the Service did not even purport to explain *why* “it is not practical . . . to monitor take-related impacts in terms of individual of the listed species,” 50 C.F.R. § 402.14(i)(1)(i), the Service once again violated its own regulations in adopting a surrogate instead of setting forth a numerical take threshold.

Third, by adopting the action itself as the surrogate for entrainment take, the Service also violated the ESA and its regulations by failing to ensure that the chosen surrogate “sets a clear standard for determining when the level of anticipated take has been exceeded.” 50 C.F.R. § 402.14(i)(1)(i). It is indisputable that the ITS is coextensive with the project because, as the 2016 BiOp acknowledges, “we would consider that the amount or extent of incidental take resulting from entrainment is exceeded if project diversions are greater than those analyzed by the Corps’ EIS and the Corps’ BA and consulted for in this biological opinion.” 2016 BiOp at 49. In turn, Denver Water has legal authorization under the ITS to entrain *far more* than the estimated 341 cutthroat trout each year as a result of the action (thereby potentially jeopardizing the species), but there would be no mechanism in that instance for reinitiating consultation because the action would remain consistent with the water diversion amounts evaluated in the 2016 BiOp. This is precisely what courts have held to be illegal under the ESA because it renders reinitiation of

consultation impossible in the absence of project modification. *See, e.g., Or. Natural Res. Council v. Allen*, 476 F.3d 1031, 1039 (9th Cir. 2007) (invalidating biological opinion and ITS where “the permissible level of take [wa]s coextensive with the project’s own scope” because “[t]he Incidental Take Statement and BiOp are rendered tautological, they both define and limit the level of take using the parameters of the project”).

Although the Service has clarified that in rare circumstances “project impacts to the surrogate [may be] coextensive with at least one aspect of the project’s scope,” in those circumstances “the action agency or applicant *will be required under the incidental take statement to monitor project impacts to the surrogate during the course of the action* (e.g., required monitoring to confirm the action does not exceed [the take estimate]), *which will determine whether these impacts are consistent with the analysis in the biological opinion.*” 80 Fed. Reg. 26832, 26832-34 (emphasis added). The Service explained that “[t]his assessment will ensure that reinitiation of formal consultation will be triggered if the extent of the anticipated taking specified in the incidental take statement is exceeded during the course of the action.” *Id.* at 26834. Thus, even if the Service’s adoption of the action itself as the surrogate for cutthroat trout entrainment were appropriate—which it is not—the fact that the Service refused to require the Corps or Denver Water to monitor the action’s impacts to the trout by counting individual entrainment takes to “determine whether these impacts are consistent with the analysis in the biological opinion” and the modeling relied upon by the Service, renders the ITS arbitrary and capricious in violation of the ESA. In short, there is no trigger for reinitiation of consultation—much less a “clear standard for determining when the level of anticipated take has been exceeded,” 50 C.F.R. § 402.14(i)(1)(i)—in the event that real-world entrainment take far exceeds the estimated 341-fish annual threshold.

Fourth, the Service’s adoption of the action itself as the cutthroat trout take surrogate is arbitrary for another reason. The Service’s own regulation governing reinitiation of consultation identifies four separate events that require reinitiation of consultation—two of which come into play here: “[i]f the amount or extent of taking specified in the [ITS] is exceeded,” and “[i]f the identified action is subsequently modified in a manner that causes an effect to the listed species . . . that was not considered in the biological opinion.” 50 C.F.R. § 402.16. Yet another legal problem with the Service’s ITS in the 2016 BiOp is that it collapses these two distinct grounds for reinitiation of consultation—i.e., a change in the project and exceeding the authorized level of entrainment take—into one. Thus, by stating that “we would consider that the amount or extent of incidental take resulting from entrainment is exceeded *if project diversions are greater than those analyzed by the Corps’ EIS . . . and consulted for in this biological opinion,*” 2016 BiOp at 49 (emphasis added)—which is tantamount to a subsequent modification of the action—the Service has unlawfully rendered the *separate* basis for reinitiation of consultation (i.e., exceeding the entrainment take threshold) superfluous and has failed to give it any independent meaning in the regulatory scheme. That result violates the ESA, and is arbitrary and capricious.

#### **IV. THE SERVICE’S “NO JEOPARDY” CONCLUSION IS ARBITRARY AND UNSUPPORTED**

For the reasons explained above, the Service’s conclusion that the action “is not likely to result in jeopardy to the species,” 2016 BiOp at 49, is arbitrary and capricious. Not only does the

Service’s population estimate and modeling fail to incorporate the best available scientific evidence, but the Service has also failed to adopt any established method of substantially reducing entrainment take of cutthroat trout (e.g., screens on the diversion structure), has failed to require any well-established monitoring methods to determine whether the Service’s take estimates are accurate in the real world, and has failed to set a clear trigger for reinitiation of consultation in the event that the estimated level of take is exceeded. In addition, the Service did not explain in the 2016 BiOp why entraining 341 cutthroat trout each year—which “generally result[s] in the loss of the fish from the population,” *id.* at 16—does not itself jeopardize the survival and/or recovery prospects of this species, or at least these genetically pure “core conservation” populations in the four affected streams, given the fact that losing 341 trout each year constitutes a large percentage of these populations being repeatedly removed from these populations on an annual basis. Accordingly, the Service’s ill-explained and unsupported “no jeopardy” conclusion cannot pass muster under these facts.

**V. BY RELYING ON A LEGALLY DEFICIENT BIOLOGICAL OPINION, THE CORPS AND DENVER WATER ARE VIOLATING SECTIONS 7 AND 9 OF THE ESA**

To the extent that the Corps and/or Denver Water have taken—or are taking—any actions in furtherance of the water diversions analyzed in the unlawful 2016 BiOp, those actions violate the ESA in three distinct ways.

First, actions taken by an action agency violate Section 7(a)(2) of the ESA when the agency (or a permittee authorized by the action agency) acts in reliance on a legally inadequate biological opinion such as the 2016 BiOp. *See, e.g., Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 698 F.3d 1101, 1127–28 (9th Cir. 2012) (explaining that action agencies and project proponents may not rely on biological opinions that are “legally flawed” or that “fail[] to discuss information that would undercut the opinion’s conclusions”); *Pyramid Lake Paiute Tribe v. U.S. Dep’t of the Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990) (“A federal agency cannot abrogate its responsibility to ensure that its actions will not jeopardize a listed species; its decision to rely on a FWS biological opinion must not have been arbitrary or capricious.”). Hence, any actions taken by the Corps (or Denver Water) in furtherance of the Moffat project or other water diversions analyzed in the 2016 BiOp violate the Corps’ independent duty to ensure compliance with Section 7(a)(2) of the ESA in the absence of reinitiation of consultation and a new biological opinion at the conclusion of that process.

Second, because the major deficiencies identified above require reinitiation of consultation pursuant to 16 U.S.C. § 1536(a)(2), “the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures.” 16 U.S.C. § 1536(d). Accordingly, until the Service has reinitiated consultation and issued a new biological opinion that is legally valid, neither the Corps nor Denver Water may take any steps that would make it more difficult for the Service to impose reasonable measures at the conclusion of the reinitiated consultation process to minimize take of cutthroat trout, or else those actions would violate Section 7(d) of the ESA.

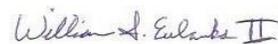
Third, in light of the fact that there is no meaningful ITS in place supported by evidence in the 2016 BiOp—nor any monitoring requirement to assess whether the entrainment estimate has any real world application (let alone any coherent explanation as to how this level of take will not jeopardize these genetically pure core conservation populations of cutthroat trout)—the Corps and Denver Water do not have a legal authorization to take trout in the absence of a new biological opinion that is scientifically and legally sound. As a result, any actions taken by the Corps or Denver Water in the meantime to implement the water diversion actions analyzed in the 2016 BiOp violate Section 9 of the ESA by taking federally protected cutthroat trout without lawful authorization under a legally valid ITS issued by the Service. *See* 16 U.S.C. § 1536(o) (stating that “any taking that is in compliance with the terms and conditions specified in a written [ITS] shall not be considered to be a prohibited taking of the species concerned”).

For these reasons, the Corps and Denver Water should halt all water diversion actions analyzed in the 2016 BiOp—as well as any construction or other actions related to these diversions that will impact cutthroat trout—until and unless the Service completes reinitiated consultation on these actions.

### **CONCLUSION**

The Service’s 2016 BiOp—and the Corps’ and Denver Water’s reliance on the BiOp—violate the ESA and its implementing regulations in myriad ways. The Service and the Corps must promptly rectify these legal violations by immediately reinitiating consultation, and in the meantime the Corps and Denver Water should refrain from taking any actions (including, but not limited to, construction or water diversion activities) that will entrain or otherwise take cutthroat trout in these four streams. Please let me know how the agencies intend to proceed in light of this letter. If we have not obtained a response within sixty days of the agencies’ receipt of this letter, we will consider all options—including litigation—to protect and conserve the cutthroat trout.

Respectfully submitted,



William S. Eubanks II