

**In the Office of Endangered Species
Fish and Wildlife Service
United States Department of Interior**

**WESTERN WATERSHEDS PROJECT
P.O. Box 141
Clayton, Idaho 83227**

Petitioner

) **Petition for a rule to list the Big Lost River
) Mountain Whitefish as an Endangered
) Species throughout its range in the Big
) Lost River, Idaho, Under the Endangered
) Species Act, 16 U.S.C. § 1531 *et seq.* (1973
) as amended) and for the concurrent
) designation of Critical Habitat.
)
) **Petition for an Emergency Rule listing the
) Big Lost River Mountain Whitefish in
) Idaho as an Endangered Species under the
) Endangered Species Act 16 U.S.C. §§
) 1533(b)(1)(c)(iii) and 1533(b)(7) and 50
) C.F.R. § 424.20.
)
) **DATED: June 12, 2006**
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WESTERN WATERSHEDS PROJECT formally petitions to list the Big Lost River Mountain Whitefish (*Prosopium williamsoni*) as an Endangered species (or in the alternative, Threatened) throughout its range in the Big Lost River and its tributaries in south-central Idaho pursuant to the Endangered Species Act (“ESA”), 16 U.S.C. §§ 1531 et seq.. This petition is submitted under 5 U.S.C. § 553(e) and 50 C.F.R. § 424.14, which grant interested parties the right to petition for issuance of a rule from the Secretary of the Interior. Petitioner also requests that critical habitat be designated for the Big Lost River Mountain Whitefish concurrently with the listing, throughout its range, pursuant to 16 U.S.C. § 1533(a)(3)(A) and 50 C.F.R. § 424.12.

Petitioners also submit this petition under 16 U.S.C. §§ 1533(b)(1)(c)(iii) and 1533(b)(7), and 50 C.F.R. § 424.20, formally requesting the Secretary to issue an emergency rule listing the Big Lost River Mountain Whitefish as Endangered throughout its range in the Big Lost River and its tributaries.

I. INTRODUCTION

This petition is supported by the attached Big Lost River Mountain Whitefish Status Report (“Status Report”) and referenced scientific literature, which demonstrate that the Big Lost River Mountain Whitefish in Idaho warrants protection as an Endangered species under the ESA. The Status Report references numerous genetic analyses, which conclude that Big Lost River Mountain Whitefish are genetically and morphologically different from all other whitefish and thus is a unique species or subspecies of fish. Recent surveys of this genetically unique and geographically isolated whitefish show that it occupies only about 22% of its historic range at only about 1.5% of its historic numbers. This dramatic decline is due to habitat destruction from irrigation and other land management practices and the introduction of non-native fishes. Despite this decline, there are currently no federal or state laws or regulations protecting the Big Lost River Mountain Whitefish.

II. PETITIONER

Petitioner WESTERN WATERSHEDS PROJECT ("Western Watersheds") is an Idaho non-profit conservation group, headquartered at its Greenfire Preserve located on the East Fork Salmon River, near Clayton in Custer County, Idaho. The Greenfire Preserve is a former cattle ranch, which Western Watersheds owns (through a subsidiary), and manages in order to promote the restoration of native habitats and protection of fish, bird and wildlife species there; to educate the public about native habitat restoration, wildlife protection, and other environmental issues; and to carry out science-based advocacy in the region.

Western Watersheds enjoys the support of over 1,400 members, volunteers, and supporters, located in Idaho and around the United States. Western Watersheds, as an organization and on behalf of its members, is active in seeking to protect and improve the

riparian areas, water quality, fisheries and other natural resources and ecological values of western watersheds. Western Watersheds is actively engaged in land restoration, public education and outreach, and advocacy efforts to improve public and private lands management within the surrounding region, including the Big Lost River.

Western Watersheds and its individual members have an interest in ensuring the conservation and recovery of the Big Lost River Mountain Whitefish through its listing under the ESA. Western Watersheds, its members and staff regularly use lands and intend to continue to use lands throughout the western United States, including the habitat and potential habitat of the Big Lost River Mountain Whitefish, for observation, research, aesthetic enjoyment, fishing, and other recreational, scientific, and educational activities. Western Watersheds members derive scientific, recreational, and aesthetic benefits from the Big Lost River Mountain Whitefish's existence in the wild.

III. THE BIG LOST MOUNTAIN WHITEFISH

Please refer to the attached Status Report for supporting analysis, based on the best available scientific and commercial data and on-site investigations, of the background, history and current status of the Big Lost River Mountain Whitefish including a detailed description of the Big Lost River basin, the whitefish's classification and nomenclature, its present legal status, life history, habitat requirements, historical distribution, and current population status and decline. Additional information on the current status and causes of the decline of the Big Lost Mountain Whitefish is also provided below, with additional references listed at the end of this petition.

IV. THE BIG LOST RIVER MOUNTAIN WHITEFISH WARRANTS PROTECTION UNDER THE ESA

a. The Big Lost River Mountain Whitefish Should Be Listed as a Separate Species or Subspecies of Whitefish.

The ESA requires the Secretary of the Interior to determine whether a petitioned species is Endangered or Threatened. The ESA defines a "species" as, "...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. §1532(16)*, *See also 59 C.F.R. §424.02(k)*.

The Big Lost River Mountain Whitefish should be protected and managed as a separate species or subspecies of whitefish because all genetic analyses demonstrate that it is a genetically unique stock and constitutes a distinct interbreeding population. *Status Report, pp. 6, 14-15*. 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. *Id.* In the alternative, the Big Lost Mountain Whitefish should be listed as a Distinct Population Segment, which is discussed in more detail at the end of this petition.

b. The Big Lost River Mountain Whitefish is Endangered Throughout a Significant Portion of its Range.

Pursuant to the ESA, a species is "Endangered" when it is in danger of extinction throughout all or a significant portion of its range and "Threatened" when it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. *16 U.S.C. § 1522(6)*; *50 C.F.R. § 424.02(e), (m)*.

Big Lost River Mountain Whitefish is in danger of extinction throughout their entire, limited range in the Big Lost River Basin and are therefore Endangered. They were once found in about 216 miles of stream in the Big Lost River drainage in Idaho. *Status Report, p. 9*.

According to recent surveys, however, they currently occupy only 22% of their historic range at

only about 1.5% of historic numbers, and are extirpated from many key tributaries. *Id.*; see also *Figures 8.2 and 8.3, pp. 11-12.* Remnant populations are found in the East Fork Big Lost River and the Blaine to Mackay Dam reach of the mainstem Big Lost River, and the only place where mountain whitefish maintain a significant population within the overall fishery is in the Chilly Diversion to the East Fork reach. *Status Report, pp. 9-10.* This population, however, is still nowhere near historic numbers and exists in severely limited and degraded habitat. In general, whitefish numbers have declined from an estimated 310 fish/kilometer to about 11 fish/kilometer. *Id., p. 9.*

Because the Big Lost Mountain whitefish meets several of the listing criteria, as discussed in detail below, its geographic isolation, habitat fragmentation, precipitous decline and extirpation from much of its historic range, and because of the ongoing threats within its diminished range, this unique species is “in danger of extinction throughout all or a significant portion of its range” and therefore qualifies for listing as an Endangered Species.

The following are the five criteria FWS considers when determining whether a species is Threatened or Endangered:

1. The present or threatened destruction, modification, or curtailment of the species’ habitat or range;
2. Overutilization for commercial, recreational, scientific or educational purposes;
3. Disease or predation;
4. The inadequacy of existing regulatory mechanisms; or
5. Other natural or manmade factors affecting the species’ continued existence.

16 U.S.C. § 1533(1)(A)-(E); 50 C.F.R. § 424.11(c)(1)-(5). The ESA directs that the Secretary must list a species, based on the best scientific and commercial data available, if that the species is Threatened or Endangered because of any one or a combination of the above factors. *Id.*

The decline of the mountain whitefish in the Big Lost River and its extirpation from key tributaries has many causes. *Status Report, pp. ii, 10 Table 8.2.* The overarching causes are the

present and threatened destruction, modification and curtailment of the species habitat and range by irrigation diversions and the impacts (competition, predation and disease) caused the introduction of non-native fish species throughout its range in the Big Lost River basin. These and other impacts, as discussed below, are not controlled or mitigated by existing regulatory mechanisms. Thus, the Big Lost Mountain Whitefish meets at least three, if not all five of the above criteria, and therefore warrants protection as and Endangered (or in the alternative, Threatened) species.

1. The present or threatened destruction, modification, or curtailment of the species' habitat or range.

One major cause of the decline of Big Lost River Mountain Whitefish, and its extirpation throughout most of its range, is habitat destruction, modification and/or curtailment due to water demand for agricultural use:

The Big Lost River drainage is riddled with water diversions on the mainstem and principle tributaries. The irrigation diversions, during operation, entrain fry, YOY and juvenile whitefish. Water withdrawals also cause a reduction in key habitat features (wetted width, depth, and velocity) and minimizes the extent of riparian habitat (reduced water tables and out of –channel flows); induce temperature changes (warmer in summer and colder in the winter); and dewater spawning areas and exposes incubating eggs. Diversions structures block or hinder migration between spawning areas and rearing habitat; reduce stream connectivity; and inhibit genetic exchange between isolated metapopulations.

Status Report, p. 13; See also Fredericks et al., 2004, pp. 15-18; Gamett et al., 2004, pp. 13-17 (both cited in Status Report).

For example, the 60 miles of Big Lost River below Mackay Reservoir has been extensively modified by numerous irrigation diversions and channelization for flood control, which has destroyed about 25% of the channel. *IDFG, Fisheries Management Plan 2001-2006, p. 230.* Well development combined with lower natural flows has reduced or eliminated most fish populations, including whitefish, downstream from the Moore Diversion. *Id.* The river

from Mackay Reservoir upstream to Chilly Bridge is annually de-watered for irrigation and suffers from long-term stream alteration activity. *Id.* “Much of the riverine area occupied by mountain whitefish is now dry due to agriculture water demand. For example, the Big Lost River supported a healthy whitefish population from the Blaine Diversion out on to the desert below Arco, and now this area is completely dry for most of the year.” *Status Report, p. 10.*

The Lower Big Lost River subwatershed consists of the segment of the river from Mackey Dam to below the Moore Diversion, and its tributaries. *IDEQ, Big Lost River Subbasin Assessment and TMDL, May 6, 2004 (hereinafter IDEQ 2004), p. 52.* Below the Moore Diversion, the Big Lost River is dewatered for irrigation for eight or more months per year. *Id.* Land management is similar to the upper Big Lost River subwatershed in that the valley bottom is privately owned, with the intermediate elevations managed by the BLM and the upper elevations managed by the Forest Service. *Id.* Land use is primarily agriculture and livestock grazing, and irrigation diversion structures are numerous. *Id.* There are no known fish screens within the valley, as required by Idaho law, above or below the dam. *Id.* Many of these irrigation diversion structures in the main channel and tributary streams are fish passage barriers. *Id.*

In the stretch of the lower Big Lost River below the Beck and Evan Ditch to Alter Creek, which is exclusively private land, flow decreases during the irrigation season and in the off-season when the reservoir is filling. Tributary in-flow is largely intercepted along this reach by diversions and in-stream habitat quality progressively degrades as a result of altered flow regime. *Id., p. 57.*

While water loss for irrigation is the major cause of habitat alteration and destruction, other impacts have and continue to cause the loss and degradation of the Big Lost River

Mountain Whitefish's habitat, including, but not limited to, historic and ongoing livestock grazing and off-road vehicle use. According to the Idaho Department of Environmental Quality:

Native fish populations, water quality, and riparian habitat conditions are issues of concern in the subbasin. The cumulative effects of irrigation diversion, alteration of vegetation by grazing in riparian areas, human-caused stream alterations, historic mining practices, roads, residential and municipal development, and past timber harvest have combined to impact water quality and aquatic life in the watershed.

IDEQ 2004, p. xviii; see also, Id., pp. 15-64.

Throughout the upper Big Lost River subwatershed (from the confluence of the North Fork and East Fork to the Mackay Reservoir), historic and ongoing livestock grazing has significantly degraded whitefish habitat. For example, grazing has resulted in alteration of stream channels, such as downcutting and incision, and an associated drop in the water table that “has reduced off channel storage that would likely provide flow for longer periods of the year and better habitat for riparian vegetation and aquatic life.” *Id., p. 30.* In addition,

Thousand Springs Creek would be important refuge to any aquatic species that would populate the main channel, though the Thousand Springs Creek channel and riparian habitat are highly degraded from grazing....Grazing occurs around the periphery of the marsh and extends onto wet meadows surrounding the marsh. Season-long livestock grazing occurs on the private land below the marsh to the confluence of Thousand Springs Creek with the main Big Lost River.

Id., p. 33

Water diversions and livestock grazing also significantly degrade the Sage Creek watershed within the Upper Big Lost River basin, primarily managed by BLM:

Flow seldom extends below the confluence of the North Fork of Sage Creek, Sage Creek and Corral Creek. A permanent diversion takes flow above 1 cfs throughout the year. This area is heavily grazed with visible impacts to streambanks and riparian vegetation. The North Fork of Sage Creek is included in a Wilderness Study Area that is roaded and grazed. A significant timber sale was conducted in the Sage Creek watershed in the 1950s resulting in sediment impacts that have been compounded by grazing practices since that period with

channel downcutting and bank erosion. Though the sum of flows...is greater than 1cfs, the flow is heavily diverted and any remaining flow rapidly infiltrates below the confluence of the two streams before the channel reaches chilly Slough and Thousand Springs Creek.

Id., p. 34.

On Antelope Creek, a key Big Lost River tributary where the native whitefish have been extirpated, “[f]low is perennial only to the permanent diversion approximately 4.5 miles below the confluence of Cherry Creek, approximately 12 miles above the confluence with the Big Lost River. *Id.* Further,

The floodplain and riparian zone has been heavily altered by conversion to irrigated pasture with limited irrigated crop production, primarily livestock feed. Winter range of livestock is a major land use along the listed reach. Willows have been eradicated over much of this reach to increase forage production. Burning of riparian willows was observed over the upper listed reach as recent as fall 2002. There are numerous diversion structures that have resulted in head cutting.

Id., pp. 43-44.

Unmitigated livestock grazing and off-road vehicle use also occur throughout the upper Antelope Creek watershed, where bank trampling, shearing, and widened stream channels are evident in all of the watersheds. “Off-road vehicles have pioneered trails on hillsides and throughout riparian areas....There are numerous stream crossings with rills and gullies associated with hillslope trails.” *Id.*, p. 46; *see also* p. 50.

A remnant population of the Big Lost River Mountain Whitefish is found in the East Fork Big Lost River. *See Status Report*, p. 9. Property ownership of most of the East Fork is mainly public land managed by the Forest Service, although there are several private in-holdings along the stream. (*IDEQ 2004*, p. 17). Management emphasis of these public lands is livestock grazing. *Id.* There is a riparian management demonstration project below Corral Creek, which creates a 1,200-acre riparian pasture that has been in place since the early 1980s. Over

utilization of this demonstration project, however, has negated the potential improvement in riparian condition and streambank integrity and stability. *Id.* Further, **no riparian fencing has been implemented elsewhere within the watershed.** *Id.* Although road density is less than 1 mile per square mile in the watershed, within the riparian areas road density is greater than 1 mile per square mile. *Id.* There are also several road crossings within this reach primarily affiliated with grazing management and fishing access. *Id.*

Ultimately, habitat for the Big Lost River Mountain Whitefish has been, and continues to be, modified or destroyed by irrigation diversions, livestock grazing and off-road vehicle use throughout its range in the Big Lost River watershed. This issue is also addressed further below in the discussion of the inadequacy of existing regulatory mechanisms.

2. Overutilization for commercial, recreational, scientific or educational purposes

Fisheries Biologists from the Idaho Department of Fish and Game identified angling as a potential cause of Big Lost River Mountain Whitefish decline. *Status Report, p. 10 citing Fredericks et al., 2004.* While current fishing regulations provide for catch-and-release of whitefish in the Big Lost River and its tributaries, there is no available information on the impacts (positive or negative) of catch-and-release on the whitefish.

3. Disease or Predation

The second major cause of the decline and extirpation of the Big Lost River Mountain Whitefish identified in the Status Report is the introduction of non-native fish species throughout the basin. *Status Report, pp. 13-14.* The Status Report details the well-known and well-documented impacts that non-native fish have on native fish such as the whitefish, which include predation, competition for food and habitat, parasitism and disease (such as whirling disease) *Id.* IDFG has stocked non-native sport fish (trout) throughout the Big Lost River drainage since the

1920's, and stream surveys show that non-native fish are established and reproducing in all of the stocked streams. *Id.*, p. 13. Further augmentation stocking of hatchery produced non-native species is routinely conducted by IDFG throughout the drainage. *Id.* According to the Status Report, "predation and competition with non-native fish is more responsible for the whitefish decline over time than drought." *Id.*, p. 14.

The introduction of non-native fish species may also cause diseases such as whirling disease. Big Lost River Mountain Whitefish are threatened with whirling disease, if they are not already infected. Research has determined that mountain whitefish are susceptible to whirling disease (*Nickum 1999, pp. 7, 19, 23*), and recent studies confirmed that the Big Lost River drainage above the North Fork and the Antelope Creek drainage are heavily infested with the parasite *myxobolus cerebralis*, the causative agent for whirling disease. *IDFG, Fisheries Management Plan 2001-2006, p. 230; Nickum 1999, p. 7*. Rainbow trout in the Big Lost River are infected with the disease. *Id.*, pp. 18, 24, 26.

4. The inadequacy of existing regulatory mechanisms

Other than catch-and-release fishing regulations, there are virtually no state or federal regulatory mechanisms in place to protect the Big Lost River Mountain Whitefish. *Status Report, pp. ii and 6*. Much of the mainstem Big Lost River flows through private land, while most of the tributaries are on public lands managed by either the BLM or Forest Service.

As discussed previously, irrigation diversion structures are numerous within the Big Lost River basin and are not equipped with fish screens, as required by Idaho law. *See e.g. Id.*, p. 52. Many of these irrigation diversion structures in the main channel and tributary streams are fish passage barriers. *Id.* Nor is there evidence of any measuring devices in place on the countless diversions within the Big Lost River basin to ensure against excessive water use in violation of

water rights. Thus, while some limited regulatory mechanisms may exist – like the requirement to install fish screens - they are not being implemented or enforced. Further, there are no regulatory mechanisms in place to mitigate diversions’ impacts on water quality or quantity.

Also discussed previously and in detail in the Status Report, the IDFG stocks non-native trout throughout the Big Lost River basin. There are no regulatory mechanisms in place to eliminate or mitigate the impacts of this stocking program on the native Big Lost River Mountain Whitefish.

Other unregulated land-uses that have and continue to impact the Big Lost River Mountain Whitefish include livestock grazing and off-road vehicle use, the effects of which are currently not being controlled by existing regulatory mechanisms on either federal or private lands. “Grazing occurs throughout the [upper Big Lost River] Subbasin with limited identifiable riparian-directed grazing management or best management practices on public or private land.” *IDEQ 2004, p. 28*. A similar situation exists throughout the entire Big Lost River basin. “Off-road vehicle use is evident throughout the Subbasin on private and public land as evidenced by improvised trails and hill slope roads in most drainages.” *Id., p. 28; see also pp. 16-23, 46*. The impacts of such unmitigated livestock grazing and off-road vehicle use are discussed above in Section 1.

Because the Big Lost Mountain whitefish meets several of the listing criteria, its current status as occupying only 22% of its historic range and at only 1.5% of historic abundance, and because of the ongoing threats within its diminished range, this unique species is “in danger of extinction throughout all or a significant portion of its range” and therefore qualifies for listing as an Endangered Species.

c. If FWS Determines Not to List the Big Lost River Mountain Whitefish as a Separate Species/Subspecies, it Must Be Listed as a Distinct Population Segment.

As stated previously, 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 a 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. *Status Report, pp. 6, 14-15.* If, however, FWS determines not to list the Big Lost River Mountain Whitefish as a separate species or subspecies, in the alternative, the Big Lost Mountain Whitefish should be listed as a Distinct Population Segment because it is both discrete and significant, and as demonstrated above, meets several of the listing criteria.

The FWS' policy for classifying a population as a Distinct Population Segment ("DPS") under the ESA states:

Three elements are considered in a decision regarding the status of a possible DPS as endangered or threatened under the Act. These are applied similarly for addition to the lists of endangered and threatened wildlife and plants, reclassification, and removal from the lists:

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 (i.e., is the population segment, when treated as if it were a species, endangered or threatened?).

Discreteness: A population segment of a vertebrate species may be considered discrete if it satisfies either one of the following conditions:

1. It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation.

2. It is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

Significance: If a population segment is considered discrete under one or more of the above conditions, its biological and ecological significance will then be considered in light of Congressional guidance (see Senate Report 151, 96th Congress, 1st Session) that the authority to list DPS's be used "sparingly" while encouraging the conservation of genetic diversity. In carrying out this examination, the Services will consider available scientific evidence of the discrete population segment's importance to the taxon to which it belongs.

This consideration may include, but is not limited to:

1. Persistence of the discrete population segment 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.

Status: If the population is discrete and significant (it is a DPS), its evaluation for endangered or threatened status will be based on the Act's definitions of those terms and a review of the factors enumerated in section 4(a). It may be appropriate to assign different classifications to different DPS's of the same vertebrate taxon.

61 Fed. Reg. 4721-4725 (February 7, 1996).

1. The Big Lost River Mountain Whitefish is Discrete.

There is no doubt that the Big Lost River Mountain Whitefish meets FWS's definition of discrete. As the Status Report shows, due to the terminal nature of the Big Lost River, its whitefish population is isolated to the Big Lost River Basin, and has been for the past 10,000 to several million years. *Status Report*, pp. 1, 9. Further, as discussed above, according to all available genetic data the Big Lost River Mountain Whitefish are genetically discrete from all other whitefish populations. *Id.*, pp. 14-15. Thus, on the basis of the available scientific

information, the Big Lost River Mountain Whitefish is discrete from other populations of the same taxon as a consequence of physical, ecological and physiological factors.

2. The Big Lost River Mountain Whitefish is Significant.

The Big Lost River Mountain Whitefish is significant because it 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 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. *Status Report, p. 1*. These Sinks Drainages differ from the adjacent drainages in that they do not have a surface connection to the Snake River basin. *Id.* It is believed that Mountain Whitefish entered the Big Lost River from the Snake River between 10,000 and several million years ago when higher stream flows formed a pluvial lake connecting all the lost streams with the Snake River. *Id., p. 9*. The Big Lost River is **the only one** of these lost rivers to have sufficient habitat for Mountain Whitefish. *Id., p. 9*.

This physical isolation has led to genetic and other differences, which provide additional evidence that the Big Lost River Mountain Whitefish are highly differentiated from all other mountain whitefish populations. *Id., p. 15*. As the Status Report demonstrates, the best scientific data concludes 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.

- The Big Lost River Mountain Whitefish is highly genetically differentiated from all other whitefish populations analyzed to date. The genetic distance observed between Big Lost whitefish and surrounding populations is at least as large as that seen between other subspecies or even species – indeed, they are likely a unique species or subspecies of mountain whitefish.

Id., pp. 14-15.

Given the high level of genetic, morphological and physical uniqueness of the Big Lost River Mountain Whitefish to the species as a whole, this discrete population also meets FWS’s definition of “significant” and is therefore a Distinct Population Segment.

V. DESIGNATION OF CRITICAL HABITAT

The ESA requires that FWS designate critical habitat concurrently with the determination that a species is Endangered or Threatened. *16 U.S.C. § 1533(a)(3)(A)*. Western Watersheds thus requests critical habitat designation concurrent with listing the Big Lost River Mountain Whitefish as Endangered (or in the alternative, Threatened). This critical habitat should include current and historical habitat because populations of the Big Lost River Mountain Whitefish are fragmented and isolated due to the loss and degradation of habitat and extirpation in many tributary streams as well as in portions of the mainstem Big Lost River. In order to conserve the species and prevent any further decline or complete extirpation of the species, populations must be able to expand and connect throughout their historic habitat within the Big Lost River basin.

VI. REQUEST FOR AN EMERGENCY LISTING RULE

Western Watersheds further petitions the FWS to issue an emergency rule immediately listing the Big Lost River Mountain Whitefish as an Endangered Species. The ESA requires that FWS “shall” make “prompt use” of the ESA’s emergency listing authority to “prevent a significant risk to the well-being” of any species. *16 U.S.C. § 1533(b)(3)(C)(iii)*.

The Big Lost River Mountain Whitefish is a critically imperiled species that deserves emergency listing and immediate protection under the ESA while FWS promulgates a final listing rule. Emergency protection is warranted because of the imminent and ongoing destruction of habitat from irrigation diversions, livestock grazing and off-road vehicles, as well as the imminent and ongoing impacts of non-native species including predation, competition and disease (whirling disease). As demonstrated in this petition, all of these activities pose significant and imminent threats to the well being of the Big Lost River Mountain Whitefish. Due to the small size and isolation of the remnant populations, there is a high probability of stochastic events and other factors completely extirpating this genetically unique whitefish from the Big Lost River basin.

VII. CONCLUSION

The Big Lost River Mountain Whitefish merits protection under the ESA as an Endangered (or, in the alternative Threatened) Species. As demonstrated above, in the attached Status Report, and by the best available scientific data, the Big Lost Mountain Whitefish are a unique species or subspecies of mountain whitefish, and therefore should be protected as such. In the alternative, Big Lost River Mountain Whitefish qualify as a Distinct Population Segment.

Substantial scientific information has been presented in this petition and the attached Status Report, which is incorporated by reference into this petition, to warrant the petition and provide the endangered status of the Big Lost River Mountain Whitefish. Scientific studies and the Status Report document the decline of the species and the significant loss and degradation of its habitat. Population numbers are extremely low – estimated at 1.5% of historic numbers - and it exists in only a small, fragmented portion of its historic habitat. The decline and extirpation of the Big Lost River Mountain whitefish is linked to the destruction of habitat from irrigation

diversions, livestock grazing and off-road vehicle use, and the introduction of non-native fish species. With the inadequacy of current regulatory mechanisms, the current negative trends will continue, ultimately resulting in the extirpation of this unique whitefish from the Big Lost River basin.

Respectfully submitted this ____ day of June, 2006.

Jon Marvel, Executive Director
Western Watersheds Project

LITERATURE CITED

(This literature is in addition to the literature cited in the Big Lost River Mountain Whitefish Status Report, attached to this Petition)

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