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February 24, 2016

Mr. David Fogle  
North Zone Fish Biologist  
671 N. Washington St.  
Afton, WY 83110

Via email: [dfogle@fs.fed.us](mailto:dfogle@fs.fed.us)

Dear Mr. Fogle,

The following comments on the Dime and Mystery Lakes Restoration Project come from Wilderness Watch, a national wilderness conservation organization. Wilderness Watch's headquarters is located in Missoula, with additional staff offices in Idaho and Minnesota. Our mission is to protect the wilderness character of all units of the National Wilderness Preservation System, including the Teton Wilderness on the Bridger-Teton National Forest.

We have read the Request for Public Comments related to this project, and we have the following comments to submit for the record:

Wilderness Watch questions whether the active removal of aquatic species in the Teton Wilderness is compatible with the Wilderness Act's mandate to preserve a wilderness's untrammelled character and to allow natural processes to operate without human manipulation. Any uncertainty over this initial question aside, it is clear that the removal of these species, should the Forest Service choose the removal option, must be done in a manner that is compatible with the Wilderness Act. The use of chemical applications or motorized equipment and the restocking of historically fishless lakes to establish a "recreational fishery" are not actions that are compatible with the Wilderness Act. We request that the Forest Service take a hard look at the direct, indirect, and cumulative impacts of its proposal and analyze a full range of alternatives that would accomplish the Forest Service's goals in a manner that does not offend the Wilderness Act and that would lessen the impacts on the environment.

### **Wilderness Act Background**

Congress defined "Wilderness" as follows:

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

16 U.S.C. § 1131(c).

Congress stated that Wilderness areas “shall be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness ....” *Id.* § 1131(a). Accordingly, “... each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such areas for such other purposes for which it may have been established as also to preserve its wilderness character.” *Id.* § 1133(b). Congress and the federal courts have made clear that the goal of advancing recreation and research in wilderness, while allowable and encouraged, cannot trump the overriding statutory purpose to preserve wilderness character. *See id.* §§ 1131(a), (c), 1133(b)-(c); *High Sierra Hikers v. Blackwell*, 390 F.3d 630, 647 (9th Cir. 2004) (affirming that, under the Wilderness Act, the Forest Service may not “elevate[] recreational activity over the long-term preservation of the wilderness character of the land”). Consistent with these statutory mandates, the Forest Service’s implementing regulations dictate that in wilderness, “[n]atural ecological succession will be allowed to operate freely to the extent feasible.” 36 C.F.R. § 293.2(a).

The proposed action is not consistent with these mandates for the following reasons:

**1. Rotenone must not be used to poison the lakes and streams.**

The proposed action would authorize the Wyoming Game and Fish Department to remove the brook trout population in Dime Lake and remove the rainbow and brook trout populations in Mystery Lake by chemically treating Dime Lake, Dime Creek, Mystery Lake and Mystery Creek with the piscicide rotenone. These actions would occur within the Teton Wilderness.

**a. Rotenone kills organisms other than the targeted non-native fish, and those lost species can remain absent for more than five years.**

Rotenone is a poison that kills all organisms that utilize gills during part of their life cycle. These organisms include not only the targeted non-native fish, but amphibians, macroinvertebrates, and other non-target organisms that use gills, perhaps even including the

Columbia Spotted Frog in its tadpole stage. See Mangum, F. A. and J. L. Madrigal, 1999; Don C. Erman, 2012; and Dalu, T., R.J. Wasserman, M. Jordaan, W.P. Froneman, and O.L.F. Weyl, 2015.

A 5-year study on a river in Utah (Mangum and Madrigal 1999) found that: “up to 100% of Ephemeroptera, Plecoptera, and Trichoptera [mayflies, stoneflies and caddis flies] were missing after the second rotenone application. Forty-six percent of the taxa recovered within one year, but 21% of the taxa were still missing after five years. At least 19 species were still missing five years after the rotenone treatments.” Especially in a designated Wilderness, chemicals like rotenone would bring a significant trammeling to the wilderness character of these two lakes and accompanying streams in violation of the basic tenants of the 1964 Wilderness Act (16 U.S.C. 1131-1136).

**b. Rotenone can persist in the ecosystem.**

In Sequoia-Kings Canyon National Parks in California, the National Park Service (NPS) acknowledged in its 2013 Restoration of Native Species in High Elevation Aquatic Ecosystems Plan and DEIS that rotenone has a half-life of 20 days in cold water (DEIS at 217), that it “completely degrades” within 1-8 weeks (DEIS at 217). Twenty days’ duration where rotenone is still exposing wildlife, humans, and environmental resources to a toxicant is a significant time of persistence. As a result of longer duration of rotenone, other species (and humans) are likely to be more at risk of being affected by rotenone.

**c. Rotenone can have significant failures, requiring additional applications.**

In 2010, the U.S. Bureau of Reclamation completed its “Proposed Reapplication of Rotenone in Bonita Creek: Supplement to the Environmental Assessment on Native Fish Restoration in Bonita Creek, Gila Box Riparian National Conservation Area, Graham County, Arizona”. The supplement was needed so the Bureau could poison Bonita Creek again after the first attempt at fish eradication failed. The Supplement gave a table (Appendix B, List of Stream Renovation Projects in the Lower Colorado River Basin) of other projects in the region. There were 21 projects listed of which 19 had results of the poisoning on fish eradication “success”. Of these 19 projects, the average number of poisonings (i.e., number of times the poisoning failed and was repeated) was 1.9 poisonings per stream. Four of the 19 stream projects were poisoned up to 3 times in hopes of eradication. In only 6 cases (32%) was one poisoning considered sufficient for eradication of all fish.

**d. Effective alternatives to rotenone exist.**

Rotenone should not be used, given the success of non-chemical methods of removing non-native fish from high elevation lakes in the Sierra Nevada Mountains of California and other locations. These non-chemical methods include gill netting, electrofishing, disruption or covering of redds, and fish traps. See Knapp, R.A. and K.R. Matthews, 1998; Knapp, R.A. et al., 2007; and National Park Service, 2012.

Combinations of non-poisonous methods of fish removal have been very successful in removing non-native fish, without the need for rotenone, in lakes of similar size or larger than the 2-acre Dime Lake or the 6.3-acre Mystery Lake. Particularly in a designated Wilderness, utilizing these other non-chemical methods would better protect wilderness character. See FSM 2320.3

(“Where there are alternatives among management decisions, wilderness values shall dominate over all other considerations...”).

For these reasons, if the Forest Service authorizes removal of fish from these lakes, Wilderness Watch strongly recommends non-chemical removal methods that would be less harmful to the wilderness environment.

**2. If the Forest Service authorizes removal of fish from Dime and Mystery Lakes, both lakes should remain fishless.**

It appears that both Dime and Mystery Lakes were naturally fishless lakes historically. See Jackson Hole Daily News Article (quoting Wyoming Game and Fish Department fisheries biologist Tracy Stephens as stating, “Both lakes were likely historically fish-less.”) The proposed action calls for stocking Mystery Lake after removal of the rainbow and brook trout there with Snake River fine spotted cutthroat trout (SRC) “to establish a recreational fishery.” Mystery Lake has never had a population of SRC before, which means that the proposed action would stock Mystery Lake, once again, with a non-native species.

The purpose and need section of the Request for Public Comment does not articulate a defensible wilderness-based need for fish stocking and does not indicate how artificial fish stocking is necessary to administer the Teton Wilderness “so as to preserve its natural conditions” and maintain the wilderness as “an area where the earth and its community of life are untrammelled by man.” 16 U.S.C. § 1131(c). Indeed, it would be incredibly difficult to articulate a need for artificial fish stocking in wilderness lakes that were historically fishless. See Knapp, 1996 (noting that “trout stocking serves to maintain an artificial fishery that has substantial impacts on native aquatic biota” and that stocking is necessarily at odds with wilderness, “areas managed for their natural values”); see also Knapp, 2004 (Forest Service publication noting that the introduction of non-native trout into naturally fishless lake ecosystems is a major cause of decline in certain amphibians).

Active stocking and manipulation of fish populations in historically fishless lakes is directly at odds with the Forest Service’s management guidance. See FSM 2323.31 (“Provide an environment where the forces of natural selection and survival rather than human actions determine which and what numbers of wildlife species will exist.”); see also FSM 2320.2 (“Maintain wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces.”). Given the clear inconsistency with Wilderness Act mandates and the Forest Service’s management guidance, the artificial fish-stocking component of the proposed action should not be authorized.

The only explanation provided in the Request for Public Comment for fish stocking in Mystery Lake is “to establish a recreational fishery.” The artificial stocking of fish in Mystery Lake for the purpose of recreational fishing is in conflict with the Wilderness Act. “While fishing is an activity that is common among visitors to wilderness areas, neither fishing nor any other particular activity is endorsed by the Wilderness Act, nor is the enhancement of any particular recreational potential a necessary duty of wilderness area management.” *High Sierra Hikers Ass’n v. U.S. Forest Serv.*, 436 F.Supp.2d 1117, 1134 (E.D.Cal. 2006). “The wilderness that the

Act seeks to preserve is not defined by reference to any particular recreational opportunity or potential utility, but rather by reference to the land's status or condition as being 'Federal land retaining its primeval character and influence [...]' *Id.* citing 16 U.S.C. § 1131(c). This conflict is expounded by the fact that Mystery Lake was likely historically fishless, and the artificial introduction of another fish species into this lake ecosystem is likely to impact native aquatic biota.

Additionally, the use-related impacts from Wilderness users seeking out Mystery Lake for recreational fishing have not been disclosed and further negate the compatibility of artificially stocking Mystery Lake with more introduced fish. The Forest Service must analyze the impacts to wilderness character from maintaining an artificially stocked recreational fishery. The Bridger-Teton National Forest Land and Resource Management Plan ("Forest Plan")<sup>1</sup> indicates the following:

[S]ummer use in the Teton Wilderness has increased dramatically in the last few years, a result of increases in both private and commercially served pack trips for fishing and sightseeing.

Crowding in Wildernesses is detrimental not only to user expectations of solitude and to physical elements such as soil and vegetation, but also to the resource of wilderness. Wildernesses are managed partly to allow for human enjoyment, but also to preserve wildlands, free from evidence of human use, intact for the future. Wildernesses beckon the recreationist, but recreation use cannot occur at the expense of the biophysical resource of wilderness.

Human use in Wildernesses is frequently concentrated on mainline trails and at popular destinations for camping. Distribution of access points, roads to portals, trails, and destinations largely determine use distribution within Wildernesses.

Forest Plan at 31. The Forest Service must disclose and analyze the use impacts that may be associated with maintenance of a recreational fishery and, given this context, analyze how artificial stocking of a wilderness lake comports with the Wilderness Act – particularly where that lake was historically fishless.

For these reasons, if the Forest Service authorizes removal of fish from these lakes, Wilderness Watch strongly supports restoring wilderness conditions to both lakes by leaving both lakes free of fish after the non-native fish have been removed. Not only will this benefit the wilderness character of Mystery Lake and its surroundings, but it is also likely to benefit the Columbia Spotted Frog population and native aquatic biota in and around Mystery Lake.

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<sup>1</sup> Wilderness Watch references the April 15, 2015 electronic version of the Bridger-Teton National Forest Land and Resource Management Plan available at: [http://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprd3840286.pdf](http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3840286.pdf)

## **National Environmental Policy Act (NEPA) Background**

NEPA directs federal agencies to prepare a detailed Environmental Impact Statement (“EIS”) for federal actions that may significantly affect the quality of the human environment. 42 U.S.C. § 4332(2)(C). The phrase “human environment” is “interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment.” 40 C.F.R. § 1508.14. The purpose of an EIS is two-fold: 1) to ensure that the agency will have available and will carefully consider detailed information on significant environmental impacts when it makes decisions, and 2) to “guarantee that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision.” *Robertson v. Methow Valley Citizens*, 490 U.S. 332, 349 (1989); 40 C.F.S. § 1501.2(b).

The abbreviated Request for Public Comment does not provide enough detail on the project proposal to allow for fully-informed public comment. The “Proposed Action” description is less than a page in length and there is no comparative analysis of direct, indirect, and cumulative environmental impacts for the proposed action and alternatives. Accordingly, Wilderness Watch requests an opportunity to provide additional public comment once an environmental impact statement or environmental assessment is prepared.

### **1. An Environmental Impact Statement may be required.**

Pursuant to NEPA’s implementing regulations, to determine whether an EIS is required, federal agencies may first prepare a less detailed environmental assessment. *See* 40 C.F.R. § 1501.4. An environmental assessment should consider several factors to determine if an action will significantly affect the environment, a circumstance that would mandate the preparation of an EIS. 40 C.F.R. § 1508.27. If the agency concludes the action will not significantly affect the environment, it must issue a Finding of No Significant Impact (“FONSI”) to justify its decision not to prepare an EIS. 40 C.F.R. § 1508.13. The FONSI must provide a convincing statement of reasons why the action will not have a significant effect on the environment. *Id.* It is *only* when the proposed action will not have a significant effect on the environment that an EIS is not required. 40 C.F.R. § 1508.13.

It may be possible that an alternative proposal to remove non-native fish species without chemical-applications and without artificial stocking of Mystery Lake would not trigger the need to prepare an environmental impact statement; however, the proposed action poses significant direct, indirect, and cumulative impacts to the environment and to wilderness character. Because the proposed action has the potential to significantly affect a designated Wilderness, set a precedent for future authorizations (including future stocking activities at Mystery Lake), result in cumulatively significant impacts, and result in a violation federal law (including the Wilderness Act), a full environmental impact statement should be prepared. *See* 40 C.F.R. § 1508.27.

### **2. The Forest Service must take a hard look at and disclose the direct, indirect, and cumulative impacts of the project.**

NEPA requires the Forest Service to take a hard look at the direct, indirect, and cumulative impacts of the project. Under NEPA, the direct impacts of an action must be analyzed based on the affected interests, the affected region, and the locality in which they will occur. 40 C.F.R. § 1508.27(a). Indirect effects of a proposed action are effects that are caused by the action but occur later in time or are further removed in distance. 40 C.F.R. § 1508(b). Cumulative impacts are “the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.7. Cumulative impacts can result from “individually minor but collectively significant actions taking place over a period of time” and are “the impacts on the environment which result from the incremental impact of the action when added to other *past*, present, and *reasonably foreseeable future* actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” *Id.* (emphasis added).

The Forest Service must fully disclose and analyze the potential direct, indirect, and cumulative impacts from removal of fish species that have inhabited the lakes for decades.

For the proposed action, the Forest Service must disclose and analyze the full extent of the fish stocking proposal. The Forest Service should include a detailed analysis of direct, indirect, and cumulative impacts, including but not limited to, how the stocking would be accomplished; how many times stocking would occur to maintain the recreational fishery; what the cumulative impacts of such a stocking program are on wilderness character and the aquatic environment, particularly where the lake was historically fishless; and how maintaining a recreational fishery will affect user-impacts near the lake.

The Forest Service must also fully disclose and analyze the direct, indirect, and cumulative impacts from use of the piscicide rotenone to remove existing fish from the lakes, including impacts to non-target species.

### **3. The Forest Service must rigorously explore a range of alternatives to the proposed action.**

Regardless of whether it prepares an EIS or an Environmental Assessment, NEPA requires the Forest Service to “[r]igorously explore and objectively evaluate all reasonable alternatives” to a proposed action. 40 C.F.R. § 1502.14(a). The Forest Service “may not define the objectives of its action in terms so unreasonably narrow that only one alternative . . . would accomplish the goals of the agency’s action, and the EIS would become a foreordained formality.” *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991).

As discussed above, there are reasonable alternatives to the proposed action that would both satisfy the purpose and need of the project and comply with the Wilderness Act. The Forest Service should disclose and fully explore alternatives where non-native fish are removed by non-chemical methods (*see e.g.* Knapp, R.A. and K.R. Matthews, 1998; Knapp, R.A. *et al.*, 2007; and National Park Service, 2012) and alternatives that do not include the artificial stocking of either lake.

## **Conclusion and Summary of Recommendation**

Wilderness Watch requests that if the Forest Service decides to authorize this project, it remove non-native fish species in a manner that is compatible with the Wilderness Act. The use of chemical applications and the restocking of historically fishless lakes to establish a “recreational fishery” are not actions that are compatible with the Wilderness Act.

Wilderness Watch strongly urges that Forest Service perform a comprehensive NEPA analysis that takes a hard look at the direct, indirect, and cumulative impacts of its proposal and analyze a full range of alternatives that would accomplish the Forest Service’s goals in a manner that does not offend the Wilderness Act and that would lessen the impacts on the environment. Then the agencies and the public will be able to make better-informed decisions about this project. If the Forest Service intends to pursue chemical treatments and fish stocking of historically fishless wilderness lakes, the Forest Service should prepare a full environmental impact statement to address the significant short-term and long-term impacts of such a proposal.

Please keep Wilderness Watch informed of additional steps in this project.

Sincerely,

A handwritten signature in dark ink that reads "Kevin Proescholdt". The signature is written in a cursive, flowing style.

Kevin Proescholdt  
Conservation Director  
Wilderness Watch



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