

that are significant to the taxon. Therefore, we will not commence a status review in response to this petition.

If you wish to provide information regarding summer-run Issaquah Creek kokanee, you may submit your information or materials to the Manager, Western Washington Fish and Wildlife Office (see **ADDRESSES**).

References Cited

A complete list of all references cited is available upon request from the Western Washington Fish and Wildlife Office (see **ADDRESSES**).

Author

The primary authors of this document are Western Washington Fish and Wildlife Office (see **ADDRESSES**).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: October 15, 2007.

Kenneth Stansell,

Acting Director, Fish and Wildlife Service.

[FR Doc. E7-20748 Filed 10-22-07; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition To List the Mountain Whitefish (*Prosopium williamsoni*) in the Big Lost River, ID, as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 90-day petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list the mountain whitefish (*Prosopium williamsoni*) occurring in the Big Lost River in Idaho as threatened or endangered under the Endangered Species Act of 1973, as amended (Act). We find that the petition does not present substantial scientific or commercial information indicating that listing the mountain whitefish in the Big Lost River may be warranted. This finding is based on insufficient information indicating that mountain whitefish in the Big Lost River may represent a species, subspecies, or distinct population segment (DPS) and,

therefore, a listable entity under section 3(16) of the Act. Accordingly, we will not be initiating a status review in response to this petition. However, we ask the public to submit to us any new information that becomes available concerning the status of mountain whitefish occurring in the Big Lost River at any time. This information will help us to monitor and encourage the ongoing conservation of mountain whitefish in the Big Lost River.

DATES: The finding announced in this document was made on October 23, 2007. You may submit new information concerning the mountain whitefish occurring in the Big Lost River for our consideration at any time.

ADDRESSES: Submit data, information, comments, and materials concerning this finding to the Supervisor, Snake River Fish and Wildlife Office, 1387 S. Vinnell Way, Boise, ID 83709. The supporting file for this finding is available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Jeffery Foss, Field Supervisor, Snake River Fish and Wildlife Office (see **ADDRESSES**); telephone 208-378-5243; facsimile 208-378-5262. If you use a telecommunications device for the deaf (TDD), please call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Act requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. Such findings are based on information contained in the petition, supporting information submitted with the petition, and information otherwise readily available in our files at the time we make the determination. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition, and publish a notice of the finding promptly in the **Federal Register**.

Our standard for substantial scientific or commercial information, as defined by the Code of Federal Regulations (CFR), with regards to a 90-day petition finding is "that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted" (50 CFR 424.14(b)). If we find that the petition presents substantial scientific or commercial information, we are

required to promptly commence a status review of the species.

We base this finding on information provided by the petitioner that we determined to be reliable after reviewing sources referenced in the petition and information readily available in our files at the time of the petition review. We evaluated this information in accordance with 50 CFR 424.14(b). Our process for making this 90-day finding under section 4(b)(3)(A) of the Act and § 424.14(b) of our regulations is limited to a determination of whether the information in the petition meets the "substantial information" threshold. A substantial finding should be made when the Service deems that adequate and reliable information has been presented that would lead a reasonable person to believe that the petitioned action may be warranted.

On June 15, 2006, we received a petition, dated June 14, 2006 (hereafter cited as 'Petition' 2006), from the Western Watersheds Project ('petitioner'). The petitioner requested that mountain whitefish in the Big Lost River, Idaho, be listed as threatened or endangered in accordance with section 4 of the Act. The petitioner also requested that critical habitat be designated. The petition clearly identified itself as such and included the requisite identification information for the petitioner, as required in title 50 of the Code of Federal Regulations (CFR), 424.14(a). In an August 21, 2006 letter to the petitioner, we acknowledged receipt of the petition, and explained that we would not be able to address the petition at that time due to other priorities relating to court orders and litigation settlement agreements. We further indicated that we had reviewed the petition and determined that an emergency listing was not necessary.

The petition requested that we list the mountain whitefish in the Big Lost River of Idaho as a separate species, subspecies, or in the alternative as a distinct population segment. The petition contends that mountain whitefish occupying the Big Lost River have experienced "a population decline and extirpation, and a decreased range." Threats identified in the Big Lost River include "loss and degradation of habitat due to irrigation diversions, livestock grazing, off-road vehicle use, roads; and predation, competition, and disease from non-native fish species." The petition asserts that this situation is in contrast to other populations of mountain whitefish in other drainages.

The petition was accompanied by a single document, the "Big Lost River Mountain Whitefish Status Report,"

prepared by Ecosystem Sciences Foundation and dated February 2006 (hereafter cited as 'ESF Status Report 2006'). This report contained information related to the taxonomy, life history, demographics, genetics, habitat, threats, and the past and present distribution of mountain whitefish in the Big Lost River. The petition incorporated by reference any citations used in the ESF Status Report 2006, but did not provide actual copies of those references.

Species Information

Mountain whitefish (*Prosopium williamsoni*) are members of the Salmonidae family and are found throughout mountainous areas of western North America in Canada and the United States. In the United States, the species is known to occur in the States of Washington, Oregon, Idaho, Wyoming, Montana, Colorado, Utah, Nevada, and California (NatureServe 2007). Mountain whitefish are relatively common and widespread in most river basins in Idaho (American Fisheries Society 2007). Their preferred habitat is cold water streams and lakes in western North America, and typically third or fourth order streams (Van Kirk et al. 2003, p. 8).

While the majority of populations of mountain whitefish occur in riverine environments, some populations are restricted to lakes or isolated sink basins. Mountain whitefish in the Big Lost River reside in a "sink" drainage which was once part of a large Pleistocene lake system that included Lake Terretton (Van Kirk et al. 2003, p. 6). As the waters receded, the Big Lost River and four adjacent drainages lost their surface connection to the Snake River, resulting in five isolated sink drainages in Idaho.

There are additional populations of mountain whitefish that occur in other sink drainages, such as tributaries in the Lahontan Basin in California and Nevada and the Bonneville Basin in Utah. Populations in these basins are similar to the population in the Big Lost River in that all are relict populations of mountain whitefish that formerly resided in large Pleistocene lake systems that are now closed basins.

Mountain whitefish in the Big Lost River are thought to be most closely related to populations that occur in the upper Snake River based on genetic data from Whiteley et al. (2006) and Campbell and Cegelski (2005). The species most likely entered the Big Lost River approximately 10,000 years ago (Van Kirk et al. 2003, p. 8). Today, mountain whitefish in the Big Lost River are physically isolated from other

populations within the Snake River basin.

Mountain whitefish, also known as mountain herring, are about 57 centimeters (cm) (22 inches (in)) in length. The general body shape is slender with a somewhat round cross section, and body coloration is typically silver on the sides, dusky olive green or blue on the back, and the belly is a dull white (Simpson and Wallace 1982, p. 77). It has been suggested that individuals from the Big Lost River appear to be different from other populations of mountain whitefish in coloration and body shape, but data to confirm this observation has not yet been collected (A. Whiteley, pers. comm. 2007a).

The spawning season for mountain whitefish is in the fall, and is correlated with stream temperature (Simpson and Wallace 1982, p. 77; Wydoski 2001, p. 694). Unlike other salmonids, mountain whitefish are broadcast spawners in which a nest or redd is not created; females scatter eggs and the males fertilize them (McGinnis 1984, p. 137).

Mountain whitefish are thought to be opportunistic bottom feeders that consume whatever is in abundance, including fish eggs during the spawning season (McGinnis 1984, p. 137). It is known to actively feed on both aquatic and terrestrial insects, but is also a piscivore (eats other fish) (NatureServe 2007). Mountain whitefish reach sexual maturity at 3 to 4 years, and have been observed to live up to 12 years (Wydoski 2001, p. 694).

Listable Entity Evaluation

In making a 90-day finding on a petition to list a species, we must first establish that the subject of the petition may constitute a "species" under section 3(16) of the Act. In this case, the petitioner has requested that the mountain whitefish occupying the Big Lost River in Idaho be listed as a separate species, subspecies, or in the alternative, as a distinct population segment. For vertebrates, the Act allows listing of these three entities (16 U.S.C. 1532(16)).

Evaluation of the Mountain Whitefish in the Big Lost River as a Species or Subspecies

The mountain whitefish in the Big Lost River of Idaho are currently recognized as members of the single species *Prosopium williamsoni*, which is considered common and widespread throughout the mountainous western United States northward into Canada (NatureServe 2007). The mountain whitefish in the Big Lost River are not recognized as a separate species or

subspecies by the American Fisheries Society (Nelson et al. 2004, p. 86), nor by the Integrated Taxonomic Information System (2007). The State of Idaho does not consider the mountain whitefish occupying the Big Lost River to be either a significant species or a species of concern (Idaho Comprehensive Wildlife Strategy 2005).

The petitioner's arguments for the recognition of mountain whitefish in the Big Lost River as a species, subspecies or distinct population segment (discussed separately, below), rely primarily on the analysis of molecular data. Because of the complex and highly technical nature of molecular analysis, we consulted with a fisheries genetics expert within the Service to assess the petitioner's assertions to the potential significance of the genetics information presented. Dr. Donald E. Campton, Senior Scientist at the U.S. Fish and Wildlife Service's Abernathy Fish Technology Center and former President of the Genetics Section of the American Fisheries Society, served as our consultant on this finding.

The petitioner contends that "the best available science demonstrates that the Big Lost River Mountain Whitefish should be protected as a separate species or subspecies of whitefish because all genetic analyses demonstrate that it is genetically unique—so much so that the genetic distance observed between Big Lost River mountain whitefish and surrounding populations is at least as large as that seen between other subspecies or even species. [ESF] Status Report [2006], pp. 6, 14–15." The ESF Status Report 2006, p. 6 cites Whiteley and Gamett (2002) for the basis of this assertion. Whiteley and Gamett (2002) is an abstract of a presentation given at the Sinks Symposium of the Idaho Chapter of the American Fisheries Society in February 2002 (Van Kirk et al. 2003, p. 13).

We contacted Mr. Gamett to determine whether any written document was available reflecting the content of that presentation, but found that the abstract was the only written record. The Symposium Proceedings (Van Kirk et al. 2003) were available to us in our files. The abstract does not state that "the genetic distance is at least as large as that seen between other subspecies or even species," but rather that "consideration of the Big Lost River mountain whitefish as a separate subspecies may be warranted." This appears to represent the personal opinions of the presenting researchers, no data are presented to support the petitioner's claim regarding genetic distance, and the ESF Status Report

2006 cited by the petitioner appears to have overstated the conclusions of Whiteley and Gamett (2002).

Data available in our files from a 2005 Idaho Department of Fish and Game Report do not support the contention that mountain whitefish found in the Big Lost River are genetically equivalent to a subspecies or species. In analyzing the sequence divergence of mitochondrial DNA between whitefish populations, Campbell and Cegelski (2005, Figure 3) found that the percent sequence divergence of mountain whitefish from the Big Lost River compared to other populations within the Upper Snake River Basin ranged from 0.33 to 0.49 percent. The authors note that, for comparison purposes, sequence divergence between recognized subspecies of cutthroat trout range (*Oncorhynchus clarki lewisi* and *O. c. bouvieri*) from 1.4 to 1.9 percent, and sequence divergence between different species of trout (*O. mykiss* and *O. clarki*) range from 4.0 to 4.5 percent (Campbell and Cegelski 2005, p. 6); these are far higher levels of mtDNA sequence divergence than was observed between mountain whitefish in the Big Lost River and other populations within the Upper Snake River assemblage. According to this report, the genetic distance between mountain whitefish in the Big Lost River and surrounding populations is far less than that observed between other subspecies or species of salmonids. Furthermore, several other populations of mountain whitefish examined by Campbell and Cegelski (2005, Figure 3) exhibited levels of divergence equal to or greater than that exhibited by fish from the Big Lost River (the Boise River populations, for example). This issue is discussed in further detail in the distinct population segment analysis presented below.

The petitioner's citation of pages 14–15 of the ESF Status Report 2006 in support of their contention that mountain whitefish in the Big Lost River merit consideration as a separate species or subspecies apparently refers to several different statements and sources, beginning with the citation of Whiteley (2002) as stating that “the Big Lost [mountain whitefish] should be considered as a separate group. This group is highly genetically differentiated from all other populations analyzed to date” (ESF Status Report 2006, p. 15).

The ESF Status Report 2006 presented only conclusions from the Whiteley 2002 reference, but provided no data or analysis to support those conclusions. Only the name of the author, a title, and the name of a genetics laboratory in the Biological Sciences Department at the

University of Montana was provided under the Whiteley 2002 citation (ESF Status Report 2006, p. 18) and we were unable to locate a publication by that name through a search of the published literature. We therefore contacted Mr. Whiteley and asked for a copy of the referenced publication. Mr. Whiteley informed us that the document cited was an unpublished report to a funding agency (A. Whiteley, pers. comm. 2007b), and referred us to a recently published, peer-reviewed paper on the genetics of mountain whitefish (Whiteley et al. 2006, already contained in our files and discussed further below). In responding to us, Mr. Whiteley also stated that he believes that mountain whitefish in the Big Lost River are more divergent than two other “species” of whitefish, *Prosopium spilonotus* and *P. abyssiicola* (A. Whiteley, 2007b; quotes from author's original communication). However, Mr. Whiteley went on to indicate that the classification of these mountain whitefish species is not clearly defined (that they may not be “good” species; A. Whiteley, 2007b, quotes from author's original communication) and subject to debate.

The petitioner further references the following statements: “In analysis of all the genetic information available at that time, Gamett et al. (2004) concluded that Big Lost River whitefish are genetically different from all other whitefish and they are likely a unique species or subspecies of fish,” and “Given the most recent genetic studies of Miller et al. (2005) and Campbell et al. (2005), all of which confirm past studies and conclusions—the Big Lost mountain whitefish must be managed as a separate species from all other mountain whitefish” (ESF Status Report 2006, p. 15). The Gamett et al. (2004) citation appears to be a reference to an oral presentation made at a meeting of the Idaho Fish and Game Commissioners (ESF Status Report 2006, p. 16), and it was therefore unavailable to us. The citations for both Miller et al. (2005) and Campbell et al. (2005) appear to be references to abstracts, papers, or posters presented at a meeting of the American Fisheries Society and were not available to us.

In our files we had a recent publication, W, Whiteley et al. (2006), regarding the genetics of mountain whitefish which was not cited in the ESF Status Report 2006. In this publication, the researchers utilized both allozymes and microsatellites to examine the genetic structure of mountain whitefish populations throughout the northwestern United States and British Columbia, plus two

populations from western Alberta. The results indicated three large-scale genetic assemblages of mountain whitefish in this region based on allozyme data, and five large-scale genetic assemblages based on the microsatellite data (Whiteley et al. 2006, p. 2778).

The Big Lost River population was included within the resulting Upper Snake River assemblage in both cases and is described as the “most genetically divergent” site in that assemblage. However, the data indicate that the degree of genetic divergence of mountain whitefish in the Big Lost River from other populations in the upper Snake River region is substantially less than the genetic divergence observed between the major assemblages. The authors note low levels of within-population genetic variation in several physically isolated populations of mountain whitefish, including not only the Big Lost River, but also the Big Wood River, Bull River, and Thutade Lake (Whiteley et al. 2006, p. 2780). They also note a higher degree of genetic differentiation in several physically isolated sites in the Upper Snake region, which is to be expected when gene flow is precluded geographically. In addition to the Big Lost River, this pattern was observed in the Henry's Fork and several Bonneville Basin sites (Whiteley et al. 2006, p. 2781).

This most recent analysis of the genetic relationships of mountain whitefish (Whiteley et al. 2006) does not support the contention that mountain whitefish of the Big Lost River are distinctive or unique genetically as compared to other populations in the upper Snake River assemblages, or as compared to populations within other assemblages relative to the rest of the species. Rather, the authors point to a high degree of genetic differentiation between many populations of mountain whitefish in the Upper Snake River due to the topography of the region, and characterize those populations as “more finely subdivided than elsewhere” (Whiteley et al. 2006, p. 2781). The authors also point out that the degree of genetic differentiation observed in mountain whitefish among tributaries within river basins is less than that observed in populations of other salmonids, such as bull trout (*Salvelinus confluentus*) and westslope cutthroat trout (*Oncorhynchus clarki lewisi*) (i.e., bull trout and westslope cutthroat trout show greater levels of genetic differentiation between populations within river basins than do mountain whitefish) (Whiteley et al. 2006, p. 2783). Despite this high degree of

genetic structuring, it has not been suggested in literature, that each of these bull trout or westslope cutthroat trout populations be considered as separate subspecies or species. The mountain whitefish in the Big Lost River exhibit less genetic differentiation than these populations.

Also referenced by the petitioner in the ESF Status Report 2006 is the statement that "Whitefish in the Big Lost River are fixed for microsatellite alleles that are rare or not present in the surrounding rivers" (ESF Status Report 2006, p. 15). The petition cites Whiteley and Gamett (2002), which is the previously mentioned abstract from a meeting of the Idaho Chapter of the American Fisheries Society (Van Kirk et al. 2003, p. 13), available to us in our files. It refers to "the fixation of a unique allele in the Big Lost River population at one of the microsatellite loci." The ESF Status Report 2006 implies that there are multiple rare or unique microsatellite alleles in the Big Lost River population, when in fact the abstract indicates there was only one unique allele.

Although we were not provided with the data to support this statement, even if we assume that one microsatellite allele has become fixed in mountain whitefish occupying the Big Lost River, that information does not in and of itself confer any biological or ecological importance (e.g., as measured by morphological, physiological, or behavioral traits) because microsatellite alleles are considered selectively neutral, the frequencies of which largely reflect random or stochastic processes (e.g., genetic drift, population bottlenecks, founder effects, mutation rates) rather than selection for traits that confer increased fitness (Ashley and Dow 1994, p. 185). Indeed, the total lack of variability observed in microsatellites sampled for mountain whitefish in the Big Lost River (Whiteley et al. 2006, p. 2775) indicates that this population has likely undergone a past population bottleneck relative to other populations with a subsequent loss of genetic variability and random fixation (e.g., via drift of a unique [or nearly unique] allele) (D. Campton, pers. comm. 2007). Under such conditions, genetic distance may increase quickly, but is not in and of itself indicative of biological significance (Hedrick 1999, pp. 315, 316).

We have no information, and the petitioner has offered none, to indicate that the fixation of this single microsatellite allele may in any way be biologically important or significant to the taxon as a whole. Such fixed allelic differences between geographically

isolated freshwater populations of salmonid fishes are not considered uncommon (Allendorf and Waples 1996, p. 257).

In sum, mountain whitefish occurring in the Big Lost River are not currently recognized as a subspecies or species (Nelson et al. 2004, p. 86; ITIS 2007), and neither the information provided in the petition nor in our files suggest that mountain whitefish in the Big Lost River may represent a distinct species or subspecies. Even considering the additional information supplied by Mr. Whiteley, our conclusion remains the same. Although no universally accepted definition of species and subspecies exists, in general such classifications are based on multiples lines of evidence, including factors such as morphology, behavior, and genetic characters (Haig et al. 2006, p. 1586). Information in our files indicates that the genetic distance observed between mountain whitefish in the Big Lost River and surrounding populations is substantially less than that observed between other subspecies or species of salmonids (Campbell and Cegelski 2005, p. 6).

Likewise, the petition provides no substantial information to support its assertion that the mountain whitefish in the Big Lost River constitute a genetically unique stock; although the population possesses one unique haplotype, almost every population sampled had at least one unique haplotype, and some had several (Campbell and Cegelski 2005, Table 1). All available evidence indicates that there is a high degree of genetic structuring between populations of mountain whitefish, as is frequently observed in populations of freshwater salmonids (Allendorf and Waples 1996, p. 257; Whiteley et al. 2006, p. 2783), but that the degree of genetic differentiation between mountain whitefish in the Big Lost River and surrounding populations is no greater than that observed between other populations of mountain whitefish (Whiteley et al. 2006, p. 2781; Campbell and Cegelski 2005, Figure 3, p. 5).

Although mountain whitefish in the Big Lost River may be genetically differentiated from other populations of the species, the data demonstrate that the same can be said of many populations of whitefish throughout the species' range; this widespread genetic structuring of populations alone does not indicate that each of these individual populations may warrant consideration as a separate subspecies or species (Haig et al. 2006, p. 1588). We conclude that the petitioner did not present substantial information indicating that mountain whitefish in

the Big Lost River may be a species or subspecies.

Evaluation of Mountain Whitefish in the Big Lost River as a Distinct Population Segment

Under the Act, we can consider for listing any species, subspecies, or distinct population segment (DPS) of any species of vertebrate fish or wildlife that interbreeds when mature (16 U.S.C. 1532(16)). The petitioner has asked us to consider listing mountain whitefish occurring in the Big Lost River of Idaho as a DPS. We, along with the National Marine Fisheries Service, developed the Policy Regarding the Recognition of Distinct Vertebrate Population Segments (DPS Policy) (February 7, 1996, 61 FR 4722) to help us in determining what qualifies as a DPS under the Act. The policy identifies three elements that are to be considered in a decision regarding the status of a possible DPS as endangered or threatened under the Act:

1. Discreteness of the population segment in relation to the remainder of the species to which it belongs;
2. The significance of the population segment to the species to which it belongs; and
3. The population segment's conservation status in relation to the Act's standards for listing.

Discreteness

The petitioner asserts that the mountain whitefish occupying the Big Lost River basin are discrete due to the terminal nature of the Big Lost River within a sink drainage and the isolation of this population. Our DPS policy states that a population segment of a vertebrate species may be considered discrete if it is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. We agree that mountain whitefish in the Big Lost River may be considered discrete, since they occur in a closed basin lacking a surface connection to any major river system and are therefore physically separated from the remainder of the populations in the taxon. We therefore conclude that there is substantial information indicating that mountain whitefish in the Big Lost River may satisfy the discreteness criterion of the DPS policy.

Significance

If a population segment is considered discrete, our DPS policy directs us to consider available scientific evidence of the importance of this discrete population to the remainder of the taxon (species) to which it belongs. The policy

suggests four potential factors to consider in evaluating significance:

1. Persistence of the discrete population in an ecological setting unusual or unique for the taxon,
2. Evidence that loss of the discrete population segment would result in a significant gap in the range of the taxon,
3. Evidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range, or
4. Evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.

The petitioner points to two of these four factors in arguing for the significance of a possible DPS, contending that mountain whitefish occupying the Big Lost River are significant "because it [mountain whitefish] exists in a unique ecological setting that has contributed to its genetic differentiation, and because it differs markedly in its genetic characteristics from other whitefish populations." The petition asserts that the Big Lost River is a unique ecological setting because it is one of five so-called "sinks drainages" that are a collection of closed surface drainage basins in southeastern Idaho, and that this physical isolation has led to genetic and other differences.

The petitioner's argument that the mountain whitefish of the Big Lost River occupy a unique ecological setting relative to the rest of the species rests on the fact that the Big Lost River basin is a closed surface drainage basin. However, as noted earlier, the mountain whitefish also occurs in isolated populations in sink drainages in the Bonneville Basin in Utah and the Lahontan Basin in California and Nevada. Therefore, the mere fact that these mountain whitefish are found in a physically isolated drainage is not in and of itself unique, unusual, or significant to the species as a whole.

In addition, other mountain whitefish occur in other types of physically isolated settings, such as above impassable waterfalls (e.g., Big Wood River and Henry's Fork of the Snake River in Idaho, or Bull River and Thutade Lake in British Columbia; Whiteley et al. 2006, p. 2780). The petitioner does not provide any information that the Big Lost river drainage is ecologically unusual or unique in any other way (e.g., in terms of prey species, community composition, water chemistry, substrate), apart from its physical isolation. As other populations of mountain whitefish also occur in closed

drainage basins within the range of the species, and other populations occur within other physically isolated settings, the petition information does not indicate that the ecological setting of the Big Lost River is unique or unusual for the species.

We next evaluate whether the mountain whitefish in the Big Lost River differ markedly from the remainder of the species in its genetic characteristics. The petition contends that mountain whitefish in the Big Lost River meet the significance criterion of the DPS policy "given the high level of genetic, morphological, and physical uniqueness of the Big Lost River Mountain Whitefish to the species as a whole." As evidence, the petitioner states that "Big Lost River Mountain Whitefish are isolated and evolving separately from all other whitefish populations; the Big Lost River Mountain Whitefish have coloration and morphological differences—morphologically Big Lost River Mountain Whitefish are distinct from all other mountain whitefish; Big Lost River Mountain Whitefish are fixed for microsatellite alleles that are rare or not present in the surrounding rivers; biologically, Big Lost River Mountain Whitefish are an evolutionarily independent unit because they are isolated from surrounding populations and have been for some time; and the Big Lost River Mountain Whitefish is highly genetically differentiated from all other whitefish populations analyzed to date. [ESF] Status Report [2006], pp. 14–15."

We have already addressed in our evaluation of whether this population may be a separate species or subspecies, the petition's points regarding the fixation of a single microsatellite allele and the degree of genetic differentiation observed in mountain whitefish of the Big Lost River. In short, we concluded that the ESF Status Report 2006 had overstated the findings of Whiteley and Gamett 2002 by implying that more than one microsatellite allele was fixed in this population, when the abstract indicates that they only detected the fixation of a unique allele at a single microsatellite locus. We also found that the petitioner had not provided substantial information to indicate that the fixation of this one microsatellite allele may be significant to the taxon as a whole, particularly since microsatellites are considered likely to be neutral markers (Ashley and Dow 1994, p. 185), and fixed allelic differences between isolated populations of freshwater fishes are not considered to be uncommon (Gyllenstein

1985, p. 691; Allendorf and Waples 1996, p. 257).

We likewise concluded that the petitioner had not provided substantial information indicating that the genetic distance between mountain whitefish in the Big Lost River and surrounding populations was so great as to merit classification as a separate subspecies or species. Here, however, we must address whether the petitioner has provided us with substantial information indicating that there may be marked genetic differences between mountain whitefish found in the Big Lost River and the remainder of the species such that mountain whitefish occurring in the Big Lost River may be considered significant to the taxon as a whole. The petitioner relies upon pages 14–15 in the ESF Status Report 2006 in support of its significance argument regarding the genetic status of mountain whitefish in the Big Lost River.

The first part of the discussion on these pages cites the studies of Miller et al. (2005) and Campbell et al. (2005), neither of which was directly available to us. According to the ESF Status Report 2006, Miller et al. (2005) defined two distinct clades of mountain whitefish and possibly four separate species, although the four possible species are not identified, and Campbell et al. (2005) found evidence for three large genetic assemblages of mountain whitefish, but neither reference apparently specifically addresses mountain whitefish in the Big Lost River (ESF Status Report 2006, p. 14).

The ESF Status Report 2006 also cites Whiteley (2002) as identifying mountain whitefish from the Big Lost River as genetically most similar to the Upper Snake River populations above Shoshone Falls. The ESF Status Report 2006 quotes from Whiteley (2002) that "This group is highly genetically differentiated from all other populations analyzed to date. It is most genetically similar to populations from the upper Snake River (above Shoshone Falls) * * * These fish also have coloration and morphological differences, which provides additional evidence that they are highly differentiated from other mountain whitefish populations" (ESF Status Report 2006, p. 15).

As noted earlier, the Whiteley (2002) citation in the ESF Status Report 2006 does not provide a reference to any obtainable published work or data, and when we requested the information from the author, he informed us that the quotations cited in the ESF Status Report 2006 were from an unpublished report to a funding agency, and provided us with a more recent published paper, Whiteley et al. (2006)

(A. Whiteley, pers. comm. 2007a, b). This publication was also available to us in our files. Similar to the described findings of Campbell et al. 2005, Whiteley et al. (2006) found evidence for three large genetic assemblages of mountain whitefish in the Pacific Northwest, which they termed Cascadia, the Upper Missouri, and Upper Snake.

As described above, mountain whitefish in the Big Lost River were one of several populations included within the Upper Snake assemblage. Although described as the “most genetically divergent” site in that assemblage, this publication identifies several other populations of mountain whitefish that, due to their physical isolation, exhibit low levels of within-population genetic variation (Big Lost River, Big Wood River, Bull River, and Thutade Lake) and that demonstrate a high degree of genetic differentiation, presumably due to reduced gene flow as a result of physical barriers (Big Lost River, Henry’s Fork and several Bonneville Basin sites) (Whiteley et al. 2006, pp. 2780–2781). Thus the mountain whitefish found in the Big Lost River are not particularly distinctive or unique genetically in relation to the species as a whole, as several other isolated populations of the species exhibit similar levels of genetic variability and differentiation.

In a personal communication to the Service, Mr. Whiteley also indicated that mountain whitefish in the Big Lost River “fall into the upper Snake River group and thus are not completely differentiated from all other whitefish populations analyzed to date” (A. Whiteley, 2007b). He went on to state that the degree of differentiation for mountain whitefish in the Big Lost River is the greatest he has observed, and that it is the single most divergent population from other nearby populations in the species’ range. While we acknowledge that mountain whitefish in the Big Lost River may be genetically distinguished from other nearby populations, the petitioner provides no data to support the contention that this degree of divergence may be considered a marked level of differentiation, particularly in light of the fact that other populations of mountain whitefish, such as those in the Boise River, show a greater degree of difference, as described below.

In considering the potential genetic distinctiveness of mountain whitefish in the Big Lost River, we evaluated the recent work of Campbell and Cegelski (2005), available in our files, which examined the phylogeography of mountain whitefish in Idaho, Utah, and Montana based on sequence analyses of

the cytochrome-b gene of mitochondrial DNA (mtDNA). These data reveal that populations of mountain whitefish in general, and not just in the Big Lost River, are characterized by fixed, or nearly fixed, haplotypic differences between populations: Only 2 haplotypes out of 18 were shared by multiple populations (Campbell and Cegelski 2005, pp. 4–5).

The possession of a unique haplotype is therefore not unique to the mountain whitefish of the Big Lost River; on the contrary, the publication by Campbell and Cegelski (2005) demonstrates that most populations of mountain whitefish sampled possess unique haplotypes. For example, in a sample of 7 individuals from the Boise River, the researchers identified 3 different haplotypes not observed in any of the 10 other populations sampled. The Big Lost River population possessed one unique haplotype, Haplotype 9. An analysis of the percent sequence divergence data presented in Figure 4 (Campbell and Cegelski 2005, p. 6) demonstrates that Haplotype 9 in the Big Lost River population differs from Haplotype 8 in the Henry’s Fork population by 0.33 percent. This degree of divergence is far less than that observed between other populations of whitefish examined in this study, especially as compared to populations in the Lower Snake River assemblage. Haplotype 6, for example, from the Boise River, differs from Haplotype 5 observed within the same population by 1.49 percent.

Campbell and Cegelski (2005) also found evidence for three broad genetic assemblages of mountain whitefish, which they term the Upper Snake River, Lower Snake River, and Upper Missouri River, and found that mountain whitefish from the Big Lost River, which have been isolated within that drainage, fall within the Upper Snake River Basin assemblage. The authors conclude that their results, in conjunction with “previous research indicating that mountain whitefish in the Big Lost [River] appear to be genetically and morphologically distinct” (citing Whiteley and Gamett 2003 [*sic*; 2002]), justify conserving the mountain whitefish occurring in the Big Lost River independent of other populations in the larger genetic assemblage to which they belong.

We encourage the conservation of mountain whitefish and other native species as components of the natural biodiversity of the Big Lost River. However, the desirability of conserving mountain whitefish is not the same issue as whether the mountain whitefish found in the Big Lost River may qualify as a listable entity under the Act. Under

the “significance” prong of the DPS policy we are required to apply a different and specific set of criteria. Based on the information in the petition and our files, we do not find substantial or reliable information indicating that mountain whitefish in the Big Lost River may be considered any more distinct genetically than any of several other populations of mountain whitefish examined, all of which may well be argued to merit conservation efforts outside of the realm of the Act.

As noted above, the most recent genetic work (Whiteley et al. 2006) indicates that there are several physically isolated populations of mountain whitefish that, as expected under a scenario of reduced gene flow, show some divergence from their presumed common populations of origin. Particularly when a population has gone through a presumed bottleneck, as evidenced by the lack of microsatellite variation observed in mountain whitefish in the Big Lost River, the amount of genetic distance is expected to increase very quickly (Hedrick 1999, p. 315). Such increased distance does not, however, automatically confer biological significance in the absence of any indication of adaptive differences. The research clearly indicates that throughout the relatively broad range sampled, most populations of mountain whitefish have diverged to the point of possessing unique haplotypes, and that other populations of mountain whitefish exhibit a greater degree of genetic divergence than observed in mountain whitefish from the Big Lost River (Campbell and Cegelski 2005, Figure 3). Mountain whitefish in general appear to exhibit a high degree of genetic structure between populations, as observed in many species of freshwater fishes (Gyllenstein 1985, p. 691; Allendorf and Waples 1996, p. 257; Whiteley et al. 2006, p. 2783). The petition does not provide substantial evidence that the mountain whitefish in the Big Lost River are any more different than any of several other populations of whitefish throughout the species’ range.

In addition to genetics, the petitioner contends that differences in coloration and morphology of mountain whitefish in the Big Lost River provide additional evidence that they are “highly differentiated” from all other populations, citing the ESF Status Report 2006, pp. 14–15. The ESF Status Report 2006 contains no data or other analysis to support its assertions regarding color and morphological differences, but cites Whiteley (2002) as the source of this information; however, as described earlier, no obtainable

reference is available (ESF Status Report 2006, p. 18). When we contacted the author and asked if he could provide us with the data demonstrating the referenced coloration and morphological differences. Mr. Whiteley replied, "I don't have any data on morphological variation for whitefish from the Big Lost. The references you cite all go back to personal observations by myself" (A. Whiteley, pers. comm., 2007a).

Although he believes that "whitefish in the Big Lost [River] look different," Mr. Whiteley stated that "these traits have not been quantified" (A. Whiteley, pers. comm. 2007a). This suggests that the authors of the ESF Status Report 2006 erred in alluding to "phenotypic studies" if, in fact, they were referring to a researcher's personal observations (ESF Status Report 2006, p. 6). Therefore, we do not consider the statement in the ESF Status Report 2006 to this effect to be reliable.

We accept Mr. Whiteley's description (A. Whiteley, pers. comm. 2007a) that mountain whitefish from the Big Lost River may differ in color and form. However, based purely on Mr. Whiteley's opinion of the nature of these differences (shorter heads and possibly differing in body shape), we conclude that the petitioner has not provided us with substantial and reliable information to support the claim that the mountain whitefish in the Big Lost River have a "high level of [genetic], morphological and physical uniqueness * * * to the species as a whole." We have no evidence before us to suggest that any differences in color or morphology that may exist are anything other than natural phenotypic variation that is often observed in different populations of fish.

Natural variation in characteristics such as body shape in fish is commonly attributable to environmental factors, such as water temperature during development (e.g., Barlow 1961). Additionally, many fish exhibit a considerable degree of intraspecific variation in morphology, which has been experimentally demonstrated to be the result of phenotypic plasticity in response to the environment rather than a heritable response to selection (e.g., Mittelbach et al. 1999). Head depth is a common plastic trait in fish related to diet (e.g., Day et al. 1994). We have no information in our files, nor has the petitioner provided any substantial information, to suggest that any apparent differences in morphology or coloration of the mountain whitefish are in any way biologically meaningful such that they may be significant to the species as a whole. We also considered

the additional information provided by Mr. Whiteley (A. Whiteley, pers. comm. 2007a). Even considering this additional information, our conclusion remains the same.

DPS Conclusion

Our DPS policy directs us to evaluate the significance of a discrete population in the context of its importance to the remainder of the taxon. Based on an analysis of the information presented by the petitioner, Service staff expertise, and information within our files, our evaluation indicates that the genetic, morphological, and coloration differences cited by the petitioner do not indicate that mountain whitefish found in the Big Lost River may differ markedly from other populations of mountain whitefish such as to be significant to the species as a whole. Therefore, the differences do not rise to the level of significance under the criteria set by our DPS policy. Because the mountain whitefish occupying the Big Lost River fail to meet the significance criteria for a DPS under the policy, we have determined that they do not constitute a listable entity under the Act. We also note that the petitioner did not petition us to list the Big Lost River mountain whitefish on the basis of a significant portion of the species' range, nor did the petitioner provide specific information indicating that the mountain whitefish within the Big Lost River basin represented a significant portion of the range of the species. Therefore, we did not specifically analyze whether the mountain whitefish in the Big Lost River basin represented a significant portion of the range of the species.

Finding

We have reviewed and evaluated the petition and literature cited in the petition in relation to information available to us. On the basis of this review and evaluation, we find that the petition does not present substantial scientific information to indicate that listing the mountain whitefish in the Big Lost River of Idaho may be warranted. This finding is based on lack of substantial information indicating that the mountain whitefish occurring in the Big Lost River qualify as a listable entity under section 3(16) of the Act. We find that mountain whitefish occurring in the Big Lost River do not constitute a separate species or subspecies, and although they may be considered discrete, neither the petition nor our files contain substantial information to indicate that this population may be biologically or ecologically significant according to the criteria under our DPS

policy. Although we are not commencing a status review in response to this petition, we will continue to monitor the status and trends, potential threats, and ongoing management actions that might affect mountain whitefish in the Big Lost River. We encourage interested parties to continue to gather data that will assist with conservation of mountain whitefish in the Big Lost River basin. If you wish to provide information regarding mountain whitefish in the Big Lost River, you may submit your information or materials to the Field Supervisor, Snake River Fish and Wildlife Office (see **ADDRESSES**).

References Cited

A complete list of all references cited is available on request from the Snake River Fish and Wildlife Office (see **ADDRESSES**).

Author

The primary author of this notice is the Snake River Fish and Wildlife Office (see **ADDRESSES**).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

Dated: October 15, 2007.

Kenneth Stansell,

Acting Director, U.S. Fish and Wildlife Service.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 622

[Docket No. 0612243157-7232-03]

RIN 0648-AT87

Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Reef Fish Fishery and Shrimp Fishery of the Gulf of Mexico; Amendment 27/14

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed rule; request for comments.

SUMMARY: NMFS issues this proposed rule that would implement a joint Amendment 27 to the FMP for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP) and Amendment 14 to the Fishery Management Plan (FMP) for the Shrimp Fishery of the Gulf of