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**DRAFT ECONOMIC ANALYSIS OF CRITICAL  
HABITAT DESIGNATION FOR THE WENATCHEE  
MOUNTAINS CHECKER-MALLOW**

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Prepared for:

Division of Economics  
U.S. Fish and Wildlife Service  
4401 N. Fairfax Drive  
Arlington, VA 22203

Prepared by:

Robert E. Unsworth and Matthew M. Engler  
Industrial Economics, Incorporated  
2067 Massachusetts Avenue  
Cambridge, Massachusetts 02140

Send comments on the economic analysis to:

Carol Schuler  
Acting Manager  
Western Washington Office  
U.S. Fish and Wildlife Service  
510 Desmond Drive SE  
Suite 102  
Lacey, Washington 98503-1263

## 1. INTRODUCTION AND BACKGROUND

1. On January 18, 2001, the U.S. Fish and Wildlife Service (Service) proposed designation of critical habitat for the Wenatchee Mountains checker-mallow (*Sidalcea oregana var. calva*) on approximately 6,135 acres of land in Chelan County, Washington. The purpose of this report is to identify and analyze the potential economic impacts that would result from this designation. This report was prepared by Industrial Economics, Incorporated (IEc), under contract to the U.S. Fish and Wildlife Service's Division of Economics.
2. Section 4(b)(2) of the Endangered Species Act (Act) requires the Service to base proposed designation of critical habitat upon the best scientific and commercial data available, after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. The Service may exclude areas from critical habitat designation when the benefits of exclusion outweigh the benefits of including the areas within critical habitat, provided the exclusion will not result in extinction of the species.
3. Under the listing of a species, section 7(a)(2) of the Act requires Federal agencies to consult with the Service in order to ensure that activities they fund, authorize, or carry out are not likely to jeopardize the continued existence of the species. The Act defines jeopardy as any action that would appreciably reduce the likelihood of both the survival and recovery of the species. For designated critical habitat, section 7(a)(2) also requires Federal agencies to consult with the Service to ensure that activities they fund, authorize, or carry out do not result in destruction or adverse modification of critical habitat. Adverse modification of critical habitat is defined as any direct or indirect alteration that appreciably diminishes the value of critical habitat for the survival and recovery of the species.
4. This analysis distinguishes between economic impacts caused by the listing of the checker-mallow and those additional effects that would be caused by the proposed critical habitat designation. The Service only considers the incremental economic impacts of the critical habitat designation beyond those of the listing and other laws because the Act specifically excludes the Service from considering the economic impacts of the listing. To evaluate the increment of economic impacts attributable to the critical habitat designation for the checker-mallow, beyond the listing, the analysis assumes a “without critical habitat” baseline and compares it to a “with critical habitat” scenario. The difference between the two measures the net change in economic activity that may result from the designation of critical habitat for a species. In the event that a land use or activity would be limited or prohibited by another existing statute, regulation, or policy, the economic impacts associated with those limitations or prohibitions would not be attributable to critical habitat designation.
5. The critical habitat designation for the checker-mallow encompasses land owned or

managed by the United States Forest Service (USFS), the Washington Department of Natural Resources (WDNR), and private landowners. This analysis assesses how critical habitat designation for the checker-mallow may affect current and planned land uses and activities on these lands. For USFS managed land, designation of critical habitat can directly impact any activities, land uses, and other actions that may adversely affect critical habitat. For WDNR land holdings and private land subject to critical habitat designation, consultations and modifications to land uses and activities can only be required when a Federal nexus, or connection, exists. A Federal nexus arises if the activity or land use of concern involves Federal permits, Federal funding, or another form of Federal involvement. Activities on state and private land that do not involve a Federal nexus are not affected by critical habitat designation.

6. To be considered in the economic analysis, activities must be "reasonably foreseeable," i.e. activities which are currently authorized, permitted, or funded, or for which proposed plans are currently available to the public. This report considers current and future activities that could potentially result in new or reinitiated section 7 consultations or modifications due to the critical habitat designation.

## **1.1 Description of Species and Habitat**

7. The Wenatchee Mountains checker-mallow is an herbaceous perennial plant that branches into several stems.<sup>1</sup> Plants range in height from eight to 60 inches and produce pink flowers in clusters with one to many stalked flowers arranged singly along a common stem.
8. The Wenatchee Mountains checker-mallow is only found in the central Washington county of Chelan. Based on field surveys and research, the Service has identified physical and biological habitat features, referred to as primary constituent elements, that are essential for the survival and recovery of the Wenatchee Mountains checker-mallow. Primary constituent elements for the checker-mallow include: wetland conditions that for the majority of the year produce surface water or saturated upper soil profiles and remain moist into the early summer; a relatively stable plant community with vegetation dominated by native grasses and forbs and generally free of woody shrubs and conifers that would produce shade and competition; open, sparsely forested, wet meadow openings within a ponderosa-pine and Douglas-fir forest and on the margins of shrub and hardwood thickets (primarily composed of aspen); seeps, springs, and riparian areas on fine textured soils (clay loams and silt loams) that would allow for the expansion of the species; and habitat that has a maximum elevation

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<sup>1</sup> Information on the Wenatchee Mountains checker-mallow and its habitat comes from the *Proposed Designation of Critical Habitat for the Wenatchee Mountains checker-mallow*, January 18, 2001 (66 FR 4783).

of 3,300 ft and a minimum elevation of 1,600 ft.

## 1.2 **Proposed Critical Habitat**

9. The Service has proposed one unit of critical habitat for the Wenatchee Mountains checker-mallow on approximately 6,135 acres of land in Chelan County. The proposed critical habitat comprises 2,051 acres of National Forest lands managed by USFS, 1,428 acres of state land managed by WDNR, and 2,656 acres of privately held land. The Camas Creek and Pendleton Creek watersheds form the basis for the area proposed as critical habitat.

C **U.S. Forest Service-** The Service has proposed designation of critical habitat on portions of four USFS parcels. Of the 2,051 acres of USFS land proposed as critical habitat, one acre is located within a geographic area known to be occupied by the checker-mallow.

C **Washington Department of Natural Resources-** The majority of the 1,428 acres of WDNR land proposed as critical habitat is located within the Camas Meadows Natural Area Preserve. The remainder of the proposed critical habitat on WDNR land is located in a state land trust. Of the 1,428 acres of WDNR land proposed for critical habitat designation, 94 acres are within the geographic area currently known to be occupied by the checker-mallow.

C **Private-** The Service has proposed designation of critical habitat on 2,656 acres of privately owned rural land. One acre of private land within the proposed critical habitat is known to be occupied by the checker-mallow.

10. Although most of the proposed critical habitat is not currently known to support populations of the Wenatchee Mountains checker-mallow, the Service finds that it is necessary to propose critical habitat for the entirety of the Camas Creek and Pendleton Creek watersheds. The areas within the watershed that are unoccupied by the species and possess the primary constituent elements have been proposed for critical habitat designation because they are essential for the establishment of new populations, continued growth of current populations, and the recovery of the species as a whole. Lands within the boundaries of the proposed critical habitat that are not occupied by the species and do not possess the primary constituent elements will not be subject to any additional consultations beyond those that

would be required under the listing of the checker-mallow.<sup>2</sup>

## **2. FRAMEWORK, METHODOLOGY, IMPACTS, AND BENEFITS**

### **2.1 Framework for Analysis**

11. As noted above, this economic analysis examines the impacts to specific land uses or activities within those areas proposed as critical habitat for the checker-mallow. An impact of critical habitat designation includes any effect of the designation above and beyond the impacts associated with the listing of the species. This report employs a framework that compares economic activity with critical habitat designation to economic activity without critical habitat designation. The without-critical-habitat baseline for analysis represents current and expected economic activity under all modifications prior to critical habitat designation, including protections already accorded to the checker-mallow under state and Federal laws, such as the Endangered Species Act and National Environmental Policy Act. The difference between the two scenarios measures the net change in economic activity attributable to the designation of critical habitat for the checker-mallow. The listing of the checker-mallow is the most significant aspect of baseline protection, as it provides the most protections by making it illegal for any person to: remove or reduce to possession the species from areas under Federal jurisdiction; maliciously damage or destroy the species on any such area; or remove, cut, dig up, or damage or destroy the plant species on any other area in knowing violation of any law or regulation of any state or in the course of any violation of a state criminal trespass law.

### **2.2 Methodological Approach**

12. This report relies on a sequential methodology and focuses on distilling the salient and relevant aspects of potential economic impacts of designation. The methodology consists of:
  - C Considering what specific activities take place on the USFS, WDNR, and private land affected by critical habitat designation;
  - C Identifying whether activities taking place on the state and private land are likely to involve a Federal nexus;

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<sup>2</sup> Personal communication with Wildlife Biologist, U.S. Fish and Wildlife Service, Western Washington Office, U.S. Fish and Wildlife Service, December 21, 2000.

- C Evaluating the likelihood that activities associated with identified Federal nexuses will result in consultations and, in turn, that consultations will result in modifications to projects;
- C Attributing costs to any expected consultations and project modifications;
- C Assessing if critical habitat designation will create costs for small businesses as a result of modifications or delays to projects;
- C Enumerating economic costs associated with public perception about the effect of critical habitat on the private land subject to the designation;
- C Establishing benefits of critical habitat designation.

## **2.3 Information Sources**

13. The methodology outlined above relies on input and information supplied by staff from the Service, USFS, U.S. Army Corps of Engineers (Corps of Engineer), WDNR, and the Chelan County Planning Board. Comments and information on land uses and the effects of critical habitat designation were not available from private landowners, so this analysis uses information from these sources regarding activities occurring on the private land and the likelihood of Federal nexuses being associated with these activities.

## **2.4 Impacts**

### **2.4.1 U.S. Forest Service**

14. USFS land located within the boundaries of proposed critical habitat for the checker-mallow does not support much activity detrimental to the species or its habitat. Personnel with USFS report that the agency is currently engaged in an ecological restoration program on some of the land proposed as critical habitat.<sup>3</sup> This project entails the thinning of timber stands and the use of controlled burns. Previously, USFS initiated a formal consultation with the Service to address the construction of a road associated with this project. Even though the road construction did not occur in an area occupied by the checker-mallow, USFS

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<sup>3</sup> Personal communication with Botanist, U.S. Forest Service, Leavenworth Ranger Station, Washington, January 5, 2001.

initiated the consultation with the Service in order to address the indirect impacts of the project on the Camas Creek watershed in which the species is found.

15. In general, USFS works closely with the Service in its efforts to protect the checker-mallow and routinely performs surveys for the species and its habitat. Given the low level of activity on USFS lands within the boundaries of proposed critical habitat, personnel from USFS believe that critical habitat will not result in any new or additional consultations. Furthermore, because USFS has already consulted with the Service under the listing for an activity that took place in an area that is included in the proposed designation but is not near an occupied site, it is likely that if any future consultations do occur for activities within the area of proposed critical habitat, they would be attributable to the listing of the species and not critical habitat designation. Nevertheless, personnel from the Service indicate that designation of critical habitat will lead to a reinitiation of the formal consultation that was conducted for the road construction. Based on an analysis of similar consultations that have taken place at various Service offices, the cost of the reinitiated consultation is estimated to be not more than \$1,000.

#### **2.4.2 U.S. Fish and Wildlife Service**

16. Although the Service does not manage any lands within the area proposed as critical habitat, if the designation increases the number of consultations in which the Service must engage, then it is possible that critical habitat designation could have an impact on the overall work load of the Service. It is expected that, as a result of critical habitat designation, the service will engage in one reinitiated consultation that would not have occurred under the listing alone. The estimated cost associated with a reinitiated consultation is approximately \$1,000.

#### **2.4.3 Washington Department of Natural Resources**

17. The WDNR land that has been proposed as critical habitat for the checker-mallow supports minimal activity that could potentially be affected by the designation. The majority of the proposed critical habitat falls within the Camas Meadows Natural Area Preserve. WDNR expressly manages this land for the benefit and protection of the checker-mallow and other species. Personnel from WDNR report that low-impact recreation and vegetation management beneficial to the checker-mallow constitute the only activities likely to take place in the Camas Meadows Natural Area Preserve.<sup>4</sup> No Federal nexuses exist for

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<sup>4</sup> Personal communication with Natural Area Manager, Southeast Region, Washington Department of Natural Resources, January 4, 2001.

recreation and vegetation management, so neither activity would require a consultation with the Service. In general, it is not likely that a Federal nexus would exist for activities taking place on WDNR land. In the past, WDNR has not received Federal funding or sought federal permitting for activities at Camas Meadows Natural Area Preserve. In the future, WDNR intends to apply for Federal funding for activities such as ecological research and plant surveying that would not alter the land. So, even if a Federal nexus were to arise for a future activity, it would not likely result in a consultation.

18. The remainder of critical habitat proposed for WDNR land is located in an area called Section 16, which is state trust land. WDNR manages state trust lands in order to generate revenue through timber harvesting and other commercial uses. Currently, little activity and no revenue-generating activity take place on Section 16. Staff from the WDNR report that the Section 16 trust land has been harvested within the last ten years, so it will not be commercially harvested again for another 20 years.<sup>5</sup> Non-commercial activities that could take place on a small scale include pre-commercial harvesting and stand maintenance, general maintenance of extant roads, and elimination of non-native, invasive species. In general, these activities will not likely have Federal nexuses, as WDNR has historically not received Federal funding or permitting for them. It is possible that in the future WDNR may receive some funding from USFS for elimination of non-native, invasive species in areas occupied by the checker-mallow. However, because this activity would take place in an area that is already occupied by the checker-mallow, any new consultation to address the future elimination of non-native, invasive species would most likely be attributable to the listing of the checker-mallow and not the designation of critical habitat.
19. Both Camas Meadows Natural Area Preserve and Section 16 fall within an area that has been designated as a Habitat Conservation Plan (HCP) for the northern spotted owl. Designation as an HCP limits the types and amount of activities allowed to take place in these areas and further reduces the likelihood that activities detrimental to the checker-mallow will take place in areas of proposed critical habitat on WDNR land.
20. In light of the limited activity taking place on WDNR land proposed as critical habitat, the lack of Federal nexuses for activities that could occur, and the presence of all of the WDNR land proposed as critical habitat in an HCP for the northern spotted owl, personnel from both the Service and WDNR assert that critical habitat designation should not lead to any new consultations between the Service and WDNR. Therefore, it is expected that designation of critical habitat for the checker-mallow on the Camas Meadows Natural Areas Preserve and on Section 16 trust land will not lead to any increased costs for the WDNR.

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<sup>5</sup> Personal communication with Management Forester, Southeast Region, Washington Department of Natural Resources, January 4, 2001.

#### **2.4.4 Private Land**

21. Conversations with the Service reveal that, on the whole, little activity takes place on the private land proposed as critical habitat for the Wenatchee Mountains checker-mallow.<sup>6</sup> Personnel from the Chelan County Planning Board report that the private lands within the boundaries of the proposed critical habitat are zoned as Commercial Forest and Rural Residential 20.<sup>7</sup> Although these zoning designations mean that, in the future, areas of private land within the proposed critical habitat could potentially be harvested commercially or have new private residences built on 20-acre lots, it is unlikely that critical habitat designation will result in any new consultations for activities on private land. Typically, a Federal nexus does not exist for timber harvesting on private land, so it is expected that no new consultations will be required for this activity. If new private residences are built within the boundaries of proposed critical habitat, it is possible that a Federal nexus could exist through Corps of Engineer permitting required for activities in wetlands. Personnel from the Corps of Engineers, however, report that no one who owns private land within the boundaries of the proposed critical habitat has applied for a wetlands-use permit in the last ten years.<sup>8</sup>
22. In sum, economic impacts to owners of private land located within the boundaries of the proposed critical habitat are expected to be minimal due to a generally low level of activity taking place in these areas and a lack of Federal nexuses. Therefore the estimated cost to private landowners is none.

#### **2.5 Summary of Impacts**

23. Exhibit 1 summarizes the potential for new consultations and project modifications and the expected costs attributable to critical habitat designation for the Wenatchee Mountains checker-mallow. It is expected that designation will lead to increased costs of not more than \$1,000 each to USFS and the Service as a result of a reinitiated formal

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<sup>6</sup> Personal communication with Wildlife Biologist, Western Washington Office, U.S. Fish and Wildlife Service, December 21, 2000.

<sup>7</sup> Personal communication with Planner, Chelan County Planning Board, January 9 and 10, 2000.

<sup>8</sup> Personal communication with regulatory personnel, U.S. Army Corps of Engineers, January 10, 2000.

consultation between these two agencies. Private landowners and WDNR should incur no additional costs resulting from critical habitat designation.

| <b>Exhibit 1</b>  |   |   |  |                                |
|---|---|---|--|--------------------------------|
| <b>SUMMARY OF ECONOMIC IMPACTS ASSOCIATED WITH DESIGNATION OF CRITICAL HABITAT FOR THE WENATCHEE MOUNTAINS CHECKER-MALLOW</b> |   |   |  |                                |
| <b>Potentially Affected Party</b>   | <b>Reasonably Foreseeable Activities and Land Uses within Proposed Critical Habitat</b> | <b>Likelihood of New or Reinitiated Consultations</b> | <b>Likelihood of Project Modifications</b> | <b>Expected Costs to Party</b> |
| U.S. Forest Service   | Construction of temporary roads, controlled burns, timber thinning                      | High  | Low  | \$1,000                        |
| U.S. Fish and Wildlife Service  | Not Applicable  | High  | Not Applicable                             | \$1,000                        |
| Washington Department of Natural Resources  | Recreation, vegetation management   | Low   | Low  | None                           |
| Private landowners  | Timber harvesting, private residence construction                                       | Low   | Low  | None                           |

Source: IEc analysis based on conversations with personnel from U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Army Corps of Engineers, Washington Department of Natural Resources, and Chelan County Planning Department, December 2000 and January 2001.

## **2.6 Potential Impacts to Small Businesses**

24. Under the Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996, whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions).<sup>9</sup> However, no regulatory flexibility analysis is required if the head of an agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities.

25. Timber harvesting and the construction of private residences constitute the only

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<sup>9</sup> 5 U.S.C. 601 et seq.

commercial activities that could take place within the area of proposed critical habitat. It is unlikely, however, that critical habitat designation will have any impact on small businesses in the timber harvesting industry, as commercial harvesting will not take place on the Federal and state land and a nexus typically does not exist for any possible timber harvesting on private lands. Small businesses in the construction industry should not be affected by the designation because it is not likely that any consultations will be required for residential construction projects that occur within the boundaries of proposed critical habitat, as evidenced by the lack of applications for wetlands-use permits over the past ten years.

## **2.7 Potential Impacts Associated with Project Delays and Property Values**

26. Proposed critical habitat for the checker-mallow should not result in any costs to parties as a result of project delays because no new consultations will be required. Based on the remote, undeveloped nature of the private lands proposed as critical habitat, it is unlikely that designation will in any way impact property values.

## **2.8 Benefits**

27. Personnel from WDNR indicate that the designation of critical habitat for the checker-mallow on the Camas Meadows Natural Area Preserve could benefit the efforts of WDNR to protect the species and its habitat by increasing the likelihood that WDNR will receive outside funding for conservation and protection.<sup>12</sup>

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<sup>12</sup> Personal communication with Natural Area Manager, Southeast Region, Washington Department of Natural Resources, January 4, 2001.