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Central Coast Forest Association

Protecting our land and our rights

September 11, 2002

Mr. Rod McGuiness
Acting Director, Southwest Region
National Marine Fisheries Service
501 W. Ocean Blvd., Suite 4200
Long Beach, CA 90802-4213

RE: PETITION TO CORRECT THE SOUTHERN BOUNDARY OF THE CENTRAL CALIFORNIA COHO ESU

Dear Mr. McGuiness:

Pursuant to 5 U.S.C. § 553(e); 16 U.S.C. § 1533(b)(3)(A); and 50 C.F.R. § 424.11, the Central Coast Forest Association, representing independent forestland owners, forestry professionals and small forest oriented businesses in the Santa Cruz Mountains area, hereby petitions the National Marine Fisheries Service (NMFS) to correct the southern boundary of the Central California Coho ESU. [Federal Register 61, 56138, Oct. 31, 1996 and Federal Register 62, 1296-7, Jan. 9, 1997] to exclude the Santa Cruz Mountains Area (that portion of the ESU south of San Francisco Bay) where the best scientific and commercial data available reveal no evidence or history of native coho salmon, and massive infusions of hatchery planted coho do not constitute an important component in the evolutionary legacy of the species, (56 FR 58612, Nov. 20, 1991) thereby invalidating any justification for listing them as a threatened species south of San Francisco Bay.[1]

NMFS is obligated by the Endangered Species Act (ESA) to list species pursuant to the legal requirements of the Act and "solely on the basis of the best scientific and commercial data available." 16 U.S.C. § 1533(b)(1)(A). Likewise, NMFS is obligated to review periodically such listings and remove any such species upon the determination that these legal and factual criteria are no longer met. 16 U.S.C. § 1533 (a)(1), (b)(7)(A), (b)(1)(B)(3), (c)(2), (b)(1); 50 C.F.R. § 424.11(d). Specifically, NMFS regulations state that the "factors considered in delisting a species are those in paragraph (c) of this section, as they relate to the definition of endangered or threatened species. Such removal must be supported by the best scientific and commercial data available." 50 C.F.R. §424.11. A species may cease to be threatened or endangered if "subsequent investigations may show that the best scientific or commercial data available when the species was listed, or the interpretation of such data, were in error." Listing as threatened an exotic species is clearly inconsistent with the purpose of ESA.

Pursuant to 5 U.S.C. § 553(e) and 16 U.S.C. § 1533(b)(3)(A), interested parties have the right to petition NMFS to reconsider listing actions. NMFS must then, to the maximum extent practicable, within

[1] The ESA defines "species" to include "any subspecies of fish or wildlife or plants and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature" 16 U.S.C 1352(16). NMFS introduced the term evolutionarily significant unit or ESU to interpret the ESA's meaning of distinct population segment as it relates to Pacific Salmon in 56FR 58,613. Nov. 20, 1991. A stock must satisfy two criteria to be considered an ESU. First, it must be substantially reproductively isolated from other conspecific population units. Second, it must represent an important component in the evolutionary legacy of the species.

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90 days of receipt of said petition, make a finding as to whether the petition merits review. 16 U.S.C. § 1533(b)(3)(A). If so, the NMFS must review the petition and make a decision thereon within 12 months of receipt of the original petition.

NMFS' erroneous listing of Santa Cruz Mountains coho salmon as a threatened species and the restrictive regulations related to the listing impose an unnecessary, negative effect on the people of the area. Small business owners, homeowners, farmers, foresters and citizens seeking recreation are experiencing an unnecessary devaluation of property, loss of freedom and employment, and general deterioration of their quality of life. People live under the threat of federal action for felling a tree, maintaining their roads and driveways, clearing their power line easements and many other normal activities associated with rural property ownership and use, all unnecessarily resulting from the invalid coho listing.

FACTS

Studies from three diverse scientific disciplines show the southern boundary of the Central California Coho habitat range at or north of San Francisco Bay

To form the Southern Coho ESU, NMFS has combined Santa Cruz Mountains watersheds with San Francisco Bay and the watersheds north to Punta Gorda in Humboldt County. The climate, geomorphology and demographics of these habitat areas are dissimilar and do not comprise coherent habitat conditions. Information from three diverse scientific disciplines form a consistent pattern supporting the conclusion that coho are not native to any streams south of San Francisco Bay. Naturalists, archeologists, historians and geomorphologists question whether populations of indigenous coho have ever maintained permanent colonies in Santa Cruz Mountains streams. More than a century of artificial stream stocking overlaid with politically motivated rhetoric and the unscientific, unsubstantiated folklore of generations of amateur anglers has obscured the truth about coho salmon in this locale. The hatchery coho from a multiplicity of genetic stocks that, from time to time, inhabited the streams of the area can persist only because of continuous, massive restocking. These fish do not comprise "*an important component in the evolutionary legacy of the species*".

Historic evidence that coho are not native to streams south of San Francisco Bay

Two early scientific reports of fish census in Central California streams bear witness that coho are not native to the streams south of San Francisco. The first of these by the preeminent biologist, David Star Jordan (Jordan and Everman, 1896) is a scrupulously researched four-volume description of every known fish in northern and Central America. This study concludes that the coho (Oncorhynchus kisutch) habitat range is "from San Francisco northward, especially in Puget Sound and the Alaskan Fjords". A later study by a student of Jordan's (Snyder, 1912) is a survey of the fish of Monterey Bay tributaries. It cites a single, hearsay report of a coho sighting in the San Lorenzo River as the only evidence of coho anywhere in the survey area. The authors question the report, citing hatchery stocking and the fact that spent steelhead carcasses are frequently mistaken by laymen for salmon.

Artificial fish stocking by the State Department of Fish and Game, of most California waters began in the 1870s and was a thriving industry by the early 1900s (Dayes, 1987), (Shelby, 1922). Shelby reports a total of 109,130,350 hatchery fish introduced into California waters during the single year of 1906 by state hatcheries and this figure does not include the county and private hatcheries that were also heavily contributing to exotic fish plantings. The first government sponsored hatchery in the

Santa Cruz Mountains was opened by Santa Cruz County at Brookdale in 1902. The records of the State Department of Fish and Game show vast numbers of salmonids of all species and origins being transplanted from location to location including to and from Santa Cruz Mountains streams with very little apparent thought or pattern (Streig, 1991). Even salmonids from the East Coast, Europe and Japan are reported in the species transfers.

There are no valid scientific data on adult coho salmon in Santa Cruz Mountains streams prior to massive hatchery infusions. Nevertheless, anecdotal reports of abundant past populations compared with guesses at present numbers have been used to justify classifying Santa Cruz Mountains coho as threatened. For example, the Santa Cruz County government spokesman (Mr. Dave Hope) at the April 7, 1994 hearing of the State Fish and Game Commission on listing coho in the Santa Cruz Mountains Streams testified that the number of coho in Waddell Creek are only 5% of the runs in the 1940s and 1% compared with the 1800s (California State Fish and Game Commission, 1994). In the absence of any presentation of scientific evidence to the contrary, the Commission approved the listing. The inaccuracies of the testimony have taken on the aura of facts. No valid scientific source has ever been cited for native coho populations in the 1800s.

Although hatchery fish have been present in Santa Cruz Mountains streams for many decades, except for Shapovalov and Taft (1954), there are not now, nor have there ever been mechanisms and procedures in place to count adult salmonid populations in these streams[2]. Even these counts are quantitatively meaningless since Waddell was heavily stocked with hatchery coho before and during the study (Streig, 1991; Dayes 1987). In this and other matters of fact, the listing of coho south of San Francisco is based on no valid historic records and the Jordan and Snyder studies early in the period of heavy stocking indicate their absence.

Archeological research indicating absence of native coho salmon populations in Santa Cruz Mountains streams

Four reports of archeological excavations of ancient Native American middens on the central California coast (a clear window to the Native's diet prior to European contact) are consistent with the absence of any salmon south of San Francisco Bay and tell of their plentiful presence from there northward. By contrast, the studies confirm the habitat range of steelhead as far south as the Santa Margarita River in San Diego County lending credibility to the methods and assumptions used in the studies.

The most recent and exhaustive of the four studies, "Archeological Perspectives on Native American Fisheries of Central California with Emphasis on Steelhead and Salmon" (Gobalet et al, 2002) examined over 117,000 fish remains from middens south of San Francisco, and although steelhead remains were present, no other salmonid remains were found.

Another significant study encompassing the southern portion of Central Coast Coho ESU identified over 80 species of ocean and fresh water fish from among 77,000 fish remains recovered from 51 central coastal middens from San Mateo County to San Luis Obispo County, spanning 6200 B. C. to 1830 A. D. (Gobalet and Jones, 1995). The other two papers report similar studies of nine middens in Contra Costa County (Gobalet 1990) and a single midden in Berkeley (Follett, 1975). Species mixes

[2] The egg taking station that operated on Scotts Creek from 1905 until the 1940s was suitable for use as an adult fish census mechanism but there is no record of its having been used for this purpose.

differed with location and time of deposit. In instances where the relationships have been studied, the mix was consistent with species' prevalence, food value and convenience of catch[3].

Of the 6,993 elements identified from the Contra Costa middens, 1,135 were salmon, chinook or coho, demonstrating two important facts: 1) Salmon skeletal signatures remain stable and identifiable over the time span of the deposits. 2) Where they were available, salmon were caught and consumed by the coastal native people.

Although more than 80 species, including nearly every variety of fish that would likely have been present, were consumed by the natives along the central coast south of San Francisco, *salmon were not a discernible part of these people's comprehensive diet.* Steelhead were found in all three studies from Contra Costa to San Luis Obispo Counties, reinforcing the opinion that, if salmon had ever been consumed by these natives, their remains would have also been found in the southern locations. Gobalet and Jones make this comment: (Gobalet and Jones, 1995)

> ***"The lack of salmon at any of our sites is consistent with their absence from Central Coast[4] drainages..."***

This agrees with the premise that significant numbers of coho salmon did not populate the Santa Cruz Mountains streams until massive artificial stocking was initiated on behalf of fishermen beginning in 1870. (Snyder, 1912; Streig, 1991; Dayes, 1987).

Physical reasons that Santa Cruz Mountains streams do not support permanent coho populations

Santa Cruz Mountains streams probably have never supported permanent indigenous coho salmon colonies because of the natural hazards of climate and geography. These relatively short, steep streams in a setting with widely fluctuating precipitation, a highly erodable mudstone, sandstone and weathered granitic substrate and ongoing tectonic uplift are naturally subject to frequent, violent events. Floods, at inopportune times in the coho life cycle that wash out redds or newly emerged fish, are frequent in these watersheds (Baker, 1998; Brown and Moyle, 1991). Droughts are also common. These prevent coho smolt migration and the return of adults to the spawning streams, either of which can deplete or destroy a generation. In the easily eroded terrain, rock breakdown and soil formation are hastened by the growth of tree roots, then storms, landslides and earthquakes transport large amounts of sediment to the streams. These events are natural characteristics of the location and are not related to human activity. Since coho spawn on a rigid three-year cycle and die immediately thereafter, a missing generation leaves one of the three-year classes vacant and it can remain vacant for many years or permanently unless restored by strays from another location or human intervention. The rigid life cycle prevents nearly all interbreeding between generations of coho[5].

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[3] The distribution of fish remains indicates that, probably because of the tendency toward rapid decomposition, they were not transported in significant quantity over great distances from one location to another.

[4] Central Coast is defined by the Gobalet and Jones (1995) as the area from San Louis Obispo to (but not including) San Francisco. Northern California is defined as the area from San Francisco to the Oregon border.

[5] Recent experiments by the Monterey Bay Salmon and Trout Project with techniques to accelerate coho maturity have resulted in restoration of missing year classes by spawning of precocious, two-year-old fish.

Coho colonies occasionally started by strays[6] (Shapovalov and Taft, 1954) or human intervention could flourish for a few years, but would inevitably succumb to one of these natural stochastic events. Thus, prior to the practice of continuous stocking, these streams, beginning in the1870s, may have sustained ephemeral, but not permanent coho populations.

Anecdotal reports of bountiful coho runs in the Santa Cruz Mountains streams are possibly exaggerated but are consistent with the previously mentioned history of continuous stocking of these streams (Shelby, 1922; Streig, 1991; Lydon 1997; Dayes, 1987). In the 1970s, salmonid stocking in California was reduced and, not surprisingly, coho populations then declined. This is consistent with the fact that the only remaining, reasonably robust coho population in Santa Cruz Mountains streams is that of Scotts Creek that is still continuously stocked by a local hatchery. The salmonid decline also coincides with a drop in the ocean survival of all West Coast salmonids that is attributed to a number of causes including climate shift (decadal oscillation), increases in predation by exploding pinniped populations (NMFS, 1999) and possibly over-fishing (Briggs, 1999).

However, regardless of ocean productivity, were hatchery stocking of Santa Cruz Mountains streams discontinued, coho populations would resume their ephemeral pattern or cease to exist, in spite of any attempt to "restore" their inland habitat. The only way to approximate a stable coho population in these Santa Cruz Mountains streams is by permanent wide-scale human intervention with artificial stocking.

Santa Cruz Mountains coho do not constitute an "important component in the evolutionary legacy"

With the possible exception of an occasional stray, all coho in streams south of San Francisco are of exotic origin, thus do not meet the NMFS criterion: *"It must represent an important component of the evolutionary legacy of the species"* (56 FR 58612). The genetic origin of hatchery fish planted in these streams is ubiquitous and undeterminable. Sources include, Alaska, Canada, Washington, Oregon, northern California, East Coast USA, Europe and Asia. Should hatchery stocking be terminated, coho could not maintain permanent colonies in the subject streams for reasons not related to human activity. Thus, it cannot be logically concluded that these fish in any way comprise or contribute to "*an important component in the evolutionary legacy of the species*".

Conclusion

The history and geomorphology of the Santa Cruz Mountains streams cast doubt on the validity of stories of bountiful natural coho populations in these streams and archeological research gives credibility to their absence from the natives' diet during the 8,000 year prior to 1830 A. D. Although no single scientific disciplinary source may be sufficient to conclude unequivocally that coho are not native to these streams, the mutually consistent patterns disclosed independently by three separate scientific disciplines provides a preponderance of evidence and compels this conclusion.

The multi-origin, hatchery stocked coho in the streams south of San Francisco Bay are not natural populations nor an important component of the evolutionary legacy of the species and do not meet the NMFS criteria of 56 FR 58612.

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[6] All salmonids occasionally return to a stream other than that of their origin. Shapovalov and Taft (1954) report normal straying of a few percent of returning coho, usually to very nearby streams but they cite one instance of a Waddell Creek stray as far away as Noyo River.

Petition

For the reasons set forth herein, the Central Coast Forest Association hereby petitions the National Marine Fisheries Service to correct the southern boundary of the Central California Coho ESU to exclude coastal waterways south of San Francisco Bay (The Santa Cruz Mountains area) from this ESU since the best available scientific information shows that it has never supported and is incapable of supporting a permanent, natural population of coho salmon and the hatchery coho that are or have been present are not *an important component in the evolutionary legacy of the species*.

Pursuant to 16 U.S.C. § 1533(b)(3)(A) you have ninety days to offer a substantive response to this petition.

Sincerely,

Richard C. Burton, President
Central Coast Forest Association

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