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UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

CENTER FOR BIOLOGICAL DIVERSITY,

Plaintiff,

v.

U.S. FISH AND WILDLIFE SERVICE; MARTHA WILLIAMS, in her official capacity as Principal Deputy Director of the U.S. Fish and Wildlife Service; DEBRA HAALAND, in her official capacity as Secretary of the U.S. Department of the Interior,

Defendants.

Case No.

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

INTRODUCTION

1. Plaintiff Center for Biological Diversity ("Center") challenges the decision of the U.S. Fish and Wildlife Service ("Service") that the Clear Lake hitch (*Lavinia exilicauda chi*) ("hitch") is not warranted for listing under the Endangered Species Act ("ESA"), 16 U.S.C. § 1531 *et seq.*; 85 Fed. Reg. 78,029 (Dec. 3, 2020).

2. The Clear Lake hitch—known as "chi" by indigenous communities—is an increasingly rare freshwater fish that is both ecologically and culturally significant. Native to Clear Lake, the oldest lake in North America, the hitch's population has dwindled to a tiny fraction of its historic size, with only a few thousand fish spawning each spring and only two streams regularly supporting hitch spawning in substantial numbers.

3. Hitch used to be the most abundant fish in Clear Lake. Historical accounts speak of hitch filling Clear Lake's tributaries bank-to-bank each spring, with spawning runs so plentiful the creeks were difficult to ford. Hitch depend on the seasonal flows of Clear Lake's tributaries for their annual spawning migration when spring rains temporarily inundate the dry creek beds. Adult hitch must migrate up the intermittent tributaries, spawn, and make it back to the lake before the creeks dry again in the summer heat. Not only has this short window of time to spawn been getting shorter—often leaving hitch stranded in the dry creek beds—as temperatures get warmer, but most spawning habitat has been blocked or destroyed. At one time, hitch spawned in all of Clear Lake's tributaries, but human development in the watershed has rendered 92 percent of the hitch's historical stream spawning habitat unusable.

4. Loss of spawning habitat is a primary driver of the hitch's decline. Ongoing effects of development, dams, water diversions, agriculture, mining, and overgrazing, together with competition and predation by non-native fish, increased pollution and cyanobacteria blooms in the lake, increased drought and wildfire frequency, and other regional climate impacts occurring now and into the foreseeable future threaten the hitch's very existence.

5. Nearly a decade ago, the Center petitioned to protect the Clear Lake hitch as an endangered or threatened species under the Endangered Species Act because the best available science showed that the combined threats were propelling the hitch swiftly towards extinction.

6. Disregarding the clear scientific evidence showing that the Clear Lake hitch is at risk of extinction or endangerment due to these and other threats, the Service concluded that the status of the hitch did not warrant Endangered Species Act protection.

7. As detailed in this Complaint, the Service's decision is unlawful and failed to rely on the best scientific and commercial data available in several respects, including: (1)

arbitrarily relying on unreliable and unscientific theories about the hitch's ability to forego spawning in tributary streams and instead spawn in the lake; (2) arbitrarily relying on the hitch's fecundity and long lifespan to deny listing in spite of significant population declines; (3) arbitrarily ignoring its own analysis that hitch are critically vulnerable to climate change; and (4) arbitrarily ignoring the best available science, including its own analysis, finding that current regulatory mechanisms are inadequate to protect the hitch.

8. To remedy these violations, the Center seeks a Court order declaring the Service's "not warranted" decision to be unlawful, vacating the illegal decision, and providing injunctive relief remanding the decision to the Service with direction to issue a new determination regarding whether the best available science supports protecting the Clear Lake hitch as an endangered or threatened species, within six months.

JURISDICTION AND VENUE

9. Plaintiff brings this action under the ESA, 16 U.S.C. §§ 1533, 1540(g), and the Administrative Procedure Act ("APA"), 5 U.S.C. § 706.

10. This Court has jurisdiction to review this action under 16 U.S.C. § 1540(c), (g); 28 U.S.C. § 2201; and 28 U.S.C. §§ 1331 and 1346, because the case presents a federal question under the laws of the United States, including the ESA and APA.

11. Pursuant to the ESA citizen suit provision, Plaintiff provided the Secretary of the U.S. Department of the Interior and the Service with 60 days' notice of intent to sue for ESA violations on February 25, 2021, more than 60 days prior to the filing of this Complaint.

12. Defendants have not taken sufficient action to remedy their continuing ESA violations by the date of this Complaint's filing.

13. Therefore, an actual and present controversy exists between the parties, and the requested relief is proper under the Declaratory Judgment Act, 28 U.S.C. § 2201; the APA, 5 U.S.C. §§ 701-706; and the ESA citizen suit provision, 16 U.S.C. § 1540(g).

14. Venue is proper in this judicial district under 28 U.S.C. § 1391(b) and (e), as a substantial part of the acts or omissions giving rise to the claims has occurred in this district

due to federal Defendants' decisions, the Clear Lake hitch's range is entirely located within this District, and Plaintiff maintains a regional office within this District.

15. No real property is involved in this action.

INTRADISTRICT ASSIGNMENT

16. Pursuant to Civil Local Rule 3-2(c), the appropriate intradistrict assignment of this case is to the San Francisco or Oakland Division.

PARTIES

17. Plaintiff CENTER FOR BIOLOGICAL DIVERSITY is a non-profit environmental organization that works through science, law, and the media to protect imperiled species and their habitats. The Center has more than 84,000 members, including many who live in Northern California and in Lake County and who recreate in and around Clear Lake. The Center is incorporated in California and headquartered in Tucson, Arizona, with offices throughout the United States, including in Oakland and Los Angeles. The Center brings this action on behalf of itself and its members who derive ecological, cultural, recreational, aesthetic, educational, scientific, professional, and other benefits from the Clear Lake hitch. The Center's members are deeply interested in and committed to conservation of imperiled biologically and culturally significant species, including the Clear Lake hitch, and the effective implementation of the ESA to protect those species. The Center's members have observed runs of Clear Lake hitch spawning in the wild and have also experienced the heartbreak of attempting to locate hitch—a once-abundant species of biological and cultural significance—but finding few or none. Many of the Center's members live in and have specific intentions to continue to use and enjoy the Clear Lake watershed, including the lakes, tributary streams, and surrounding area within current and historic spawning habitat range for the Clear Lake hitch, frequently and on an ongoing basis in the future.

18. The Center's members have been, are being, and will continue to be adversely harmed by the Service's unlawful determination that listing the Clear Lake hitch as a threatened or endangered species is not warranted and the Service's failure to protect the hitch under the ESA. The injuries that the Center and its members have suffered are actual, concrete injuries,

which are presently suffered by the Center and its members, and they will continue to occur unless this Court grants relief. For example, one of the Center's members, Ron Montez, Sr., who is the Tribal Historic Preservation Officer and a member of the Big Valley Band of Pomo Indians, has observed the Clear Lake hitch on multiple occasions in the creeks and tributaries of Clear Lake and has concrete plans to continue to look for hitch, including after it rains for multiple days in the spring at the start of next year's spawning season. Another of the Center's members, Irenia Quitiquit, Tribal Council member of the Robinson Rancheria Pomo Indians who was the Tribe's Environmental Director for over a decade, has witnessed the significant decline of hitch over the last ten years and has worked alongside state and Tribal partners to study and research the disappearing hitch, including to physically move hitch into Clear Lake to prevent them from being stranded in the dry creek beds. Another of the Center's members, Sarah Ryan, who works as the Environmental Director of the Big Valley Band of Pomo Indians, has often gone to the creeks to look for hitch and has even photographed dead hitch stranded in dry creek beds, and regularly goes to look for hitch as part of her professional responsibilities for the Tribe. The Service's decision that protecting hitch as a threatened or endangered species under the ESA was not warranted ignores the best available science and leaves the hitch vulnerable to the ongoing loss and degradation of habitat that is crucial for its survival and recovery. The relief sought herein—including an Order vacating the "not warranted" decision and remanding to the Service to issue a new decision based on the best available science—would redress those harms. The Center and its members have no other adequate remedy at law.

19. Defendant U.S. FISH AND WILDLIFE SERVICE is a bureau agency in the U.S. Department of the Interior. The Secretary of the Interior has delegated to the Service the authority to conserve non-marine endangered and threatened species under the ESA. 50 C.F.R. § 402.01(b). This authority encompasses proposed and final listing determinations for the hitch.

20. Defendant MARTHA WILLIAMS is the acting Director of the U.S. Fish and Wildlife Service and is charged with ensuring agency decisions comply with the law. The Center sues Defendant Williams in her official capacity.

21. Defendant DEBRA HAALAND is the Secretary of the U.S. Department of the Interior ("Secretary") and has the ultimate responsibility to administer and implement the provisions of the ESA regarding the Clear Lake hitch and to comply with all other applicable federal laws. The Center sues Defendant Haaland in her official capacity.

LEGAL BACKGROUND

Endangered Species Act

22. The Endangered Species Act is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *TVA v. Hill*, 437 U.S. 153, 180 (1978). Its fundamental purposes are to provide "a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved" and "a program for the conservation of such endangered species and threatened species." 16 U.S.C. § 1531(b).

23. The Act directs the Secretary of the Interior, through the Service, to determine which species of plants and animals are "endangered" and "threatened" and place them on the list of protected species—otherwise known as "listing" a species. *Id.* § 1533.

24. The Secretary has delegated its administration of the Act to the Service for freshwater aquatic species, including the Clear Lake hitch. 50 C.F.R. § 402.01(b).

25. ESA section 4 requires that the Service protect imperiled species by listing them as either "endangered" or "threatened." 16 U.S.C. § 1533(a)(1). An "endangered" species is one "in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6). A "threatened" species is "likely to become an endangered species within the foreseeable future." *Id.* § 1532(20).

26. The ESA does not define what constitutes a "significant portion" of a species' range. In 2014, the Service and the National Marine Fisheries Service promulgated a "Final Policy on Interpretation of the Phrase 'Significant Portion of Its Range' in the Act's Definitions of 'Endangered Species' and "Threatened Species.'" 79 Fed. Reg. 37,578 (July 1, 2014) ("SPR Policy"). The SPR Policy provides that "a key part" of the analysis of whether a species is at risk in a significant portion of its range is "whether the threats are geographically concentrated in some way." *Id.* at 37,586. This definition of "significant portion of range" saying that a

portion is significant only if, without that portion, the entire species would go extinct (or become endangered) has been judicially invalidated. The Service now "identif[ies] portions that may be significant by looking for portions of the species' range that could be significant under any reasonable definition of 'significant.'" 84 Fed. Reg. 13,223, 13,230 (Apr. 4, 2019).

27. The ESA does not define "foreseeable future." *See generally* 16 U.S.C. § 1532. The Service interprets the "foreseeable future" to "extend[] only so far into the future as the Services can reasonably determine that both the future threats and the species' responses to those threats are likely." 50 C.F.R. § 424.11(d). The Service determines "the foreseeable future on a case-by-case basis, using the best available data and taking into account considerations such as the species' life-history characteristics, threat-projection timeframes, and environmental variability." *Id.*

28. The Act defines "species" to include "any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." 16 U.S.C. § 1532(16).

29. The Service must list a species as endangered or threatened based on threats throughout all or in a "significant portion" of the species' range. The question of whether a species is endangered or threatened "throughout all" of its range is distinct from the question of whether a species is endangered or threatened in a "significant portion of its range."

30. In making listing determinations, the Service must assess threats to the species based on five statutory factors, also known as "listing factors." 16 U.S.C. § 1533(a)(1). Those factors are: (A) the present or threatened destruction, modification, or curtailment of the species' habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. *Id*.

31. The Service must list a species if the species meets the definition of "endangered" or "threatened" due to "any one or a combination of" these five listing factors. 50 C.F.R. § 424.11(c); *see* 16 U.S.C. § 1533(a)(1).

32. When most of a species' historic range has been lost and threats to all or a "significant portion" of its current range are ongoing, the Service must explain why the species

should not be protected as a listed species.

33. The Service must make listing determinations "solely on the basis of the best scientific and commercial data available," 16 U.S.C. § 1533(b)(1)(A), and may not allow for "economic considerations" when making "determinations regarding the status of species." H.R. Rep. No. 97-835, at 20 (1982).

34. The requirement that the Service base listing determinations "solely" on the "best scientific and commercial data available," 16 U.S.C. § 1533(b)(1)(A), means that the Service cannot invoke scientific uncertainty to justify its refusal to list a species as endangered or threatened. It means that the Service must consider all of the available data, even if that information does not provide clarity or absolute certainty.

35. A species does not receive substantive protections under the Act until it is listed as endangered or threatened. Without these protections, endangered and threatened species continue to decline toward extinction and become more difficult to protect from the threat of extinction as their situations become even more dire.

36. Once a species is listed, the Act provides both procedural and substantive protections to ensure not only the species' continued survival, but also its ultimate recovery.

37. For example, Section 4 of the Act requires the Service to designate areas that are "essential to the conservation of the species" as "critical habitat," and to develop and implement recovery plans. *Id*. §§ 1533(a)(3), (f); 1532(5). Section 7(a)(2) requires all federal agencies to consult with the Service to ensure their actions do not "jeopardize the continued existence" of listed species or "result in the destruction or adverse modification" of their critical habitat. *Id.* § 1536(a)(2). Section 9(a)(1)(B) makes it unlawful to "take" any endangered species, which means no person can "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" an endangered species without first receiving authorization from the Service. *Id.* §§ 1532(19), 1538. Thus, listing is the crucial first step in the ESA's system of species conservation and recovery.

38. The ESA allows any interested person to formally petition the Service to list a species as endangered or threatened. *Id.* § 1533(b)(3)(A); 50 C.F.R. § 424.14(a).

39. Upon receiving a listing petition, the Service generally has 90 days to determine whether the petition "presents substantial scientific or commercial information indicating that the potential action may be warranted." 16 U.S.C. § 1533(b)(3)(A); 50 C.F.R. § 424.14(h)(1). If the Service finds that the petition does not present substantial information indicating that listing may be warranted, the petition is rejected and the process ends.

40. If on the other hand, as in this case, the Service determines that a petition does present substantial information indicating that listing may be warranted, then the agency must publish that finding and proceed to conduct a full scientific review of the species' status. 16 U.S.C. § 1533(b)(1)(A); 50 C.F.R. § 424.14(h)(2).

41. Upon completion of this status review, and within twelve months from the date that it receives the petition, the Service must make one of three "12-month findings": (1) the petitioned actions is "warranted"; (2) the petitioned action is "not warranted"; or (3) the petitioned action is warranted, but listing is presently "precluded" by other proposals to list, delist, or reclassify the status of listed species. 16 U.S.C. § 1533(b)(3)(B)(i)-(iii).

42. If the Service issues a 12-month finding that listing the species is "warranted," it must promptly publish in the Federal Register a listing determination, i.e., the 12-month finding and a "general notice and the complete text of a proposed regulation" to list the species as endangered or threatened. *Id.* § 1533(b)(3)(B)(ii). Within one year of publishing a "warranted" finding and proposed rule, the Service must publish the final regulation listing the species.

43. If, on the other hand, as in this case, the Service issues a 12-month finding that listing the species is "not warranted," the Service rejects the petition, and the process ends. A "not warranted" finding is subject to judicial review. *Id.* § 1533(b)(3)(C)(ii).

Administrative Procedure Act

44. While the ESA provides for judicial review of a "not-warranted" 12-month finding, *id.* § 1540(g), the APA generally governs the standard and scope of judicial review, 5 U.S.C. §§ 701-706.

45. The APA grants a right of judicial review to "[a] person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action." *Id.* § 702.

46. Under the APA, a reviewing court "shall hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Id.* § 706(2)(A).

47. An agency action is arbitrary and capricious if it relies on factors that Congress did not intend it to consider, entirely fails to consider an important aspect of the problem, offers an explanation that runs counter to the evidence before the agency, or is so implausible that it cannot be ascribed to a difference in view or the product of agency expertise. *Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

FACTUAL BACKGROUND

The Clear Lake Hitch

48. The Clear Lake hitch (*Lavinia exilicauda chi*) is a large, lake-adapted minnow endemic to the Clear Lake watershed in Lake County, California. Adult Clear Lake hitch average about 13 inches long and weigh about 15.5 ounces, with large scales, big eyes, a small head, and an upturned mouth. Hitch can live up to four to six years and spawn annually.

49. Located about 100 km north of San Francisco Bay, Clear Lake is the largest freshwater lake completely within the California state border. It is fed by several tributary streams, which are typically dry except for brief periods in winter and spring when they become inundated from seasonal rains associated with the local Mediterranean climate.

50. The entire Clear Lake hitch population is confined to the Clear Lake watershed. The once-abundant hitch population has declined 100-fold from historical levels as its namesake watershed has been ecologically altered and degraded, plummeting to only a few thousand spawning fish annually.

51. For most of the year, Clear Lake hitch live in the lacustrine (lake) environment. Between February and May when seasonal rains temporarily raise flows in the creeks, adult hitch begin to migrate upstream to spawn in the lake's low-gradient tributaries. Adult hitch have only a brief window of time when the tributaries have enough water flowing for long enough to support the hitch's upstream migration, spawning in suitable spawning habitat, and the fish's downstream return to the lake before the creeks dry again in the summer heat.

52. Although hitch are capable swimmers, they rarely jump, so spawning habitat is easily blocked—any barrier that requires jumping to traverse is likely to prevent the hitch's ability to migrate upstream or downstream, including dewatered and dried portions of streams.

53. All of Clear Lake's tributaries have been altered by development, dams, barriers, diversions, and other manmade structures or habitat modifications that impede fish passage.

54. During spawning, once hitch eggs are deposited in riffles with fine to medium gravel substrate and fertilized, they remain in the gravel for multiple days until they hatch. Fertilized hitch eggs require sufficient instream flows and depth to remain submerged and specific water quality and temperature to properly develop. Eggs hatch in 7 to 10 days, and fry are free-swimming in another 7 to 10 days.

55. At about a month old, juvenile hitch must make it back to the lake before the streams dry again. To do this, the young hitch require adequate streamflow to support their downstream migration and prevent stranding and heavy predation by birds and non-native fish.

56. Juvenile hitch rear in the lake's nearshore emergent wetland habitat until fall, relying on stands of tule (*Schoenoplectus acutus*) and other aquatic vegetation for cover and to support adequate invertebrate food. In the fall, juvenile hitch move into the lake's open water, where they depend on clean, well-oxygenated water and an adequate food supply for survival into adulthood.

Status and Threats to the Hitch

57. Historically, Clear Lake hitch lived in numerous lakes and ponds throughout the watershed, including Clear Lake, Thurston Lake, Upper Blue Lake, Lower Blue Lake, and Lampson Pond. In the late 19th and early 20th centuries, hitch were the most abundant fish in Clear Lake, with massive spawning runs. As late as the 1970s, Clear Lake hitch spawning runs still numbered in the hundreds of thousands.

58. Now, the hitch is found only in Clear Lake and the much smaller Thurston Lake, as well as in the lakes' associated tributaries during spawning season. It is thought that hitch were introduced into Thurston Lake less than 50 years ago, but did not historically occur there.

Hitch populations have been completely extirpated from the Upper and Lower Blue Lakes, and it is unclear whether Lampson Pond still exists, so the status of the hitch there is unknown.

59. The once-abundant hitch, known also as "chi" by area Tribes, was a reliable food source that sustained indigenous communities for generations. The tule reed that provides hitch essential rearing habitat in the lake is also an important cultural resource for the Tribes.

60. Historically, hitch likely spawned in all or most of Clear Lake's tributaries including Adobe, Canyon, Cole, Cooper, Kelsey, Manning, Middle, Morrison, Scott, Schindler, and Seigler Creeks.

61. In the past 20 years, hitch have been regularly observed spawning in significant numbers in only five tributaries—Adobe, Cooper, Kelsey, Manning, and Middle—with only two creeks, Kelsey and Adobe, regularly having more than 1,000 fish spawning in each year. The annual maximum number of spawning fish observed from 2013 to 2020 has averaged only 1,237 in Kelsey Creek and 433 in Adobe Creek.

62. The California Department of Fish and Wildlife ("CDFW") determined in 2014 that barriers have eliminated or blocked over 92 percent of the estimated 180 stream miles of spawning habitat that was historically available to Clear Lake hitch and approximately 85 percent of historically available wetland rearing habitat for juvenile hitch was destroyed.

63. Municipal and agricultural water diversions, contaminants from historical mercury mining along the lakeshore, urban and agricultural development, overgrazing, increased drought and wildfire frequency, and the elimination of lakeshore wetland habitat have further degraded hitch spawning and rearing habitat. Increased runoff, pesticide use around the lake, and degraded tributary streams have, in turn, degraded the lake's water quality, contributing to increased cyanobacteria blooms and periodic fish kills in the lake.

64. Clear Lake hitch are vulnerable to predation by a variety of non-native fishes that have been introduced for sport and recreational fishing, such as black bass, sunfish, and catfish, which prey on all life stages of hitch. Clear Lake hitch must also compete directly with these non-native fishes for access to spawning habitat, rearing habitat, and food resources. Predation and competition threaten the hitch's ability to survive and reproduce.

65. Climate change further threatens the hitch's continued existence. Along with the increased frequency and duration of drought, streams are drying prematurely and progressively earlier, shrinking the remaining spawning habitat and shortening the brief migration window for hitch. Consequently, hitch can no longer reach most of their former spawning grounds, and the remaining streams dry up much earlier in the season, causing spawning failures or lack of spawning entirely. As the region's climate continues to warm, the frequency, duration, and severity of drought are expected to increase and accelerate the trend of streams drying earlier, shrinking the spawning window even further and causing further spawning failures, threatening any chance the Clear Lake hitch has to not only survive, but recover to former abundance.

66. Noted hitch expert Dr. Peter Moyle determined that the Clear Lake hitch is "critically vulnerable" to climate change effects, specifically the change in spring hydrograph.

67. Although hitch have occasionally been observed spawning along the shoreline of the lake, in-lake spawning is not considered a significant source of hitch production and recruitment, and shore spawning is not contributing to hitch survival or recovery.

68. The Clear Lake hitch's closest relative, the endemic Clear Lake splittail (*Pogonichthys ciscoides*), was driven to complete extinction by the 1970s from habitat alterations that dried out spawning streams and barriers that prevented its spawning migration.

PROCEDURAL BACKGROUND

The Center's Petition and Listing History

69. On September 25, 2012, the Center petitioned the Service to list the Clear Lake hitch as an endangered or threatened species because the best available science showed that habitat degradation, predation and competition from non-native fish, drought, and climate change would propel the hitch swiftly towards extinction.[1]

70. On April 10, 2015, the U.S. Fish and Wildlife Service published a positive 90-day finding that the petition presented substantial evidence that listing the Clear Lake hitch may

[1] In 2014 the California Department of Fish and Wildlife listed the Clear Lake hitch as a threatened species under the California Endangered Species Act, in response to a related petition that the Center filed.

be warranted and a notice that the Service was initiating a status review. 80 Fed. Reg. 19,259 (Apr. 10, 2015). The Service based its conclusion on: (1) present or threatened destruction or modification of habitat from urban and agricultural development, dams, water diversions, migration barriers, mining activities, and grazing; (2) overutilization for commercial fishing, recreational fishing, and tribal harvest; (3) disease and predation; and (4) other natural or manmade factors affecting its continued existence, including effects from climate change, contaminants, and introduced fish. *Id.* at 19,261.

The Service's Unlawful "Not Warranted" Determination

71. On December 3, 2020, the Service issued a 12-month finding concluding that listing the Clear Lake hitch as threatened or endangered under the ESA was not warranted. 85 Fed. Reg. 78,029 (Dec. 3, 2020).

72. The Service's "not-warranted" determination was primarily based on the Species Assessment and Priority Assignment Form ("Species Assessment") dated July 30, 2020. The Service's Sacramento Field Office also conducted a "species status assessment" ("SSA") of Clear Lake hitch in April 2020 to inform the Service's decision.

73. Both the SSA and Species Assessment describe the many threats that have reduced the hitch's population and available spawning and rearing habitat, and that are likely to continue to negatively impact hitch into the future. The Service found that the "various past and current negative influencing threats have reduced the current abundance of hitch compared to historical accounts," and that "this decline in abundance is primarily due to reductions in reproductive success, recruitment, and survival, most likely caused by the loss of consistent tributary flow, the loss of wetland/tule habitat surrounding the lake, reductions in lake water quality, effects due to introduced fish species, and the effects of drought conditions." Species Assessment at 42. Throughout the Species Assessment, the Service also explained how climate change would worsen these threats. *Id.* Indeed, the Service cited the findings of Moyle et al. that determined the hitch was "critically vulnerable" to the effects of climate change. *Id.* at 36.

74. Contrary to its own findings in the Species Assessment and SSA, the Service decided that "habitat degradation, predation and competition, drought and climate change are

not likely to adversely affect the overall viability of the Clear Lake hitch in a biologically meaningful way" to render it "in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range" because the hitch (1) "has a long life span," (2) is "highly fecund," and (3) has shown "behavioral flexibility to variable environmental conditions" through its use of different spawning strategies—i.e. occasional in-lake spawning. 85 Fed. Reg. 78,037-38. The Service also summarily concluded that regulatory mechanisms were acting to protect the hitch such that the hitch would "only undergo a slight decrease in condition into the foreseeable future." *Id.* at 78,037-38.

75. The Service fails to adequately explain how its claim that the hitch displays "behavioral flexibility to variable environmental conditions" can justify its decision to not protect the imperiled hitch, particularly when the Service itself recognized in both the SSA and Species Assessment that any observations of in-lake spawning cannot be relied upon to help the hitch because "it is unknown whether lake spawning could support a viable [hitch] population over the long-term," and "it is unknown whether [lake spawning] would be able to sustain a viable population of hitch in Clear Lake." SSA at 18, 44; Species Assessment at 30.

76. The Service fails to rationally explain how the hitch's fecundity—the ability of female hitch to produce a lot of eggs—supports the decision that listing hitch is not warranted when the Service itself explained that fecundity does not equate to survival or recruitment because, while hitch "produce a large number of eggs during the spawning season…a majority of those eggs will not then go on to develop into reproductive adults." SSA at 18.

77. The Service's reliance on the hitch's "long lifespan"—which can be four to six years—to deny listing is also not supported in the record. In the Species Assessment, although the Service claims that "[h]aving a longer life span is likely an adaptation to variable environmental conditions within the Clear Lake area," it goes on to explain that because hitch are only able to reproduce for a few years "prolonged drought conditions can greatly impact the overall population, especially in conjunction with other factors that are currently acting on the hitch." *Id.* The Service explained that multi-year droughts can reduce or eliminate hitch reproduction each year, and it projected that climate impacts to the region will mean "more

varied precipitation and higher temperatures during the spring, which could result in even less water flow being retained within the tributary streams during the hitch's spawning season." *Id.*

78. The Service summarily dismissed its own determination that access to suitable spawning habitat is the primary limiting factor for hitch to successfully reproduce because "[f]or successful reproduction and recruitment, the Clear Lake hitch *requires* tributary streams maintain consistent flow throughout the spawning season." SSA at 23 (emphasis added). In the SSA the Service explains that along with numerous instream barriers to hitch migration, the "degradation of tributary streams has changed their hydrology, reducing the amount of water retained in the streams over the Clear Lake hitch's spawning season," which has "greatly reduced reproduction and early life stage survival (egg, larvae)." SSA at 25. Indeed, the Service's "not warranted" decision fails to address its own finding that, "[t]he loss of consistent tributary flows during the spawning season . . . is affecting the hitch at the individual, population, and subspecies level and is likely to continue into the future." *Id.* at 33.

79. The Service also failed to address its own conclusions in the SSA that no regulatory mechanisms or management actions fully ameliorate habitat loss or degradation—the number one cause of hitch population decline due to the presence of fish passage barriers, removal of nearshore wetland and tule habitat, and poor water quality from contamination—and none address ongoing impacts from algal blooms, predation or competition, grazing practices, drought, or climate change. SSA at 33, 35, 38, 39, 44, 47, 50-51. Nevertheless, the Service arbitrarily based its "not-warranted" decision on the notion that "regulatory mechanisms . . . and local ordinances are currently acting to ameliorate the severity of *some* existing threats, such as the take of individuals, degradation of tributary streams, and loss of wetland habitat surrounding Clear Lake." 85 Fed. Reg. 78,038 (emphasis added).

80. The Service's "not warranted" decision also ignores the future conditions that the Service itself laid out in the SSA. In the SSA, the Service describes how "conversion of wetland habitats" has impacted lake water quality and "reduced the amount of rearing habitat for any juvenile hitch that are able to migrate to the lake from their natal stream," further reducing the likelihood of recruitment. SSA at 25. The SSA explains that "[p]redation and

competition will continue to affect the Clear Lake hitch at the individual, population, and subspecies level into the future throughout its range" and that the "combination of wetland habitat loss and drought can result in increased predation pressure and competition." *Id.* at 44. Additionally, the SSA explains that the hitch has a heightened risk from stochastic events such as severe storms, drought, contaminant exposure, and habitat modification by both natural and anthropogenic means. *Id.* at 17.

81. The Service's "not warranted" finding relies in part on the Service's faulty assumption that the hitch will be able to maintain its current "resiliency, representation, or redundancy, or undergo only a slight decrease in condition into the foreseeable future," and that even if there is a slight decrease in future condition, "the Clear Lake hitch was not projected to be in danger of extinction in the next 50 years." 85 Fed. Reg. 78,038.

82. The ESA requires the Service to list as a threatened species "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C § 1532(20). Contrary to this mandate, the Service's not warranted finding utterly fails to explain what factors would qualify the Clear Lake hitch as endangered in what it defines as the foreseeable future (e.g., 50 years). Instead, the Service unlawfully assesses the likelihood of *extinction* in the foreseeable future, rather than the likelihood of endangerment. 85 Fed. Reg. at 78,038.

83. The current condition of the Clear Lake hitch is poor. It has lost over 92 percent of its historic spawning habitat, and what remains is available to the hitch for less and less time each year. Add to that the continued plagues of drought and development; contamination by heavy metals, pesticides, algal blooms, and bacteria in the lake, all of which have degraded water quality and quantity; and the ongoing impacts from climate change, which will continue into the future, and the foreseeable future for the hitch is bleak. The Service denied federal ESA protections for the hitch based on faulty claims that hitch live a long time, can lay a lot of eggs, and have been observed spawning in places other than the creeks. However, not only are the Service's claims not supported by scientific evidence in the record, but the Service's own assessments explain how reliance on these claims is not likely to prevent the extinction or

endangerment of the species. Therefore, the Service's decision that the Clear Lake hitch is not warranted for listing as an endangered or threatened species dismisses threats that warrant protection and is not based on the best available science—in violation of the ESA and contrary to its very purpose—and is arbitrary, capricious, and otherwise not in accordance with law.

PLAINTIFF'S CLAIMS FOR RELIEF

Claim I

Violation of the ESA in Determining that Listing the Clear Lake Hitch as an Endangered or Threatened Species Is Not Warranted

84. Plaintiff realleges and incorporates by reference the preceding paragraphs.

85. The Service "shall . . . determine whether any species is an endangered species or a threatened species" because of any one or combination of five listing factors. 16 U.S.C. § 1533(a)(1). When doing so, the Service must rely "solely on the best scientific and commercial data available." *Id.* § 1533(b)(1).

86. Defendants' decision that listing the Clear Lake hitch as an endangered or threatened species is not warranted is unlawful because the Service disregards the best available science, including its own analysis regarding the status of and imminent threats to the hitch; contradicts the best available science showing that the hitch survival depends on adequate and sustained tributary flows to provide access to spawning habitat; arbitrarily relies on observance of in-lake "shore spawning" or other "different spawning strategies" as well as the hitch's fecundity and long lifespan as reasons to deny listing; fails to rationally apply the five statutory listing factors to the available evidence; contradicts the Service's own analysis in the SSA and elsewhere that supports a finding that the hitch is at risk of endangerment or extinction throughout all or a significant portion of its range from threats including habitat degradation and loss, competition and predation by nonnative fishes, increased wildfire, and climate change; ignores the Service's own conclusions that existing regulatory mechanisms are insufficient to protect the hitch from the most serious threats; and conflates the ESA's definitions of endangered and threatened species such that the Service did not determine whether the Clear Lake hitch was a threatened species.

87. Accordingly, the Service's not-warranted decision is contrary to the best available science, dismisses threats that warrant protection, violates the ESA, and is arbitrary and capricious, an abuse of discretion, and otherwise not in accordance with law. 16 U.S.C. § 1533; 5 U.S.C. § 706(2)(A).

Claim II
(In the Alternative to Plaintiff's First Claim for Relief)
Violation of the APA in Determining That Listing the Clear Lake Hitch as an Endangered or Threatened Species Is Not Warranted

88. Plaintiff realleges and incorporates by reference the preceding paragraphs.

89. When determining whether a species is warranted for protection under the Endangered Species Act, the Service must articulate a satisfactory explanation for its action, including a rational connection between the facts found and the choice made.

90. The Service cannot rely on factors Congress did not intend the agency to consider, ignore an important aspect of the problem, offer an explanation that runs counter to the evidence before the agency, or issue a finding so implausible that it cannot be ascribed to a difference in view or the product of agency expertise.

91. The Service's not warranted finding failed to provide a rational explanation connecting the acknowledged threats facing the Clear Lake hitch and the finding that the hitch is not warranted for listing as an endangered or threatened species.

92. The Service's not warranted finding disregards the best available science, including its own analysis regarding the status of and imminent threats to the hitch; contradicts the best available science showing that hitch depend on adequate and sustained tributary flows to provide access to spawning habitat; arbitrarily relies on in-lake "shore spawning" or other "different spawning strategies " as well as the hitch's fecundity and long lifespan as reasons to deny listing; fails to rationally apply the five statutory listing factors to the available evidence; contradicts the Service's own analysis that supports a finding that the hitch is at risk of endangerment or extinction throughout all or a significant portion of its range from threats including habitat degradation and loss, competition and predation by nonnative fishes, increased wildfire, and climate change; ignores the Service's own conclusions that existing

regulatory mechanisms are insufficient to protect the hitch from the most serious threats; and conflates the ESA's definitions of endangered and threatened species such that it did not determine whether the Clear Lake hitch was a threatened species.

93. Accordingly, the Service's not-warranted finding is arbitrary, capricious, an abuse of discretion, and not in accordance with law, 5 U.S.C. § 706(2)(A).

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that this Court:

1. Declare unlawful Defendant's December 3, 2020 decision that listing the Clear Lake hitch as threatened or endangered under the ESA is not warranted;

2. Vacate and remand the December 3, 2020 12-month "not warranted" finding to Defendants for further analysis and a new listing determination by a date certain that is consistent with the ESA, APA, and this Court's order;

3. Award Plaintiff reasonable attorneys' fees and costs; and

4. Grant such other and further relief as the Court may deem just and proper.

Respectfully submitted this 17th day of August, 2021.

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