

**BY FACSIMILE: (541) 885-7837/(541)  
ATTN: John Bowerman (Klamath Falls Fish & Wildlife Office) &  
Alan Mauer (Bend Field Office), U.S. Fish & Wildlife Service**



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**RE: CRITICAL HABITAT DESIGNATION IN OREGON FOR THE KLAMATH BASIN AND  
THE COLUMBIA RIVER BASIN DISTINCT POPULATION SEGMENTS (DPS) OF  
BULL TROUT (*SALVELINUS CONFLUENTUS*)**

Monday, June 2, 2002

Dear Mr. Bowerman and Mr. Mauer,

I am writing on behalf of the Northwest Environmental Defense Center (NEDC) in support of critical habitat designation for the bull trout (*Salvelinus confluentus*) throughout its current and historical Oregon range. Clearly critical habitat designation (CHD) in both the Klamath River Basin and the Columbia River Basin is essential to this species recovery and should therefore be designated. Jack Tuholske (attorney for Friends of the Wild Swan and Alliance for the Wild Rockies) has informed us that the deadline for submitting comments was extended to June 8, 2002.

NEDC is a non-profit, public interest organization dedicated to preserving, protecting, and improving the natural environment in the Pacific Northwest. NEDC is based in Portland, Oregon, and has been working since 1969 to protect the environment and natural resources of the Pacific Northwest by providing legal support to individuals and grassroots organizations with environmental concerns, and engaging in litigation independently or in conjunction with other environmental groups. NEDC's membership consists of a Board of practicing attorneys and law students along with local citizens interested in the shared goal of protecting the environment through legal means. The members of NEDC derive educational, scientific, aesthetic, recreational, spiritual, and other benefits from the protection of our nation's biodiversity. I am also a biologist, with both personal and professional concern for the survival and recovery of this species.

As interested parties, we submit the following comments in support of CHD for the bull trout in Oregon's Columbia River and Klamath River basins.

Sincerely,

Laura Hartt, NEDC volunteer & biologist

## I. Previous FWS Listing and CHD Decisions

The FWS first listed the bull trout as a category 2 candidate species in 1985,<sup>1</sup> confirming this status in 1989<sup>2</sup> and 1991.<sup>3</sup> The bull trout was elevated to category 1 candidate status in 1994,<sup>4</sup> and remained a candidate species in 1996 when the FWS stopped using category designations.<sup>5</sup> In 1992, the FWS received a petition to list the species as endangered; that petition also requested an emergency listing and CHD.<sup>6</sup> Although the petitioners provided substantial information to suggest listing may be warranted,<sup>7</sup> in 1994 the FWS concluded that listing of the coterminous population segment was warranted but precluded because of higher priority listing actions.<sup>8</sup> Litigation followed, eventually resulting in the 1998 listing of the Klamath River and Columbia River bull trout DPSs as threatened.<sup>9</sup> At that time, the agency did not designate critical habitat, finding that CHD was “indeterminable.”<sup>10</sup> Again litigation followed, leading to a settlement agreement with Friends of the Wild Swan and Alliance for the Wild Rockies whereby the FWS has agreed to initiate the CHD process.<sup>11</sup>

## II. Temperature, Cover, Stable Channel Morphology & In-stream Flows, Clean Substrate & Low Gradient Streams, and Migratory Corridors are “Essential” Habitat Features for Bull Trout Conservation

Critical habitat (CH) is comprised of those “specific areas *within* the geographical area occupied by the species” which contain “physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection.”<sup>12</sup> The ESA also defines CH to include “specific areas *outside* the geographic area” that are “essential for the conservation of the species.”<sup>13</sup> When determining which areas should be designated as critical habitat, the Secretary “shall consider those physical and biological features that are essential to the conservation of a given species and that may require special management considerations or protection.”<sup>14</sup> FWS examples of habitat features that require special management consideration or protection include “*space for individual and population growth, and for normal behavior,*” “*food, water, air, light, minerals, or other nutritional or physiological requirements,*” “*cover or shelter,*” “*sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal,*” and “*habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.*”<sup>15</sup> When considering CHD, the Secretary “shall focus on the principal biological or physical constituent elements within the defined area that are essential to the

<sup>1</sup> 50 Fed. Reg. 37958 (Sept. 18, 1985).

<sup>2</sup> 54 Fed. Reg. 554 (Jan. 6, 1989).

<sup>3</sup> 56 Fed. Reg. 58804 (Nov. 21, 1991).

<sup>4</sup> 59 Fed. Reg. 58982 (Nov. 15, 1994).

<sup>5</sup> 61 Fed. Reg. 7596 (Feb. 28, 1996).

<sup>6</sup> Petition was submitted by Alliance for the Wild Rockies, Inc., Friends of the Wild Swan, and Swan View Coalition.

<sup>7</sup> 58 Fed. Reg. 28849 (May 17, 1993).

<sup>8</sup> 59 Fed. Reg. 30254 (June 10, 1994).

<sup>9</sup> 63 Fed. Reg. 31647 (June 10, 1998). The Jarbidge River, Coastal-Puget Sound, and St. Mary-Belly River DPSs were listed in 1999.

<sup>10</sup> *Id.* at 31672.

<sup>11</sup> Letter from Anne Badgley, FWS Regional Director (Portland, OR) to interested parties (dated Feb. 5, 2002).

<sup>12</sup> 16 U.S.C. §1532(5)(A)(i)(emphasis added); *See also* 50 C.F.R. 424.02(d)(1).

<sup>13</sup> 16 U.S.C. §1532(5)(A)(ii)(emphasis added); *See also* 50 C.F.R. §424.02(d)(2).

<sup>14</sup> 50 C.F.R. §424.12(b).

<sup>15</sup> 50 C.F.R. §424.12(b)(1)-(5).

conservation of the species.”<sup>16</sup> Each CHD “shall” include a list of “primary constituent elements” such as “roost sites, nesting grounds, *spawning sites*, *feeding sites*, seasonal wetland or dryland, *water quality or quantity*, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.”<sup>17</sup>

Important habitat requirements that distinguish the bull trout from other salmonids include temperature, cover, channel morphology and stability, spawning and rearing substrates, and migratory corridors.<sup>18</sup> As discussed below, maintaining each of these habitat features is essential for species recovery. Also, because these habitat needs are unique to bull trout, they require “special management considerations or protection.” The FWS should consider each of these habitat requirements throughout the CHD process for both the Klamath River and Columbia River basin DPSs.

### ***(A) Temperature***

Bull trout prefer cold streams, especially for spawning, and water temperatures above 15 degrees may exclude bull trout.<sup>19</sup> Spawning sites and water quantity and quality are included within the FWS regulations as examples of “primary constituent elements” that should be listed during the CHD process.<sup>20</sup> The FWS regulations also identify space for individual growth, population growth, and normal behavior, as well as sites for breeding and offspring rearing as essential habitat features that require special management consideration or protection.<sup>21</sup> Spawning is normal reproductive behavior, and spawning sites are space necessary for population growth and involve breeding and offspring rearing. Water temperature is both a function of water quantity and an indicator of water quality.

Cold streams serve another important function—they exclude introduced brook and brown trout that may otherwise hybridize with or prey on bull trout.<sup>22</sup> Hybridization erodes genetic diversity and inhibits species survival and recovery.<sup>23</sup> FWS regulations specifically recognize the importance of “habitats that are protected from disturbance,”<sup>24</sup> and exotic species introductions are a form of disturbance. More importantly, under the ESA the ultimate goal of CHD is species recovery.<sup>25</sup> Maintenance of genetic diversity is essential for species survival and recovery.<sup>26</sup> Because cold streams serve as refuge from exotics, they constitute space for individual growth, population growth, and normal anti-predation and interspecific competitive behavior.

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<sup>16</sup> 50 C.F.R. §424.12(b).

<sup>17</sup> *Id.* (emphasis added).

<sup>18</sup> 63 Fed. Reg. at 31648 (and studies cited therein). See also, Bruce E. Rieman & John D. McIntyre, Demographic and Habitat Requirements for Conservation of Bull Trout, 1, 7 (1993) (stating that “[f]ive habitat characteristics are particularly important for bull trout: channel stability, substrate composition, cover, temperature, and migratory corridors”).

<sup>19</sup> 63 Fed. Reg. at 31648 (and studies cited therein).

<sup>20</sup> 50 C.F.R. §424.12(b).

<sup>21</sup> 50 C.F.R. §424.12(b)(1), (4).

<sup>22</sup> Rieman & McIntyre, Demographic and Habitat Requirements for Conservation of Bull Trout at 4.

<sup>23</sup> 62 Fed. Reg. at 32280.

<sup>24</sup> 50 C.F.R. §424.12(b)(5).

<sup>25</sup> Discussed *infra* V.

<sup>26</sup> 62 Fed. Reg. at 32280 (stating that “[h]ybridization results in offspring that are nearly always sterile, eventually eliminating bull trout from a system”).

***(B) Cover***

Bull trout prefer complex habitats comprised of large woody debris, undercut banks, boulders, pools and other forms of cover.<sup>27</sup> Cover is necessary for overwintering and to provide predator refuge for juveniles.<sup>28</sup> Woody debris also serves as habitat for macro invertebrates on which resident and juvenile bull trout prey.<sup>29</sup> Both predator refugia and overwintering sites are space necessary for individual growth, population growth, and normal antipredation and foraging behavior. Food and cover also are specifically mentioned within the FWS regulations as essential habitat features that require special management consideration or protection.<sup>30</sup>

***(C) Stable Channel Morphology & In-stream Flows***

Preferred bull trout habitat requires stable channel morphology and normal in-stream flows.<sup>31</sup> Altered in-stream flows may adversely affect spawning behavior while channel instability increases sedimentation thereby reducing egg and juvenile survival.<sup>32</sup> Water quality and quantity is included within the FWS regulations as an example of a “primary constituent element” that shall be listed during the CHD process.<sup>33</sup> Increased sedimentation and reduced in-stream flows are both indicia of poor water quality, and in-streams influence water quantity. Adequate in-stream flows and stable channel morphology maintain space necessary for individual growth, population growth, and normal behavior. Water, breeding sites, and offspring rearing sites are specifically mentioned within the FWS regulations as essential habitat features that require special management consideration or protection.<sup>34</sup>

***(D) Clean Substrate & Low Gradient Streams***

Bull trout rely on low gradient streams with loose, clean gravel for spawning; as a consequence, sedimentation reduces substrate quality thereby reducing egg survival and emergence.<sup>35</sup> Spawning sites are an example of a primary constituent element.<sup>36</sup> Clean substrate is necessary for population growth and normal spawning behavior. FWS regulations also recognize breeding and offspring rearing sites as essential habitat features that require special management consideration or protection.<sup>37</sup> Low gradient streams with loose clean gravel enhance egg survival and offspring emergence and are therefore necessary for rearing offspring.

***(E) Migratory Corridors***

Migratory corridors are important for linking seasonal habitats for all bull trout life history morphs.<sup>38</sup> According to Dr. Mike Gilpin and other scientific experts, “the ability to migrate is important to the persistence of local bull trout subpopulations,” because migration facilitates gene flow and recolonization following catastrophic events.<sup>39</sup> The metapopulation dynamics of the bull trout allows it to persist by spreading population risk;<sup>40</sup> unfortunately, habitat alteration due to

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<sup>27</sup> 63 Fed. Reg. at 31648 (and studies cited therein).

<sup>28</sup> *Id.* (and studies cited therein).

<sup>29</sup> *Id.* (and studies cited therein).

<sup>30</sup> 50 C.F.R. §424.12(b)(2), (3).

<sup>31</sup> 63 Fed. Reg. at 31648 (and studies cited therein).

<sup>32</sup> *Id.* (and studies cited therein).

<sup>33</sup> 50 C.F.R. §424.12(b).

<sup>34</sup> 50 C.F.R. §424.12(b)(1), (2), & (4).

<sup>35</sup> 63 Fed. Reg. at 31648 (and studies cited therein).

<sup>36</sup> 50 C.F.R. §424.12(b).

<sup>37</sup> 50 C.F.R. §424.12(b)(4).

<sup>38</sup> 63 Fed. Reg. at 31649 (and studies cited therein).

<sup>39</sup> *Id.* (and studies cited therein).

<sup>40</sup> 63 Fed. Reg. at 31671 (and studies cited therein).

impoundments and diversions have eliminated migration corridors and fragmented the habitat of the bull trout.<sup>41</sup> Migratory corridors constitute space necessary for population growth and are necessary for normal migratory behavior. FWS regulations also recognize the importance of “habitats that are protected from disturbance.”<sup>42</sup> Habitat fragmentation is a form of disturbance. Finally, under the ESA the ultimate goal of CHD is species recovery.<sup>43</sup> Protection and restoration of migratory corridors would facilitate gene flow and recolonization, which are essential for bull trout survival and recovery.<sup>44</sup>

### III. The Columbia River and Klamath River DPSs

#### (A) *Columbia River (CR) DPS*

The bull trout currently inhabits less than half of its historical range in the Columbia River (CR) basin and is declining throughout its range.<sup>45</sup> The CR DPS occurs “throughout the entire Columbia River basin within the United States and its tributaries” (excluding bull trout found in the Jarbidge River).<sup>46</sup> According to the FWS, the CR DPS is “significant because the overall range of the species would be substantially reduced if this discrete population were lost.”<sup>47</sup>

Bull trout declines in the CR basin are due primarily to habitat degradation and fragmentation caused by logging and road building, mining, agriculture, grazing, dams, and diversions.<sup>48</sup> Fishing management practices, poaching, and exotic species have also led to the population’s decline.<sup>49</sup> Throughout the CR DPS, while “some strongholds still exist, bull trout, generally, occur as isolated subpopulations in headwater lakes or tributaries where migratory fish have been lost.”<sup>50</sup>

The CR DPS is subdivided into four geographic regions: Lower Columbia River, Mid-Columbia River, Upper Columbia River, and Snake River. These comments focus on the Lower Columbia and Snake rivers.

#### (1) Lower Columbia River (CR) Geographical Area

The Lower CR Geographical Area includes 20 subpopulations in nine major tributaries of the CR.<sup>51</sup> The bull trout has been extirpated from Oregon’s Middle Fork of the Willamette River, the North and South Forks of the Santiam River, the Clackamas River, the Upper Deschutes River, and the Crooked River tributary of the Deschutes River.<sup>52</sup> The bull trout remains in parts of the Deschutes and Willamette Rivers, as well as the John Day, Hood, Umatilla, and Walla Walla rivers.<sup>53</sup> Oregon’s only adfluvial subpopulation of bull trout resides in Odell Lake (Deschutes River basin).<sup>54</sup>

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<sup>41</sup> 63 Fed. Reg. at 31649 (and studies cited therein).

<sup>42</sup> 50 C.F.R. §424.12(b)(5).

<sup>43</sup> *Discussed infra* V.

<sup>44</sup> Rieman & McIntyre, Demographic and Habitat Requirements for Conservation of Bull Trout at 18 (stating that [c]onservation strategies should consider maintenance or restoration of migratory corridors wherever possible... Conservation of bull trout populations requires maintenance of multiple local populations.”).

<sup>45</sup> 63 Fed. Reg. at 31649 (and studies cited therein).

<sup>46</sup> *Id.* at 31650.

<sup>47</sup> *Id.* (and studies cited therein).

<sup>48</sup> *Id.* (and studies cited therein).

<sup>49</sup> *Id.* at 31651.

<sup>50</sup> 63 Fed. Reg. at 31652.

<sup>51</sup> *Id.* at 31651.

<sup>52</sup> *Id.* (and studies cited therein).

<sup>53</sup> *Id.*

<sup>54</sup> *Id.* (and studies cited therein).

(2) Snake River (SN) Geographical Area

The SN Geographic Area includes 34 subpopulations in fourteen tributaries of the SN.<sup>55</sup> The bull trout has been extirpated from Oregon’s Willowa Lake (Grande Ronde River basin).<sup>56</sup> The bull trout remains in Oregon’s Grande Ronde, Imnaha, and Malheur rivers.<sup>57</sup> Both the Grande Ronde and the Imnaha rivers lie downstream of the Hells Canyon Dam, where the SR basin remains “intact” and “connectivity among bull trout subpopulations may still occur.”<sup>58</sup> In the past, large numbers of bull trout have been observed in the Malheur River, which lies upstream of the dam.<sup>59</sup> However, upstream subpopulations in southeast Oregon and southwest Idaho remain isolated, and abundances are either unknown or declining.<sup>60</sup>

**(B) Klamath River (KR) DPS**

The bull trout was once widely distributed throughout the Klamath River (KR) basin and represented by all three life history morphs (i.e., fluvial, adfluvial, and resident).<sup>61</sup>

The historical distribution of the bull trout includes Sycan River, the South Fork of Sycan River, Cherry Creek, Sevenmile Creek, Coyote Creek, and Callahan Creek.<sup>62</sup> Apparently bull trout have been extirpated from these areas since the 1970s.<sup>63</sup> Records dating back to the 1800s suggest that the bull trout may have once lived in Klamath Lake as well as the Fort Creek tributary of the Wood River.<sup>64</sup> Today, the bull trout is found in higher elevation streams in three watersheds: Upper Klamath Lake, Sprague River, and Sycan River.<sup>65</sup>

Bull trout declines in the KR basin are due primarily to habitat degradation and fragmentation and diversions.<sup>66</sup> The risk of extinction for the KR DPS is between 70 and 90 percent over the next 100 years.<sup>67</sup> Only seven subpopulations remain.<sup>68</sup>

**IV. Federal activities have adversely effected bull trout and bull trout habitat**

Several federal activities have contributed to the decline of the bull trout, largely through the destruction or modification of its habitat. These activities include logging and road building, permitted mining, permitted grazing, and hydroelectric projects.<sup>69</sup>

Timber harvests have occurred throughout both the CR and KR basins.<sup>70</sup> The effects of these timber harvests on streams is “long lasting, and recovery is slow.”<sup>71</sup> Much of the KR basin

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<sup>55</sup> 63 Fed. Reg. at 31652.

<sup>56</sup> *Id.* (and studies cited therein).

<sup>57</sup> *Id.* (and studies cited therein).

<sup>58</sup> *Id.*

<sup>59</sup> *Id.* (and studies cited therein).

<sup>60</sup> 63 Fed. Reg. at 31652 (and studies cited therein).

<sup>61</sup> *Id.* at 31651 (and studies cited therein).

<sup>62</sup> *Id.*

<sup>63</sup> *Id.*

<sup>64</sup> *Id.* (and studies cited therein).

<sup>65</sup> 63 Fed. Reg. at 31651 (and studies cited therein).

<sup>66</sup> *Id.* (and studies cited therein).

<sup>67</sup> *Id.* (and studies cited therein).

<sup>68</sup> *Id.*

<sup>69</sup> *Id.* at 31650 (and studies cited therein).

<sup>70</sup> 63 Fed. Reg. at 31658.

underwent extensive logging that reduced riparian vegetative cover and increased stream temperatures (e.g. Threemile Creek).<sup>72</sup> Past road building has increased sedimentation and substrate imbeddedness, and existing roads continue to degrade stream habitat through sediment deposition.<sup>73</sup> Six out of seven of the KR basin subpopulations have been adversely affected by forest management practices.<sup>74</sup> In the CR basin, future timber harvesting activities threaten bull trout. A recent proposal to salvage trees in the Malheur National Forest within the John Day River basin “would likely degrade bull trout habitat if implemented as presently planned.”<sup>75</sup> Approximately 74% of bull trout subpopulations within the CR basin are threatened by forest management practices.<sup>76</sup>

Dams have fragmented much of the bull trout habitat within the CR basin, where dams or diversions isolate two-thirds of the subpopulations.<sup>77</sup> Historically, bull trout occurred throughout Oregon’s Willamette River basin, but are now restricted to the McKenzie River basin, where dams have isolated the bull trout into three subpopulations.<sup>78</sup> Dams have also isolated bull trout subpopulations in the SR basin.<sup>79</sup>

Livestock grazing degrades aquatic habitat by eliminating riparian vegetation, destabilizing stream banks, widening stream channels, lowering water tables, reducing pool occurrence, increasing soil erosion, and impairing water quality.<sup>80</sup> These changes result in increased temperatures, increased sedimentation into spawning and rearing habitats, and decreased available cover.<sup>81</sup> Historical grazing throughout the KR basin has been intense, in some cases causing extirpation of local bull trout populations.<sup>82</sup> Livestock continue to locally effect bull trout (e.g. Long and Deming creeks).<sup>83</sup> Livestock grazing has also degraded bull trout habitat in portions of Oregon’s Grande Ronde, Imnaha, and Malheur rivers.<sup>84</sup> Approximately half of bull trout subpopulations within the CR basin are threatened by livestock grazing.<sup>85</sup>

In Oregon, past and present mining activities “have adversely affected bull trout and bull trout habitats.”<sup>86</sup> Approximately 20% of bull trout subpopulations within the CR basin are threatened by “Past, ongoing, or potential future mining activities.”<sup>87</sup>

## **V. Benefits of CHD for the bull trout outweigh benefits of not designating CH**

With respect to Federal lands and activities, CHD will offer greater protection of bull trout habitat than the section 7 consultation process alone. Section 7 consultations only reach Federal activities

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<sup>71</sup> *Id.* (and studies cited therein).

<sup>72</sup> *Id.* at 31658 (and studies cited therein).

<sup>73</sup> *Id.* (and studies cited therein).

<sup>74</sup> *Id.*

<sup>75</sup> 63 Fed. Reg. at 31660.

<sup>76</sup> *Id.*

<sup>77</sup> *Id.* at 31657.

<sup>78</sup> *Id.* (and studies cited therein).

<sup>79</sup> *Discussed supra* III(A)(2).

<sup>80</sup> 63 Fed. Reg. at 31660 (and studies cited therein).

<sup>81</sup> *Id.* (and studies cited therein).

<sup>82</sup> *Id.* (and studies cited therein).

<sup>83</sup> *Id.* (and studies cited therein).

<sup>84</sup> *Id.* (and studies cited therein).

<sup>85</sup> 63 Fed. Reg. at 31660 (and studies cited therein).

<sup>86</sup> *Id.* at 31662 (and studies cited therein).

<sup>87</sup> *Id.*

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that “jeopardize the continued existence of” listed species or that result in the “destruction or adverse modification” of CH.<sup>88</sup> The ESA defines “critical habitat” as areas “essential to the conservation of the species,”<sup>89</sup> where “conservation” means

“the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to [the ESA] are no longer necessary.”<sup>90</sup>

Note that according to FWS regulations, “destruction or adverse modification” means

“a direct or indirect alteration that appreciably diminishes the value of critical habitat for *both the survival and recovery* of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.”<sup>91</sup>

and that “jeopardize the continued existence of” means

“to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of *both the survival and recovery* of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.”<sup>92</sup>

The standard for critical habitat is clearly one of *recovery alone*, as evident from FWS’s own regulation which defines “recovery” as “improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of the Act.”<sup>93</sup> For “jeopardy” the standard is higher, and the federal action must reduce *both survival and recovery* before triggering the consultation process. So, if an undesignated area is necessary to a listed species’ recovery though perhaps not its survival, then the consultation process is not triggered. A recent 5<sup>th</sup> Circuit case has noted that the FWS regulation defining “destruction or adverse modification” is inconsistent with Congressional intent with respect to CHD under the ESA and therefore is “facially invalid.”<sup>94</sup>

Once the decision is made to designate CH, then the Secretary must use the “best scientific data available” as well as take into account economic and other impacts of specifying any particular area as CH.<sup>95</sup> In order to exclude an area from the CHD, the benefits of exclusion must outweigh the benefits of including the area in the CHD, unless failure to include the area would result in the species’ extinction.<sup>96</sup>

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<sup>88</sup> 16 U.S.C. §1536(a)(2).

<sup>89</sup> 16 U.S.C. §1532(5)(A).

<sup>90</sup> 16 U.S.C. §1532(3).

<sup>91</sup> 50 C.F.R. §402.02 (emphasis added).

<sup>92</sup> *Id.* (emphasis added).

<sup>93</sup> *Id.* §402.02.

<sup>94</sup> *Sierra Club v. U.S. Fish & Wildlife Serv.*, 245 F.3d 434, 443 (5<sup>th</sup> Cir. 2001). The 10<sup>th</sup> Circuit also has taken note of the inconsistencies between Congressional intent with respect to the ESA and the agency’s regulatory definitions. *N.M. Cattlegrowers Assoc. v. U.S. Fish & Wildlife Serv.*, 248 F.3d 1277, 1283 n.2 (10<sup>th</sup> Cir. 2001).

<sup>95</sup> 16 U.S.C. §1533(b)(2).

<sup>96</sup> *Id.*; *See also* 50 C.F.R. §424.19.

**VI. CH should be designated for the bull trout’s current and historical Oregon range**

Six of seven of the KR basin remaining subpopulations “small in number, and unlikely to persist over the next 100 years unless conservation and other corrective actions are taken.”<sup>97</sup> Past, present, and future “land and water management practices” threaten the KR DPS, with most subpopulations facing multiple threats.<sup>98</sup> Bull trout in the CR basin are isolated into 141 subpopulations, mostly in headwater lakes or tributaries, and migratory life histories have been lost or restricted.<sup>99</sup> Oregon’s last stronghold lies within the Blue Mountains (Grande Ronde River).<sup>100</sup> Habitat degradation and fragmentation, blockage of migratory corridors, poor water quality, and exotic species introductions have and continue to threaten the species.<sup>101</sup> As with the KR DPS, the CR DPS faces multiple threats.<sup>102</sup>

Given the degree to which federal activities threaten bull trout and bull trout habitat and the essential role of migration corridors and metapopulations in lowering the risk of extinction and fulfilling the habitat requirements of both migratory and resident life history forms, all habitats in which bull trout are currently found should be designated as CH, including those within Oregon’s Klamath River basin and the Lower Columbia and Snake River basins. Furthermore, because the purpose of CHD is not only to ensure survival but also to facilitate recovery, CH should be designated in those portions of its historical range contiguous with its existing range.

Thank you for allowing us to participate in this phase of the CHD process. If you have any questions or wish further clarification, please contact me.

Sincerely,

Laura Hartt, NEDC volunteer and biologist  
email: hartt@lclark.edu

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<sup>97</sup> 63 Fed. Reg. at 31671.

<sup>98</sup> *Id.*

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> *Id.*