DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AC90

243-94

Endangered and Threatened Wildlife and Plants; Proposed Determination of Critical Habitat for Lost River Sucker and Shortnose Sucker

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed Rule.

SUMMARY: The Fish and Wildlife Service (Service) proposes to designate critical habitat for the Lost River sucker (*Deltistes luxatus*) and shortnose sucker (*Chasmistes brevirostris*), two species federally listed as endangered pursuant to the Endangered Species Act of 1973, as amended (Act). Both species are large, long-lived fish endemic to the Upper Klamath River Basin of Oregon and California. The proposed designation includes a total of approximately 182,400 hectares (456,000 acres) of stream, river, lake, and shoreline areas as critical habitat for the shortnose sucker and approximately 170,000 hectares (424,000 acres) of stream, river, lake, and shoreline areas as critical habitat for the Lost River sucker. This proposed critical habitat designation would result in additional review requirements under section 7 of the Act with regard to Federal agency actions. Section 4 of the Act requires the Service to consider economic costs and benefits prior to making a final decision on the size and scope of critical habitat.

DATES: Comments will be accepted until January 30, 1995. Public hearing requests must be received by January 17, 1995.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, U.S. Fish and Wildlife Service, Portland Field Office, 2600 S.E. 98th Avenue, Suite 100, Portland, Oregon 97266. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. Russell D. Peterson, Field Supervisor, Portland Field Office, at the above address, (503) 231–6179.

SUPPLEMENTARY INFORMATION:

Biological Considerations

The Upper Klamath River Basin (Basin) above Iron Gate Dam on the Klamath River encompasses a drainage area of approximately 2,120,400 hectares (5,301,000 acres) in Oregon and California (USFWS 1992). Early records from the Basin indicate that the Lost River and shortnose suckers were common and abundant. Cope (1884) noted that Upper Klamath Lake sustained "a great population of fishes", while Gilbert (1898) noted that the Lost River sucker was "the most important food-fish of the Klamath Lake region." Spring sucker runs "in incredible numbers" (Gilbert 1898) were relied upon as a food source by the Klamath and Modoc Indians and were taken by local settlers for human consumption and livestock feed (Cope 1879, Coots 1965, Howe 1968). Several commercial operations processed "enormous amounts" of suckers into oil, dried fish, canned fish, and other products (Andreasen 1975, Howe 1968).

The Upper Klamath Basin once had over 350,000 acres of wetlands (USFWS 1989), extensive riparian corridors, and functional floodplains that could intercept storm runoff, dampen sharp peaks in the hydrograph, reduce erosion forces, remove organic and inorganic nutrients, and improve water quality (Mitsch and Gosselink 1986). The loss of these wetlands has had large scale detrimental effects to the quality and quantity of suitable sucker habitat (USFWS 1993). Currently, less than 75,000 acres of wetlands remain in the Basin (USFWS 1992).

The Lost River sucker is native to Upper Klamath Lake (Williams et al. 1985) and its tributaries including the Williamson River, the Sprague River, the Wood River, Crooked Creek, Seven Mile Creek, Four Mile Creek and slough, Odessa Creek, Crystal Creek (Stine 1982). The Lost River sucker also historically inhabited the Lost River watershed, Tule Lake, Lower Klamath Lake, and Sheepy Lake (Moyle 1976), but is not considered native to the Klamath River. The present distribution of the Lost River sucker includes Upper Klamath Lake and its tributaries (Buettner and Scoppettone 1990), Clear Lake Reservoir and its tributaries (Buettner, pers. comm. cited in USFWS 1993), Tule Lake and the Lost River up to Anderson-Rose Dam (Scoppettone, pers. comm. cited in USFWS 1993), the Klamath River downstream to Copco Reservoir (Beak 1987) and probably to Iron Gate Reservoir (Maria, pers. comm. cited in USFWS 1993). In the Upper Klamath Lake watershed, Lost River sucker spawning runs are primarily limited to Sucker Springs in Upper Klamath Lake, and the Sprague and Williamson Rivers. Spawning runs also occur in the Wood River and in Crooked Creek (Markle and Simon 1993) in this watershed. An additional run may occur in Sheepy Lake in the Lower Klamath Lake watershed (Johnson, pers. comm. cited in USFWS 1993), and spawning has been documented in the Clear Lake watershed (Buettner and Scoppettone 1990).

Shortnose sucker historically occurred in Upper Klamath Lake and its tributaries (Miller and Smith 1981; Williams et al. 1985), although Moyle (1976) includes Lake of the Woods, Oregon, and probably the Lost River system (Scoppettone and Vinyard 1991). The current distribution of the shortnose sucker includes Upper Klamath Lake and its tributaries, Klamath River downstream to Iron Gate Reservoir, Clear Lake Reservoir and its tributaries, Gerber Reservoir and its tributaries, the Lost River, and Tule Lake. Gerber Reservoir represents the only habitat with a shortnose sucker population that does not also have a Lost River sucker population. In the Upper Klamath Lake watershed, shortnose sucker spawning runs are primarily limited to the Sprague and Williamson Rivers, although spawning runs may also occur in the Wood River and in Crooked Creek (Markle and Simon 1993). Shortnose sucker spawning has been documented in the Clear Lake watershed (Buettner and Scoppettone 1990).

Both species are primarily lake residents that spawn in rivers, streams, or springs associated with lake habitats. After hatching, larval suckers migrate out of spawning substrates, which are usually gravels or cobbles, and drift downstream into lake habitats. Shoreline river and lake habitats with vegetative structure are known to be important during larval and juvenile rearing (Klamath Tribe 1991, Markle and Simon 1993). The Lost River and shortnose suckers are omnivorous bottom feeders whose diets include detritus, zooplankton, algae and aquatic insects (Buettner and Scoppettone 1990). Sexual maturity for Lost River suckers sampled in Upper Klamath Lake occurs between the ages of 6 to 14 years with most maturing at age 9 (Buettner and Scoppettone 1990). Most shortnose suckers reach sexual maturity at age 6 or 7 (Buettner and Scoppettone 1990).

The historical range of the Lost River and shortnose suckers has been fragmented by construction of dams, instream diversion structures, irrigation canals, and the general development of the U.S. Bureau of Reclamation's Klamath Project and related agricultural processes. Because habitat fragmentation limits or prevents genetic interchange among populations, extinction could result as genetic diversity decreases and populations

become more susceptible to environmental change. The combined effects of damming of rivers, instream flow diversions, draining of marshes, dredging of Upper Klamath Lake, and other water manipulations has threatened both species with extinction (53 FR 27130). Additionally, water quality degradation in the Upper Klamath Lake watershed has led to large-scale fish kills related to algal bloom cycles in the lake (Kann and Smith 1993). Introduced exotic fishes may reduce recruitment through competition with, or predation upon, suckers and sucker larvae (USFWS 1993, Dunsmoor 1993). Conservation of the Lost River and shortnose suckers will require the identification of actions to reduce threats of water quality-induced fish kills, provide the wide range of habitats needed by all size and age classes of the fishes, reduce the impacts of exotic fishes, improve migration corridors between habitats and populations, and establish refugial populations (USFWS 1993).

Previous Federal Actions

The Lost River and shortnose suckers were proposed as endangered species on August 26, 1987 (52 FR 32145). The final rule listing the Lost River and shortnose suckers as endangered was published on July 18, 1988 (53 FR 27130). On September 9, 1991, the Service received a 60-day notice of intent to sue from the Oregon Natural Resources Council (ONRC) for failure to prepare a recovery plan and to designate critical habitat for the Lost River and shortnose suckers. On November 12, 1991, ONRC filed suit in Federal Court. On April 21, 1992, ONRC and the Service entered into an agreement to settle the litigation. The agreement required completion of a final recovery plan on or before March 1, 1993; a proposal to designate critical habitat on or before April 1, 1993; and a finding on the proposed critical habitat by April 1, 1994. After settling the suit, the Service negotiated an extension of the April 1, 1993, date for proposing critical habitat to October 1, 1993. A second extension was negotiated for the publication of a proposed rule by March 10, 1994, and publication of a final determination by November 29, 1994. The final recovery plan for both species was signed by the Regional Director on March 17, 1993. A subsequent extension provided for issuance of a proposal by August 19, 1994, and a final determination by February 28, 1995.

Determination of Critical Habitat

"Critical habitat," as defined in section 3(5)(A) of the Act means: (i) The specific areas within the geographical area occupied by the species at the time it is listed, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary that such areas are essential for the conservation of the species.

The term "conservation," as defined in section 3(3) of the Act, 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 Act are no longer necessary.

Therefore, in the case of critical habitat, conservation represents protection of the areas essential to recover a species to the point of delisting (i.e., the species is recovered and is removed from the list of endangered and threatened species). Section 3(5)(C) further states that the entire geographical area that can be occupied by the species shall not be included in critical habitat except in special circumstances.

Role of Critical Habitat in Species Conservation

A designation of critical habitat may not, by itself, achieve recovery, but is one of several measures available to contribute to conservation of a species. Critical habitat focuses conservation activities by identifying areas that contain essential habitat features (primary constituent elements) regardless of whether the areas are currently occupied by the listed species. Such designations alert Federal agencies, States, the public, and other entities about the importance of an area for the conservation of a listed species. Critical habitat also identifies areas that may require special management or protection. Areas designated as critical habitat receive protection under section 7 of the Act with regard to actions carried out, funded, or authorized by Federal agencies. Section 7 of the Act requires that Federal agencies insure that their actions are not likely to destroy or adversely modify critical habitat.

Designation of critical habitat does not create a management plan for a listed species. Designation does not automatically prohibit certain actions, establish numerical population goals, or prescribe specific management actions (inside or outside of critical habitat). However, critical habitat may provide added protection for areas designated and thus assist in achieving recovery. Areas outside of critical habitat that contain one or more of the primary constituent elements may still be important for conservation of a species. Areas not designated as critical habitat also may be of considerable value in maintaining ecosystem integrity and supporting other species, thus indirectly contributing to recovery.

Relationship of Critical Habitat to Recovery Plan

The Lost River sucker and shortnose sucker recovery plan has as its primary objective "to restore the Lost River and shortnose sucker populations to delisting status" (USFWS 1993). The plan lists interim goals of one stable refugial population of at least 500 individuals for each unique stock of suckers. The recovery plan recognizes the lack of high quality data about habitat needs, availability, and use by the populations it is intended to recover. It is therefore a general plan that discusses the need for focusing research efforts to guide the development, and ultimately implementation, of recovery efforts. It outlines the pertinent issues and recommends means to further investigate each so that recovery planning will be based on solid information and thus have a higher probability of success.

This proposed rule would further delineate the areas generally described in the recovery plan as important to the species' recovery. The critical habitat units in the proposed rule include the majority of the known populations of Lost River and shortnose suckers as described in the recovery plan. Designation of critical habitat will help to improve and stabilize the habitat conditions that support the populations of sucker listed in the recovery plan, which will aid in the attainment of the interim recovery goals. Critical habitat may also ultimately improve our knowledge and understanding of habitat conditions and the relationship of the listed suckers to those conditions by focusing research efforts within CHU's. This will have the effect of providing much of the information identified in recovery plan tasks as necessary to proceed with the recovery program for those species.

Primary Constituent Elements

In determining which areas to designate as critical habitat for a species, the Service considers those physical and biological features that are essential to the species conservation and that may require special management

considerations or protection. Such physical and biological features are stated in 50 CFR 424.12 and include, but are not limited to, the following:

(1) Space for individual and population growth, and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally,

(5) Habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of a species.

The Service has determined that the physical and biological features (referred to as the primary constituent elements) that support spawning, foraging, cover, refugia and corridors between these areas, and growth and dispersal are essential to the conservation of these species. The primary constituent elements are listed below.

Water

This element is defined as a sufficient quantity of water of suitable quality (i.e., temperature, dissolved oxygen, flow rate, pH, nutrients, lack of contaminants, turbidity, etc.) to provide conditions required for the particular life stage for each species.

Physical Habitat

This element is defined as including areas of the Upper Klamath Basin watershed that are inhabited or potentially habitable by suckers for use as refugia from stressful water quality conditions or predation, or for use as in spawning, nursery, feeding, or rearing areas, or as corridors between these areas.

Biological Environment

The components of this element include food supply and a natural scheme of predation, parasitism, and competition in the biological environment. Food supply is a function of nutrient supply, productivity, and availability for each life stage of the species. Predation, although considered a normal component of this environment, may be out of balance due to introduced fish species or the elimination of refugial structures such as cover and shelter. Competition from nonnative fish species and parasitism may also be elevated due to stresses induced by degraded habitats.

A more detailed discussion of these primary constituent elements is contained in the Lost River and Shortnose Sucker Critical Habitat Draft Biological Support Document (Biological Support Document) which is available upon request from the Portland Field Office (see **ADDRESSES** section, above). The Biological Support Document contains detailed discussions of the biological basis for the primary constituent elements.

Criteria for Identifying Critical Habitat

Several qualitative criteria were considered in proposing specific areas as critical habitat. The following discussion describes the criteria and provides a brief explanation of their use in proposing specific areas.

Current and Historic Range: Proposed critical habitat units include much of the known current and historic ranges of both species. Some portions of the currently inhabited range are not included in this proposed rule, and no potentially suitable habitats outside either the current or historic range of either species are included.

Suitable Spawning and Migration Habitats: Areas known to provide either spawning habitat or migration corridors to or from spawning habitats are included in this proposed rule.

Areas Likely to Provide Water Quality: Areas within the current or historic range of both species that are likely to provide suitable water quality are included in this proposed rule. In general, these sites are known refugial areas (such as Pelican Bay), water sources such as springs, or those areas falling within the 100-year floodplain, where defined, or areas within 300 feet on either side of streams within the current or historic range of the species. Many wetland areas are included because of their important role in maintaining water quality.

Areas to Maintain Rangewide Distribution: The major habitats currently utilized by both species across their respective ranges are included within the proposed designation.

Areas to Reduce Fragmentation of Populations: The boundaries of proposed critical habitat units were drawn to reduce the likelihood of separating, for example, a spawning habitat from the population of suckers that uses that habitat.

Adequacy of Existing Protection: The Service considered the legal status of lands in proposing specific areas as critical habitat. Areas with permanent legal protection, such as congressionally designated wilderness areas, national parks, and portions of national wildlife refuges are not proposed.

Application of the aforementioned criteria resulted in the proposal of three main types of aquatic habitats and associated uplands within the Upper Klamath Basin watershed:

(1) Lakes, reservoirs, rivers, and streams within the current or historic distribution of the Lost River and/or shortnose sucker;

(2) Lands adjacent to habitats identified in (1) (above) lying within the 100-year floodplain as defined on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM); and,

(3) Lands adjacent to stream habitats identified in (1) (above) but outside areas where FEMA 100-year flood plains have been identified in (2) (above), but that fall within a zone extending 300 feet on either side of the stream or river.

Included within the proposed designation are Federal, state and private lands and waters. Designating the six units as critical habitat would provide additional protection for the major habitat and/or population areas, and this protection would further the conservation of the species.

Proposed Critical Habitat Designation

The regulations require that the Service define "* * * by specific limits using reference points and lines as found on standard topographic maps" those areas designated as critical habitat (50 CFR 424.12 (c)). Water bodies such as lakes, rivers, and streams are commonly found on standard topographic maps, but 100-year floodplains and the delineation of a 300-foot distance from a given river or stream are not. Therefore, the Service has described the boundaries of each proposed critical habitat unit by extending the legal description out to the nearest section boundary as found on standard topographic maps. Only lands or waters that contain one or more primary constituent elements are included in the proposed designation. Areas within the 100-year floodplain that have been previously developed are not likely to provide constituent elements. Thus, paved areas, road and rail corridors, built-up areas within municipalities, and other previously developed areas are not likely to provide constituent elements and so would not be affected by the proposed designation. Diked and leveed areas to which a connection to the river or stream remains may continue to provide the constituent elements necessary for inclusion as critical habitat.

The Service has proposed the 100-year FEMA floodplains as an indicator of the likely distribution of the primary constituent elements, and those features that provide for the primary constituent elements, because the 100-year floodplains are a product of the normal

long term function of the stream. In places, the floodplain may be altered from its natural state by human activities, but in most cases these alterations also would affect the ability of those portions of the floodplain to provide the primary constituent elements. In such cases as these, inclusion of the 100-year historic floodplain as an indicator would be inappropriate.

FEMA has not mapped a 100-year floodplain on many portions of the upper watershed. According to a 1993 report by the interagency Forest Ecosystem Management Assessment Team (FEMAT), riparian zones, which provide for a majority of the primary constituent elements and components thereof, consist of "* * * areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables, and soils that exhibit some wetness characteristics." The FEMAT report (USDA et al. 1993) contains a comprehensive review of riparian ecosystem components and specifies that riparian zones for fish bearing streams should consist of "* * * the area on either side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of two site potential trees, or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest."

Under the Act's regulations (50 CFR 424.12(c)), measurements such as "the height of two site potential trees" cannot be used to determine critical habitat boundaries. Therefore, the Service has proposed the 300-foot widths discussed in the FEMAT definition of riparian areas as an indicator of the likely distribution of primary constituent elements in the absence of mapped FEMA floodplains.

Description of Units

The proposed designation includes 6 critical habitat units (CHU's) across the range of the two suckers. Each of these units provides all three of the primary constituent elements somewhere within the unit, but critical habitat only exists where one or more of the primary constituent elements is provided. Of these, all but Unit #6 (Gerber Reservoir and watershed) are proposed critical habitat for both the Lost River and shortnose suckers. Unit 6 is proposed as critical habitat only for the shortnose sucker. A brief description of each unit and the status of sucker populations inhabiting the units, follows.

Unit 1—Clear Lake and Watershed

Clear Lake supports a large population of shortnose suckers with consistent recruitment and a diverse age structure (Buettner and Scoppettone 1991). The status of the Lost River sucker population in Clear Lake is uncertain due to low catches, but the population is suspected to be larger than past sampling indicates. The age structure of Lost River suckers collected is fairly diverse (Scoppettone, per. comm. cited in USFWS 1993). Recent drought conditions may have reduced the habitat available for all fish in the Clear Lake watershed and the long-term effects on the sucker populations is unknown. This unit includes the waters of Clear Lake reservoir below the highwater line and a large portion of the Willow Creek and Boles Creek watersheds tributary to Clear Lake. The unit is located mostly in California with a small portion of Willow Creek that extends into Oregon, and includes Clear Lake National Wildlife Refuge, Modoc and Fremont National Forests, State, and private lands.

Unit 2—Tule Lake

Both Lost River and shortnose suckers have been found in Tule Lake in recent years (Scoppettone, pers. comm. cited in USFWS 1993). Researchers have not succeeded in estimating the size of the populations, but have documented the presence and relatively good health (as measured by condition factor) of populations of both sucker species in Tule Lake (Green 1993, Buettner, pers. comm.). Spawning runs from Tule Lake up the Lost River to Anderson-Rose Dam have been documented (USFWS 1993). This unit includes the waters of Tule Lake below the highwater line and the Lost River upstream to Anderson-Rose Dam. The unit is located mostly in California with a small portion of the Lost River that extends into Oregon and would include Tule Lake National Wildlife Refuge, Bureau of Land Management (Susanville District), National Park Service (Lava Beds National Monument), and private lands.

Unit 3—Klamath River

Shortnose suckers are present in Copco Reservoir on the Klamath River as an aged population; all shortnose suckers collected in 1987 were older adults (16–33 years old), indicating that neither successful reproduction nor recruitment from upstream sources has occurred since the early 1970's (Buettner and Scoppettone 1991). Lost River and shortnose suckers have been reported from other reservoirs in the Klamath River system between Upper Klamath Lake and Iron Gate Reservoir but little is known about the suckers in this stretch of river. This unit extends from Iron Gate Dam on the Klamath River in California to Link River Dam on Upper Klamath Lake in Oregon. The unit includes Winema and Klamath National Forest, Bureau of Land Management (Lakeview and Redding Districts), State, and private lands.

Unit 4—Upper Klamath Lake and Watershed (Excluding Williamson and Sprague Rivers)

Studies conducted in Upper Klamath Lake between the 1960's and the late 1980's documented serious declines in sucker populations of both species (Golden 1969, Andreasen 1975, Bienz and Ziller 1987). Fish kills associated with poor water quality in Upper Klamath Lake eliminated many larger adults of both species (Buettner and Scoppettone 1990).

In Upper Klamath Lake, recruitment of the Lost River and shortnose suckers to adult size classes is extremely poor, as evidenced by the existence of only two strong year classes of spawning adults in the last 20 years (Buettner and Scoppettone 1990). A juvenile year class from spawning activity may represent the most recent successful year class for both sucker species in the Upper Klamath Lake population in 1991 (Markle and Simon 1993).

A distinct population of Lost River suckers spawns at Sucker Springs on the shores of Upper Klamath Lake from mid-March through mid-April but may begin as early as the first of February (Andreasen 1975, Buettner and Scoppettone 1990, Klamath Tribe 1991). The Sucker Springs population of Lost River suckers appears to be comprised of large, older adults suggesting a lack of recruitment over the last 20 years (Buettner, pers. comm. cited in USFWS 1993). In 1993, limited use of Sucker Springs by shortnose suckers was also documented, but later in the season and with unknown spawning success (Buettner, pers. comm., Dunsmoor, pers. comm.). Entire stocks of Lost River suckers that once utilized other springs (e.g., Harriman Springs, Barkley Springs) disappeared between the 1960's and the present (USFWS 1993).

This unit includes the waters of Upper Klamath and Agency Lakes below the highwater line, portions of the watershed on the west side of Upper Klamath Lake, and much of the Wood River watershed. The unit also includes large wetland areas associated with the shorelines of the lakes and the floodplains of tributary streams and

rivers. Property in this unit is owned by the Winema National Forest, Bureau of Land Management (Lakeview District), Upper Klamath National Wildlife Refuge, State, and private citizens.

Unit 5—Williamson and Sprague Rivers

The Williamson and Sprague Rivers provide the primary river spawning habitat for the Upper Klamath Lake populations of both sucker species, although the quality and quantity of this habitat has declined (USFWS 1993). Spawning migrations by both species, and the outmigration of larval suckers after spawning, occur in the lower Williamson River and the Sprague River to the Sprague River Dam. Although the dam does have passage facilities that allow migrating fish access to spawning habitats upstream of the dam, the availability of suitable spawning habitat has been reduced (J. Kann, C. Bienz and L. Dunsmoor, Klamath Tribes, pers. comm. 1993). The lower Williamson River is also important larval rearing habitat (Klamath Tribe 1991) and may provide important water quality refugia for adult suckers during summer algal blooms. This unit extends from the mouth of the Williamson River at Upper Klamath Lake upstream to the confluence of the Sprague River, then up the Sprague River to upper limit of the presumed historic distribution near the confluence of Brown Creek. It includes 100-year floodplains along both the Williamson and Sprague Rivers, as well as some of their tributary streams. This unit includes land of the Winema and Fremont National Forests, Bureau of Land Management (Lakeview District), and private citizens and lies entirely within the State of Oregon.

Unit 6—Gerber Reservoir and Watershed

Gerber Reservoir is the only major habitat area inhabited by shortnose suckers but not Lost River suckers. The Gerber Reservoir population of shortnose suckers appears healthy in that it has successfully recruited in the last few years (Buettner, pers. comm. cited in USFWS 1993). Reproduction of shortnose suckers has been documented in Gerber Reservoir and its tributary streams despite stress likely induced by low reservoir levels associated with drought conditions and irrigation releases (Buettner, pers. comm. cited in USFWS 1993). This unit includes the waters of Gerber Reservoir below the highwater line and a large portion of the Ben Hall, Barnes, Barnes Valley, Pitchlog, and Wildhorse Creek watersheds. The unit is located entirely within the state of Oregon and would include Bureau of Land Management (Lakeview District), Fremont National Forest, State, and private lands.

Areas Not Proposed

Section 3(5)(C) of the Act states that "[e]xcept in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species." The Service has not proposed the permanent irrigation canals of the Bureau of Reclamation's Klamath Project, including portions of the Lost River, even though both species may occur in these canals. An exception is the Lost River below Anderson-Rose Dam, which is included because of its connection to Tule Lake. These canal habitats are barely suitable for suckers and typically do not provide for large, recruiting populations. Additionally, the Service has not proposed Lower Klamath Lake, Sheepy Lake, and other bodies of water on or near the Service's Lower Klamath National Wildlife Refuge, even though these fall within the current or historic range of both species. These habitats were excluded because they do not appear to provide adequate habitats to support stable populations. Additionally, certain lands that occur within the legally defined boundaries of proposed critical habitat but do not or could not provide any of the primary constituent elements are not considered included in the proposed critical habitat area (see legal descriptions and accompanying maps).

Effects of Critical Habitat Designation

Section 7(a)(2) of the Act requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to destroy or adversely modify designated critical habitat. This Federal responsibility accompanies, and is in addition to, the section 7(a)(2) requirement that Federal agencies insure that their actions are not likely to jeopardize the continued existence of any listed species. A Federal agency must consult with the Service if its proposed action may affect a listed species or its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402.

Destruction or adverse modification of critical habitat is defined as "* * * 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." 50 CFR 402.02. Jeopardy is defined at 50 CFR 402.02 as any action that would be expected to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild.

Survival and recovery are related concepts. Survival may be viewed as a linear continuum between recovery and extinction of the species. The closer one is to recovery, the greater the certainty of the species' continued survival. The terms "survival and recovery" are thus related by the degree of certainty that the species will persist over a given period of time. Survival is influenced by a species' population numbers, distribution throughout its range, stochasticity, expected duration, and reproductive success.

The Act's definition of critical habitat indicates that the purpose of critical habitat is to contribute to a species' conservation (i.e., recovery). Section 7's mandate that Federal agencies insure against the destruction or adverse modification of critical habitat is directed at actions that would diminish the value of habitat essential to the survival and recovery of listed species, thus providing a regulatory means of ensuring that Federal actions within critical habitat are considered with respect to the recovery needs of a listed species. Thus, the adverse modification standard has been applied closer to the recovery end of the survival continuum, whereas, the jeopardy standard has been applied nearer to the extinction end of the continuum.

Once critical habitat designation has been proposed, section 7(a)(4) of the Act and implementing regulations (50 CFR 402.10) require Federal agencies to confer with the Service on any action that is likely to result in the destruction or adverse modification of the proposed areas. Conference reports provide advisory conservation recommendations to assist a Federal agency in identifying and resolving conflicts that may be caused by the proposed action.

If an agency requests, and the Service concurs, a formal conference report may be issued. Formal conference reports on proposed critical habitat contain an opinion that is prepared in accordance with the procedures for formal consultation as if the critical habitat were already designated. Such a formal conference report may be adopted as the biological opinion pursuant to 50 CFR 402.10(d) when the critical habitat is designated, if no significant information or changes in the action occur that would alter the content of the opinion.

Designation of critical habitat focuses on the primary constituent elements within the defined units and their contribution to the species' recovery,

based on consideration of the species' biological needs and factors that contribute to recovery (e.g., distribution, numbers, reproduction, and viability). The evaluation of actions that may affect critical habitat for the Lost River and/or shortnose sucker would consider the effects of the action on any of the factors that were the basis for determining the habitat to be critical. These include the primary constituent elements of water, physical habitat, and biological environment, including the ability of an area currently lacking these elements to provide them in the future, as well as the contribution of the critical habitat unit to recovery.

Individual critical habitat units would be part of a habitat network essential to maintaining stable and well distributed populations over the ranges of both species. Section 7 analysis of activities affecting sucker critical habitat would consider impacts to individual critical habitat units, as well as the entire area designated. The Service, in its review of an action, would base its biological opinion relative to the adverse modification standard first on the critical habitat unit and then on the entire area designated.

For species where multiple critical habitat units are designated, each unit has both a local role and a rangewide role in contributing to the conservation of the species. The loss of a single unit may not jeopardize the continued existence of the species, but may significantly reduce the ability of critical habitat to contribute to recovery. In some cases, the destruction of a proposed critical habitat unit could result in the loss of an entire population, which could preclude recovery or reduce the likelihood of survival of the species. The critical habitat units in the proposed rule include the areas known to be important to recovery as described in the recovery plan to the majority of the known populations of Lost River and shortnose suckers.

Each proposed critical habitat unit is related to and, in some cases, dependent upon, adjacent units. For example, impacts to one unit may have an effect on other units downstream of that unit. The gradual degradation of an upstream critical habitat unit to the point where it no longer fulfills the overall function for which it was proposed may diminish the survival and recovery of the species because of effects on downstream units.

Present conditions vary among proposed units such that some areas may be less able to sustain continuing impacts than others at any given time. The level of disturbance a critical habitat unit could withstand and still fulfill its intended purpose is variable throughout the species' range and would need to be reviewed in the context of its current status, condition, and location. Each Federal action would require review as to its impacts at both the unit and species range level. When determining whether or not any particular action would appreciably diminish the value of the habitat for the survival and recovery of the species, the baseline condition and expected roles for both the individual critical habitat unit and connected nearby units must be considered. Under this proposal, the Service's analysis would consider the indirect effects on critical habitat from actions planned outside the designated area. Analysis of impacts to individual units would consider the effects on the local area (both the unit and nearby connected units), as well as the impacts to the entire complex of critical habitat units.

Examples of Proposed Actions

Section 4(b)(8) of the Act requires, for any proposed or final regulation to designate critical habitat, a brief description and evaluation of those activities (public or private) that may adversely modify such habitat or may be affected by such designation. Several activities, depending on the season of occurrence and the scale of the project, may result in the destruction or adverse modification of the proposed critical habitat without necessarily jeopardizing the continued existence of the Lost River and/or shortnose suckers. Examples include, but are not limited to: Timber harvest; forest management; Federal farm loan programs; flood control; lease land farming activities on refuge lands; road construction and refurbishment; hydroelectric facilities management; livestock grazing activities; irrigation delivery programs; agricultural activities; urban water and sewage management; ecosystem restoration activities; wetland filling activities; pipeline construction activities; and development.

Section 7 consultation on critical habitat would be required if a given Federal agency action may affect, directly or indirectly, any of the primary constituent elements. The Service would consider the effect of the proposed action on the primary constituent elements along with the reasons why the particular critical habitat unit was designated. Actions physically located outside of critical habitat that may affect one or more of the primary constituent elements such as through increases in sedimentation, nutrient transport, impacts to timing and quantity of streamflow, and by other means, could indirectly result in destruction or adverse modification of critical habitat, and would require consultation. Federal agencies would consult on actions that may affect the water quality, streambank stability, sedimentation rates, nutrient dynamics, floodplain structure or function, or aquatic habitat complexity of the following areas: (1) The Sprague/Sycan watershed above the Sprague River confluence with the Williamson River; (2) the Willow Creek and Boles Creek watersheds tributary to Clear Lake Reservoir; (3) the Gerber watershed tributary to Gerber Reservoir; (4) the west side tributaries to Upper Klamath Lake; and, (5) the Wood River watershed and tributaries. These consultations would be required because of the indirect effects of actions on downstream critical habitat units. Designation of critical habitat as proposed would likely add incrementally to the consultation workload that already exists by virtue of the listed status of the suckers primarily due to the inclusion in the designation of areas that are not currently occupied by the species but could provide suitable recovery habitat.

Although the current condition of these sub-basins suggests that minor activities (e.g., individual timber sales, grazing allotments, or road construction projects) may adversely affect downstream critical habitat, this may not always be the case. As recovery plan or other restoration activities bring about improvements in the amount, distribution, and quality of sucker habitat through watershed improvement, the resilience of the ecosystems that suckers depend upon should increase. These improvements should increase the ability of the watershed to ameliorate disturbances imposed by human activities, such that minor actions might no longer adversely affect critical habitat (see Biological Support Document).

Land Ownership

The proposed critical habitat includes lands of Federal, State, and private ownership as determined from BLM 1:100,000 surface or minerals management maps of the Basin. Federal lands and facilities (e.g., dams, canals, reservoirs) within the proposed designation include those owned and managed by Forest Service, Bureau of Land Management, Bureau of Reclamation, and Fish and Wildlife Service. The biological support document describes in greater detail the land ownership of each proposed critical habitat unit. While many structural facilities fall within the

boundaries of the proposed critical habitat, they would be affected by the critical habitat designation only to the extent that they provide a primary constituent element essential to the species, or that they affect the ability of an area to provide a primary constituent element.

Several reservoirs, or portions thereof, are included in the proposed critical habitat designation. The proposal would cover all areas contained within the reservoir shorelines at the full-pool elevation (the water surface elevation at full capacity). The reservoir's physical features such as shoreline vegetation, spring inflows, deep spots, and areas of vegetation that, when covered by water, can provide spawning, rearing, feeding or other habitat components, can provide important elements of sucker habitat. By establishing the upper boundary at the full pool elevation, all physical habitats within the reservoir would be included as critical habitat regardless of the water elevation at any given time. This does not mean, however, that the reservoir is required to be continuously maintained at the full pool elevation.

Included within the proposed designation are some lands falling within the boundaries of Fish and Wildlife Service National Wildlife Refuges (refuge lands). Critical habitat is defined as areas which are essential to the conservation of the species and require special management considerations or protection (section 3(5)(A)). Most of the refuge lands in the Klamath Basin are currently managed to provide the primary constituent elements of critical habitat, or do not provide suitable sucker habitat, and so are not included in this proposed designation. However, water levels on some refuge lands that provide suitable sucker habitat are dependent on either irrigation return flows, water stored for irrigation delivery, or available water after existing water rights for agricultural uses on the Klamath Project have been met (USFWS 1989, USFWS 1991, USBR 1992). The management of water on these lands, and thus the ability to manage refuge lands for the primary constituent elements on the Upper Klamath Marsh and Hank's Marsh Refuges, is entirely dependent upon reservoir management as determined by the Bureau of Reclamation (J. Hainline, USFWS Klamath Refuge Complex, pers. comm., 1994). Similarly, lake levels and volumes at Clear Lake and Tule Lake Refuges are under the control of the Bureau of Reclamation, and the Refuges have neither significant water rights nor water delivery contracts with Reclamation in order to provide for the needs of the suckers (J. Hainline, USFWS Klamath Refuge Complex, pers. comm., 1994). Therefore, these lands are appropriate to include in this proposed critical habitat rule. Prior to making a final decision on this proposal, the Service will assess the need to include all lands within the 100-year FEMA floodplain and may reduce the acreage of refuge and other lands included as critical habitat in the final rule. These refuge lands are identified in the Recovery Plan as being crucial to the sucker's survival and recovery (USFWS 1993).

Some State and private lands and waters are included within the proposed designation of critical habitat. The designation of State and private lands as critical habitat would not affect landowners in the absence of a Federal action. However, any Federal actions authorized, funded, or carried out by a Federal agency that may affect critical habitat on such lands would necessitate consultation by the action agency. Due to the limited extent of Federal involvement, the Service expects that relatively few formal section 7 consultations would be initiated for actions on these lands as a result of critical habitat designation.

Should a Federal action occur on State or private land, the Federal agency carrying out the action would be responsible for consulting with the Service if the action might affect critical habitat.

Consideration of Economic and Other Factors

Introduction

Section 4(b)(2) of the Act requires consideration of economic and other relevant impacts in determining whether to exclude areas from critical habitat. Areas may be excluded from critical habitat designation when the costs or impacts of designation outweigh the benefits, provided that exclusion will not result in extinction of a species.

The economic analysis addresses only at the incremental economic impact of designating critical habitat above and beyond any economic impacts resulting from the listing of the species. The economic impacts of listing under the Act cannot be considered. See H.R. Rep. No. 835, 97th Cong., 2d Sess. 19–20 (1982).

An economic analysis was conducted to estimate the economic effects of the proposed critical habitat designation. The Service contracted ECO Northwest, of Eugene, Oregon, to conduct an economic analysis and assist with the collection of data relevant to analyzing the economic impacts designation of critical habitat would have. The report by ECO Northwest, which follows the methodology described in ECO Northwest (1994), is available from the Service's Portland Field Office (see ADDRESSES section above). The Service is soliciting comments on the draft economic analysis report.

To collect the information used in the economic analysis, the Service developed a questionnaire which was sent to each Federal agency operating in the Upper Klamath Basin. The questionnaire assisted both the Federal agencies and the Service in collecting the information that could be used in developing an economic analysis for this critical habitat proposal. The questionnaire requested information that was already in existence or readily available in agency planning documents or associated environmental impact statements (EIS), if any. The completed questionnaires provided an approximation of the economic impacts of the proposed designation, although predictable inaccuracies in the agency responses existed due to the lack of details about where critical habitat would be designated, how consultations on critical habitat would be conducted, and the kinds of agency actions that would require consultation.

The questionnaires sent to land management agencies (such as the Forest Service and Bureau of Land Management) asked the agencies to select an option or alternative from their most recent land or resource management plan or EIS to correspond to each of three scenarios: (1) The level of agency activity and associated economic values that occurred in the period prior to the listing of the Lost River and shortnose sucker as endangered in July of 1988, called the "historical scenario"; (2) the level of agency activity and associated economic values that occurred during the period after the suckers were listed that reflects the agency's response to that listing through section 7 consultations, called the "listing scenario"; and, (3) the level of agency activity and associated economic values that could reasonably be expected to occur if critical habitat were designated such that the actions of the agency might affect critical habitat, called the "critical habitat scenario". Given the role critical habitat plays in recovery of listed species (see discussion of Role of Critical Habitat in Species Recovery, above) and in consideration of the fact that the proposed critical habitat rule was not available to guide the agencies in selecting these options from their plan,

the Service asked the agencies to use the Lost River and Shortnose Sucker Recovery Plan as a proxy for a proposed critical habitat rule.

The questionnaires developed for the agencies that do not manage lands, per se, were similar to those developed for the land management agencies except that they did not request the agencies to select options or alternatives from land or resource management plans. The Service indicated to these agencies that, for the purposes of the survey, they should assume that the critical habitat scenario was analogous to the full implementation of the recovery plan. Further, the Service indicated that the intent and function of the recovery plan was such that implementation of the plan would likely result in the following:

(1) Improvements in the condition and extent of riparian vegetation for Upper Klamath Basin streams and rivers.

(2) Increases in the extent and connectivity of riparian and lake associated wetland areas.

(3) Re-establishment of functional aspects of floodplains in Upper Klamath Basin streams and rivers.

(4) Improvements in water quality in both lake and stream environments.

(5) Gradual return to more natural or historic hydrographs for basin streams and rivers, which would likely result in lowering of average peak run-off flows, and a general increase in summertime baseflows.

(6) Establishment of healthy and stable refugial sucker populations.

The questionnaires also served to identify areas in the Upper Klamath Basin where the agencies carried out actions and asked questions designed to assess the quantity and economic value of the market and non-market goods and services provided by the agencies under the three scenarios. The potential economic impacts of recent planning efforts that have resulted in proposed changes in the management of Federal lands were also addressed in the questionnaire. These include the Forest Ecosystem Management Assessment Alternative 9 for lands within the range of the Northern Spotted Owl (Alternative 9), PACFISH, and Rangeland Reform.

Responses to Questionnaires

Table 1 identifies the Federal agencies that received a questionnaire and a request for information on the potential economic impacts of this proposed rule. Table 1 also indicates the type of response, if any, received by either ECO Northwest or the Service.

TABLE 1.—THE RESPONSES OF FEDERAL AGENCIES THAT RECEIVED QUESTIONNAIRES

Agency	Response.
BLM, KFRA, Lakeview, OR [1]	Economic Info Provided.
BLM, Ukiah, CA	Economic Info Provided.
BLM, Alturas, CA	Economic Info Provided/No Impact.
BR, Klamath Proj., Klamath Falls, OR	Economic Info Provided.
FS, Fremont Nat. Forest, Lakeview, OR	Economic Info Provided.
FS, Winema Nat. Forest, Klamath Falls, OR	Economic Info Provided.
FmHA, Portland, OR	Economic Info Provided/Partial Response.
FS, Klamath Nat. Forest, Yreka, CA	No Impact.
NPS, Tule Lake, CA	No Impact.
ACE, Sacramento, CA	Survey Was Not Received.
ASCS, Klamath Falls, OR	None.
EPA, Seattle, WA	None.
FERC, San Francisco, CA	None.
FERC, Washington, D.C.	None.
FS, Modoc Nat. Forest, Alturas, CA	None.
NPS, Crater Lake, OR	None.
SCS, Klamath Falls, OR	None.
FWS, Klamath Refuge Complex, Tulelake, CA	None.[2]
ACE, Portland, OR	Survey Returned, No Economic Info.
FmHA, Klamath Falls, OR	Survey Returned, No Economic Info.
FWS, Klamath Fisheries Resource Office, Yreka, CA	Survey Returned, No Economic Info.

[1] The Klamath Falls Resource Area responded for Lakeview District, Oregon, and for Ukiah District, California.

[2] The questionnaire sent to FWS, Klamath Refuge Complex, required data from Bureau of Reclamation, Klamath Project. This information was not made available in time for a response from the Klamath Refuge Complex.

Abbreviations, Department of Agriculture: ASCS=Agricultural Stabilization and Conservation Service; FmHA=Farmers Home Administration; FS=Forest Service; SCS=Soil Conservation Service. Department of Interior: BLM=Bureau of Land Management; BLM, KFRA=BLM, Klamath Falls Resource Area of Lakeview District; BR=Bureau of Reclamation; FWS=Fish and Wildlife Service; NPS=National Park Service. Other: ACE=Army Corps of Engineers; EPA=Environmental Protection Agency; FERC=Federal Energy Regulatory Commission.

Table 2 shows the general characteristics of the responses of the agencies that supplied economic information in their response to the questionnaire and that indicated that the proposed critical habitat designation would affect their activities. Most agencies listed in Table 1 as not providing a response indicated that they would be commenting on the proposed rule during the 60-day comment period and cited workload constraints as the reason for not providing a response during the questionnaire process.

TABLE 2.—RESPONSES OF FEDERAL AGENCIES THAT PROVIDED ECONOMIC INFORMATION.

Agency	Impact of Species Listing	Impact of Critical Habitat
BLM, KFRA, Lakeview, OR [1]	Negative	Negative.
BR, Klamath Project, Klamath Falls, OR	Negative	No Additional Impact.
FS, Fremont National Forest, Lakeview, OR	Negative	No Additional Impact.
FS, Winema National Forest, Klamath Falls, OR	No Impact	Negative.
FmHA, Portland, OR	No Impact	Negative.

[1] The Klamath Falls Resource Area responded for the Lakeview District, Oregon, and for the Ukiah District, California.

Abbreviations, Department of Agriculture: FmHA=Farmers Home Administration; FS=Forest Service. Department of Interior: BLM=Bureau of Land Management; BLM, KFRA=BLM, Klamath Falls Resource Area of Lakeview District; BR=Bureau of Reclamation.

In developing the questionnaires, the Service realized that potential shortcomings in the questionnaire process were likely to affect the quality of the resulting data. Specifically, the Service recognized that requesting agencies to select an alternative from a planning document to correspond to any one of the three scenarios described above would necessarily limit and influence the scope of the agency's actions and the associated economic values. Similarly, using the recovery plan as a model for critical habitat in the absence of a proposed rule did not provide accurate estimates of the extent and distribution of critical habitat and would not result in completely accurate information on how section 7 consultations on critical habitat would affect agency activities. In spite of these limitations, the economic analysis will facilitate the public review process by providing an indication of the potential economic impacts of designating critical habitat for the Lost River and shortnose suckers.

Responses regarding whether a particular effect would be attributed to the listing or proposed designation reflected divergent agency perspectives. This was apparent in the discrepancies between agency responses as shown in the second and third columns of Table 2, where agencies with similar lands and actions reached very different conclusions about the relative impacts of the listing and critical habitat scenarios. The types of actions that may have been erroneously applied to the critical habitat scenario would include those occurring since the listing that may affect the suckers but that have not gone through section 7 consultation. In such cases, these economic impacts belong at least partially in the listing scenario and so would reduce total impacts (whether positive or negative) attributed to the critical habitat scenario.

The Service analyzed the questionnaire responses to identify any instances where the responding agency may have incorrectly attributed impacts to the wrong category (such as placing a critical habitat impact in the listing category). The Service identified two cases where an agency apparently erred in determining the scale of impact or where impacts were inappropriately attributed to a scenario other than that in which they belonged. In both cases, the Service concluded that the data presented do not accurately reflect the impacts attributable solely to the proposed critical habitat, separate from the impacts attributable to the listing and other factors. Consequently, the draft economic study reports the data provided by all agencies, but does not integrate the data of concern from the two agencies into the analysis of the economic effects of the proposed rule. The Service will work with these agencies in order to include their data in the final economic analysis.

Economic Analysis Methodology

The following discussion is a brief overview of the methods used to conduct the economic analysis. Additional details are contained in the economic report.

The economic analysis consists of five parts. The first is a description of the local and regional economies and particularly of those elements of these economies that would be affected by the proposed designation. The second is a description of the impacts of the proposed designation on the activities of Federal agencies and of the resulting change in the level and price of each good and service produced from Federal lands or authorized or funded by Federal agencies. The third is a static estimate of the impacts on the local economy, assuming that labor and other inputs are immobile across industries and space. The fourth is an assessment of the long-run effects of the proposed designation and a description of the path different elements of the local economy are likely to follow as they make the transition from the short-run to the long-run. The fifth is an assessment of the proposed designation's overall effects on national economic welfare and economic fairness.

Results of the Economic Analysis

The proposed designation would restrict the ability of Federal agencies to engage in activities, or to support the activities of others, that would adversely modify or destroy the designated critical habitat. This restriction would have multiple, complex economic effects at the local, regional, and national levels. In addition to restricting those who otherwise would be engaged in habitat-degrading activities, the designation also would affect those who no longer would experience spillover effects from habitat degradation, those who would experience a change in the local quality of life, and those who would experience an increase in the intrinsic value they place on the suckers.

The major Federal resource-management agencies in the Upper Klamath Basin generally indicated in their questionnaire responses that they must change their activities to afford protection to the suckers, but they have reached different conclusions about whether these changes are prompted by the listing, the critical habitat designation, or both. BLM-Klamath Falls was the only agency to indicate that it must alter its activities in response to the listing and make additional changes in response to the designation. The Winema National Forest and Farmers Home Administration (FmHA) indicated that they did not change their activities in response to the listing but would have to change them in response to the designation, although FmHA did not provide any substantiation. The Bureau of Reclamation (Klamath Project) and the Fremont National Forest indicated they changed their activities in response to the listing but would make no further changes in response to the designation. BLM-Alturas indicated that its activities would not be affected by either the listing or the designation.

The data reported by some agencies may overstate the impacts attributable to the proposed designation. For example, the Winema National Forest indicated that potential reductions in the production of cattle grazing and firewood from its lands due to critical

habitat designation would likely be subsumed by the adoption of PACFISH. Similarly, BLM-Klamath Falls indicated that the impact on the production of cattle grazing on its lands would be subsumed by the adoption of Option 9 for management of spotted-owl forests and by the implementation of rangeland-reform proposals.

These preliminary economic findings reflect the Service's determination that further clarification is needed regarding (a) all of the data in the response from the Winema National Forest, and (b) the data related to fishing, boating, and camping at Gerber Reservoir in the response from the BLM's Klamath Falls Resource Area.

Table 3 presents a static estimate of the potential impact on local employment associated with the change in output of goods and services attributed to the proposed designation by the resource-management agencies (exclusive of the data requiring clarification as described above). This estimate represents the maximum potential effect on local employment and would occur only if there were no intra- or interindustry factor substitution or mobility. To the extent that employers were successful in responding to the reduction in the output of a good or service by developing new products or new markets, the impact on local employment would be less. Assuming that none of the affected employers would be successful, the change in output would cause approximately 63 workers to lose jobs they would have had, but for the designation, in the local economy as it is currently constituted. Nearly all of these would be tied to the indicated reductions in the output of timber.

TABLE 3.—STATIC ESTIMATE OF THE POTENTIAL IMPACT ON LOCAL EMPLOYMENT FROM THE CHANGE IN OUTPUT OF GOODS AND SERVICES FROM FEDERAL LANDS, BY DRAINAGE BASINS [1]

Goods and impacts	Gerber Reservoir	Klamath River [2]	Total
Non-Market Goods, Recreation	+2	−4	−2
Market Goods:			
Timber	0	−61	−61
Grazing	−1	−1	−2
Firewood	0	0	0
Christmas Trees	0	0	0
Recreation	0	+2	+2
Total Initial Impact on Employment	+1	−64	−63

[1] Preliminary estimate. Total (direct, indirect, and induced) change in employment in Klamath County assuming no intraindustry or interindustry factor substitution or mobility, exclusive of Winema National Forest, subject to clarification during the public comment period of data provided by the Winema National Forest. Exclusive of fishing, boating, and camping impacts at Gerber Reservoir, pending clarification during the public comment period of data provided by the BLM Klamath Falls, Resource Area.

[2] Klamath River and tributaries below Link River Dam and above Iron Gate Dam, excluding Jenny Creek drainage basin.

These potential changes would occur within the context of economic growth at the local and regional level. Much of this growth is attributable to the immigration of workers and households, and recent survey research indicates that much of the immigration is motivated by a desire to take advantage of the local and regional quality of life. The quality-of-life attributes associated with proximity to natural-resource amenities seem especially important as the basis for current growth trends. To the extent that the designation enhances these amenities, it will facilitate the local economy's adjustment to the reduction in timber output.

The potential impact on the timber and agricultural industries is unlikely to have a discernible impact on commodity prices or production. Commodity and capital markets will adjust to the proposed designation quickly and they probably already have begun to do so. The adjustment will be less facile for local dislocated workers whose employers are unable to respond successfully to the reduced output of goods and services from Federal lands.

In general, dislocation of workers in the local resource extraction industries would be offset, in the long run, by the creation of additional jobs in other sectors locally or in other areas. The national adjustment to the proposed designation would be essentially imperceptible as the U.S. economy redeployed labor and other resources that might become unemployed because of the designation. As buyers, sellers, workers, firms, households, and communities adjusted to the proposed designation, its economic impacts would be spread over a broad economic and spatial landscape.

It cannot be concluded, a priori, that the value of the bundle of goods and services available to society with the proposed designation is larger or smaller than the value of the bundle without it. To quantify fully the amount and value of each good and service in each of the two bundles requires an extensive and detailed analysis of the short-run, transition, and long-run effects. Whether the designation would yield net benefits or net costs has not been finally determined, but it appears that the effect would be close to zero in either case.

Available Conservation Measures

The purpose of the Act, as stated in section 2(b), is to provide a means to conserve the ecosystems upon which endangered and threatened species depend and to provide a program for the conservation of listed species. Section 2(c)(1) of the Act declares that "* * * all Federal departments and agencies shall seek to conserve endangered and threatened species and shall utilize their authorities in furtherance of the purposes of this Act".

The Act mandates the conservation of listed species through various mechanisms, such as: Section 7 (requiring Federal agencies to further the purposes of the Act by carrying out conservation programs and insuring that Federal actions will not likely jeopardize the continued existence of the listed species or result in the destruction or adverse modification of critical habitat); section 9 (prohibition of taking of listed species); section 10 (research permits and habitat conservation plans); section 6 (cooperative State and Federal grants); land acquisition; and research. The section 7 requirement that Federal agencies consult with the Service if their actions may impact critical habitat enables the Service to assess Federal activities that may impair survival and recovery potential, thus ensuring that such

actions are considered in relation to the goals and recommendations of the recovery plan.

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned government agencies, Indian Nations, the scientific community, commercial interests, or any other interested party concerning this proposed rule are hereby solicited. Comments are particularly sought concerning:

(1) The reasons why any Federal lands (either proposed critical habitat or additional areas) should or should not be determined to be critical habitat as provided by section 4 of the Act;

(2) The location and reasons why any non-Federal lands should or should not be determined to be critical habitat as provided by section 4 of the Act;

(3) Current and planned activities in or upstream of proposed critical habitat areas and their possible impacts on proposed critical habitat;

(4) Other physical and biological features that are essential to the conservation of the species and in need of special management or protection;

(5) Specific information on the scale, location, and distribution of primary constituent elements on all ownerships and land designations;

(6) Information concerning health of the ecosystems on which the Lost River and/or shortnose sucker depend;

(8) Information on the economic benefits and costs that would result from this proposed designation of critical habitat;

(9) Data and information relevant to determining whether the benefits of excluding a particular area from critical habitat outweigh the benefits of specifying the area as critical habitat;

(10) The methods the Service might use in determining whether the costs of designating an area outweigh the benefits of designation;

(11) Methods of analysis useful in evaluating economic and other relevant impacts;

(12) Information regarding the suitability or unsuitability as critical habitat boundaries of the 100-year flood plain (as defined on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM's)), or of the 300-foot widths as riparian critical habitat boundaries, modeled after Riparian Reserves as discussed in the Report of the Forest Ecosystem Management Assessment Team.

(13) Information about areas of land or water located within the outer boundaries of the proposed critical habitat, but that do not provide primary constituent elements and can thus be excluded. Of particular interest are means to describe these areas of land with specific limits using reference points and lines as found on standard topographic maps.

The final decision on this proposal will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

Public Hearings

The Act provides for at least one public hearing on this proposal, if requested by January 17, 1995. Requests for a hearing must be made in writing and addressed to the Field Supervisor, Portland Field Office (see **ADDRESSES** section).

National Environmental Policy Act

The Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

Required Determinations

This proposed rule was reviewed under Executive Order 12866. The rule will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). Based on the information discussed in this rule concerning public projects and private activities within the proposed critical habitat, significant economic impacts will not result from this action. Also, no direct costs, enforcement costs, information collection, or recordkeeping requirements are imposed on small entities by this action, and the rule contains no recordkeeping requirements as defined under the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). This rule does not require a Federalism assessment under Executive Order 12612 because it would not have any significant federalism effects as described in the order.

References Cited

A complete list of all references cited herein is available upon request from the Field Supervisor, Portland Field Office (see **ADDRESSES** section).

Authors: The primary authors of this proposal are Rollie White of the Service's Portland Field Office and Kevin Stubbs of the Service's Sacramento Field Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, the Service hereby proposes to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500, unless otherwise noted.

2. Section 17.11(h) is amended by revising "NA" in the "Critical habitat" column in the table entries for "Sucker, Lost River" and "Sucker, shortnose", under FISHES, to read "17.95(e)" and "17.95(e)", respectively.

3. Section 17.95(e) is amended by adding critical habitat for the Lost River Sucker (*Deltistes luxatus*) and Shortnose Sucker (*Chasmistes brevirostris*), in the same alphabetical order as they appear in 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) *Fishes.*

* * * * *

Lost River Sucker (Deltistes luxatus)

(1) Clear Lake and Watershed, Modoc County, California (Mt. Diablo Meridian), and Klamath and Lake Counties, Oregon (Willamette Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels, effective date September 24, 1984; or, in the absence of an applicable FIRM panel, within 300 feet of said body of water. The specific panel map number is shown in parentheses.

Mt. Diablo Meridian

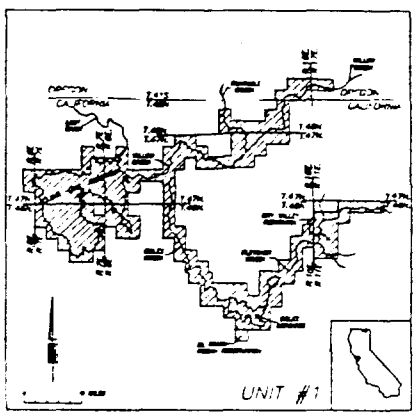
T 46 N, R 11 E.,
Secs. 1–4, 7–9, 17–20, 29, 30 (060192–0275 B).
T 46 N, R 10 E.,
Secs. 13, 23, 24, 26, 34, 35 (060192–0275 B and 060192–0450 B).
T 45 N, R 10 E.,
Secs. 3–5, 8, 9, 16–20, 29, 30 (060192–0425 B and 060192–0450 B).
T 45 N, R 9 E.,
Secs. 4, 5, 9–16, 23–25 (060192–0425 B).
T 46 N, R 9 E.,

Secs. 18, 19, 29, 30, 32, 33 (060192–0250 B and 060192–0425 B).
T 46 N, R 8 E.,
Secs. 1, 5–9, 12, 13, 16, 17 (060192–0250 B) including only those portions of the listed sections occurring within Clear Lake reservoir at full pool elevation.
T 48 N, R 10 E.,
Secs. 22, 27, 28, 31–34 (060192–0075 B and 060192–0100 B); secs. 22, 27 and 33, North Fork Willow Creek, and secs. 31 and 32, Wildhorse Creek.
T 47 N, R 10 E.,
Secs. 3–8, 18 (060192–0075 B, 060192–0250 B, 060192–0275 B and 060192–0100 B); and secs. 5, 7 and 18, North Fork Willow Creek; and secs. 5 and 6, Wildhorse Creek.
T 47 N, R 9 E.,
Secs. 1, 5–9, 12–16, 18 (060192–0075 B and 060192–0250 B); and secs. 13 and 14, North Fork Willow Creek; and secs. 1, 12 and 13, Fourmile Creek.
T 47 N, R 8 E.,
Secs. 8, 12, 13, 17, 18, 20–25, 28, 29, 31, 32, 36 (060192–0075 B and 060192–0250 B); and including only those portions of the listed sections occurring within Clear Lake reservoir at full pool elevation.
T 48 N, R 9 E.,
Secs. 26, 35, and 36, Fourmile Creek.
T 46 N, R 7 E.,
Secs. 2, 3, 6–8, 11–13, 16, 17, 21–24, 26, 27, lying within Clear Lake reservoir at full pool elevation.
T 47 N, R 7 E.,
Secs. 11, 13, 14, 19–23, 26, 27, 30, 31, 34–36, lying within Clear Lake reservoir at full pool elevation.
T 47 N, R 6 E.,
Secs. 24 and 25, lying within Clear Lake reservoir at full pool elevation.

Willamette Meridian

T 41 S, R 16 E.,
Secs. 13, 14, and 22–24, North Fork Willow Creek.
T 41 S, R 17 E.,
Secs. 17 and 18, North Fork Willow Creek.

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(2) Tule Lake, Siskiyou and Modoc Counties, California (Mt. Diablo Meridian), and Klamath County, Oregon (Willamette Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels, effective date May 17, 1982, or December 18, 1984, whichever is applicable. The specific panel map number is shown in parentheses.

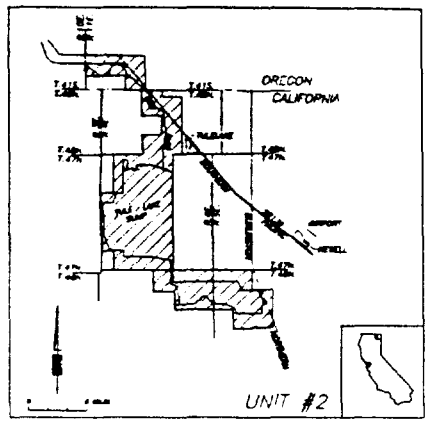
Mt. Diablo Meridian

T 46 N, R 5 E.,
Secs. 5–9, 16, 17 (060192–0200 B).
T 46 N, R 4 E.,
Secs. 1–3, 11, 12 (060362–0500 B).
T 47 N, R 4 E.,
Secs. 3–5, 8–10, 15–22, 27–30, 32–34 (060362–0500 B and 060362–0250 B).
T 48 N, R 4 E.,
Secs. 16, 21, 22, 27, 33, 34 (060362–0250 B).

Willamette Meridian

T 41 S, R 11 E.,
Secs. 7–9, 16 (410109–1400 B); including only those portions of sec. 7 downstream of Anderson-Rose Dam, and those portions of listed sections inside the top of the Lost River dike.

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(3) Klamath River, Klamath County, Oregon (Willamette Meridian), and Siskiyou County, California (Mt. Diablo Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels with effective dates of June 5, 1985; December 18, 1984; or May 17, 1982, whichever is applicable; or, in the absence of an applicable FIRM panel, within 300 feet of said body of water. The specific panel map number is shown in parentheses.

Willamette Meridian

T 38 S, R 9 E.,
Secs. 30–32 (410112–0005 B); and lying within Upper Klamath Lake reservoir at full pool elevation.
T 39 S, R 9 E.,
Secs. 4, 5, 8, 9, 17–19, 30 (6410112–009 B and 6410112–1205 B).
T 40 S, R 8 E.,
Secs. 1–3, 5, 6, 8–12, 14–16 (410109–1195 B and 410109–1350 B).
T 39 S, R 8 E.,
Secs. 23–27, 31, 34–36 (410109–1195 B and 410109–1215 B).
T 39 S, R 7 E.,
Secs. 21, 26–32, 35, 36 (410109–1195 B and 410109–1200 B).
T 40 S, R 7 E.,
Sec. 6 (410109–1200 B and 410109–1350 B).
T 40 S, R 6 E.,
Secs. 1, 12–14, 23, 26, 34, 35 (410109–1325 B and 410109–1350 B).
T 41 S, R 6 E.,
Secs. 3, 7–10, 18, (410109–1350 B) Klamath River.
T 41 S, R 5 E.,
Secs. 12 and 13, Klamath River.

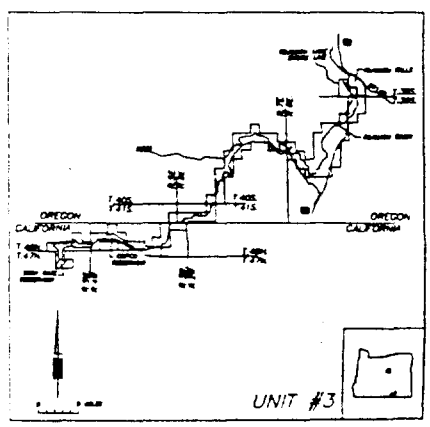
Mt. Diablo Meridian

T 48 N, R 3 W.,
Secs. 13–15, 22, 27, 28, 32, 33 (060363–0175 B).
T 48 N, R 4 W.,
Secs. 21, 27–31, 34–36 (060363–0175 B and 060363–150 B).
T 48 N, R 5 W.,
Secs. 26, 32–36 (060363–150 B).
T 47 N, R 5 W.,
Secs. 4, 9, 10 (060363–150 B).
T 40 S, R 7 E.,
Sec. 6 (410109–1200 B and 410109–1350 B).
T 40 S, R 6 E.,
Secs. 1, 12–14, 23, 26, 34, 35 (410109–1325 B and 410109–1350 B).
T 41 S, R 6 E.,
Secs. 3, 7–10, 18, (410109–1350 B) Klamath River.
T 41 S, R 5 E.,
Secs. 12 and 13, Klamath River.

Mt. Diablo Meridian

T 48 N, R 3 W.,
Secs. 13–15, 22, 27, 28, 32, 33 (060363–0175 B).
T 48 N, R 4 W.,
Secs. 21, 27–31, 34–36 (060363–0175 B and 060363–150 B).
T 48 N, R 5 W.,
Secs. 26, 32–36 (060363–150 B).
T 47 N, R 5 W.,
Secs. 4, 9, 10 (060363–150 B).

BILLING CODE 4310–55–P

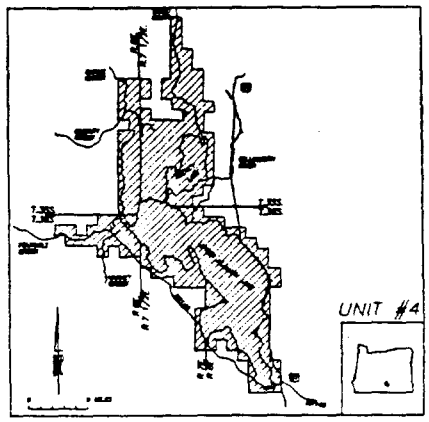


BILLING CODE 4310–55–C

(4) Upper Klamath Lake, Klamath County, Oregon (Willamette Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels, effective date May 17, 1982, or December 18, 1984, whichever is applicable; or, in the absence of an applicable FIRM panel, within 300 feet of said body of water. The specific panel map number is shown in parentheses.

T 38 S, R 8 E.,
Secs. 1, 3, 4, 6, 10–14, 23, 25 lying within Upper Klamath Lake reservoir at full pool elevation.
T 38 S, R 7 E.,
Sec. 1 lying within Upper Klamath Lake reservoir at full pool elevation.
T 37 S, R 8 E.,
Secs. 1, 6–8, 12, 13, 17–19, 24–26, 28, 29, 31–33, 35–37, lying within Upper Klamath Lake reservoir at full pool elevation.
T 37 S, R 9 E.,
Sec. 6 lying within Upper Klamath Lake reservoir at full pool elevation, and within the waters of Hagelstein Park.
T 37 S, R 7 E.,
Secs. 1–3, 24, 25, 36 (410109–1050 B); or lying within Upper Klamath Lake reservoir at full pool elevation.
T 38 S, R 9 E.,
Secs. 18, 19, 30 lying within Upper Klamath Lake reservoir at full pool elevation.
T 36 S, R 7½ E.,
Secs. 2, 3, 11, 12, 18, 19, 21, 23–30, 32–36 (410109–1050 B and 410109–900 B); or lying within Upper Klamath Lake reservoir at full pool elevation.
T 36 S, R 7 E.,
Secs. 7, 8, 15–17, 22, 23, 25, 26, 36 (410109–1050 B and 410109–900 B); or lying within Upper Klamath Lake reservoir at full pool elevation.
T 36 S, R 6 E.,
Secs. 1–4, 8–18, 21, 23, 24, or (410109–870 B, 410109–875 B and 410109–900 B); or lying within Upper Klamath Lake reservoir at full pool elevation.
T 36 S, R 5 E.,
Secs. 11–13, (410109–870 B) Fourmile Creek.
T 35 S, R 6 E.,
Secs. 1, 2, 11–14, 23–26, 35, 36 (410109–725 B, 410109–750 B, 410109–875 B and 410109–900 B).
T 34 S, R 6 E.,
Secs. 1, 2, 11–14, 24–26, 35, 36 (410109–725 B and 410109–750 B).
T 34 S, R 7½ E.,
Secs. 1–4, 6, 9–14, 18–36 (410109–750 B and 410109–745 B); including only those portions of sec. 9 found to the east of the Wood River.
T 35 S, R 7½ E.,
Secs. 2–10, 16–21, 24–30, 33, 34 (410109–745 B, 410109–750 B, 410109–885 B, and 410109–900 B).
T 35 S, R 7 E.,
Secs. 6, 7, 18, 19 (410109–745 B and 410109–885 B); or lying within Upper Klamath Lake reservoir at full pool elevation.
T 34 S, R 7 E.,
Secs. 18 and 31, (410109–745 B) Agency Creek.
T 33 S, R 7½ E.,
Secs. 3, 10, 15, 22, 23, 26, 27, 34–36, including those portions of secs. 3, 10, 15, 22, 27 and 34 (410109–600 B and 410109–735 B); Fort Creek and Crooked Creek.

BILLING CODE 4310–55–P

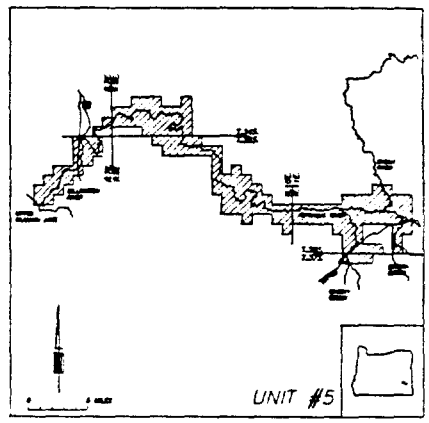


BILLING CODE 4310–55–C

(5) Williamson/Sprague, Klamath County, Oregon (Willamette Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels, effective date December 18, 1984. The specific panel map number is shown in parentheses.

T 36 S, R 7½ E.,
Secs. 1, 2, 11, 12 (410109–885 B and 410109–900 B).
T 35 S, R 7½ E.,
Sec. 36 (410109–900 B).
T 35 S, R 7 E.,
Secs. 2–4, 9–11, 15, 16, 19–21, 29–31 (410109–745 B and 410109–885 B); and all portions of Agency Lake.
T 34 S, R 7 E.,
Secs. 25, 35, 36 (410109–745 B).
T 34 S, R 8 E.,
Secs. 14–16, 19–30, 34–36 (410109–745 B, 410109–755 B, and 410109–765 B).
T.35 S, R 8 E.,
Secs. 1, 2, 12 (410109–765 B and 410109–770 B).
T 34 S, R 9 E.,
Secs. 17, 19, 20, 29–32 (410109–760 B, 410109–765 B, and 410109–770 B).
T 35 S, R 9 E.,
Secs. 4–11, 14, 23, 25, 26, 35, 36 (410109–765 B, 410109–770 B, and 410109–925 B).
T 35 S, R 10 E.,
Secs. 19, 29–33 (410109–925 B and 410109–930 B).
T 36 S, R 9 E.,
Secs. 1 and 12 (410109–925 B).
T 36 S, R 10 E.,
Secs. 3–14, 19, 24 (410109–925 B, 410109–930 B, and 410109–940 B).
T 36 S, R 11 E.,
Secs. 1, 7–18, 23–25, 36 (410109–930 B, 410109–935 B, 410109–940 B, and 410109–945 B).
T 37 S, R 11 E.,
Sec. 1 (410109–945 B and 410109–1100 B).
T 37 S, R 12 E.,
Secs. 5 and 6 (410109–945 B, 410109–975 B, and 410109–1100 B).
T 36 S, R 12 E.,
Secs. 1–19, 23, 24, 26, 30–33, 35 (410109–935 B, 410109–945 B, and 410109–975 B).
T 35 S, R 12 E.,
Secs. 33 and 34 (410109–975 B).

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

Known constituent elements include water (quality, quantity, timing of flow), physical habitat (suitable spawning, nursery, rearing, migratory, and refugial habitats) and biological environment (food supply, nutrients, competition and predation).

* * * * *

SHORTNOSE SUCKER (*Chasmistes brevirostris*)

(1) Clear Lake and Watershed, Modoc County, California (Mt. Diablo Meridian), and Klamath and Lake Counties, Oregon (Willamette Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels, effective date September 24, 1984; or, in the absence of an applicable FIRM panel, within 300 feet of said body of water. The specific panel map number is shown in parentheses.

Mt. Diablo Meridian

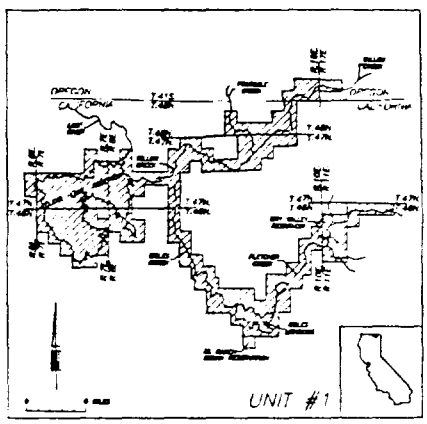
T 46 N, R 11 E.,
Secs. 1–4, 7–9, 17–20, 29, 30 (060192–0275 B).
T 46 N, R 10 E.,
Secs. 13, 23, 24, 26, 34, 35 (060192–0275 B and 060192–0450 B).
T 45 N, R 10 E.,
Secs. 3–5, 8, 9, 16–20, 29, 30 (060192–0425 B and 060192–0450 B).
T 45 N, R 9 E.,
Secs. 4, 5, 9–16, 23–25 (060192–0425 B).
T 46 N, R 9 E.,

Secs. 18, 19, 29, 30, 32, 33 (060192–0250 B and 060192–0425 B).
T 46 N, R 8 E.,
Secs. 1, 5–9, 12, 13, 16, 17 (060192–0250 B) including only those portions of the listed sections occurring within Clear Lake reservoir at full pool elevation.
T 48 N, R 10 E.,
Secs. 22, 27, 28, 31–34 (060192–0075 B and 060192–0100 B);
Secs. 22, 27 and 33, North Fork Willow Creek, and
Secs. 31 and 32, Wildhorse Creek.
T 47 N, R 10 E.,
Secs. 3–8, 18 (060192–0075 B, 060192–0250 B, 060192–0275 B and 060192–0100 B); and
Secs. 5, 7 and 18, North Fork Willow Creek; and
Secs. 5 and 6, Wildhorse Creek.
T 47 N, R 9 E.,
Secs. 1, 5–9, 12–16, 18 (060192–0075 B and 060192–0250 B); and
Secs. 13 and 14, North Fork Willow Creek; and
Secs. 1, 12 and 13, Fourmile Creek.
T 47 N, R 8 E.,
Secs. 8, 12, 13, 17, 18, 20–25, 28, 29, 31, 32, 36 (060192–0075 B and 060192–0250 B); and including only those portions of the listed sections occurring within Clear Lake reservoir at full pool elevation.
T 48 N, R 9 E.,
Secs. 26, 35, and 36, Fourmile Creek.
T 46 N, R 7 E.,
Secs. 2, 3, 6–8, 11–13, 16, 17, 21–24, 26, 27, lying within Clear Lake reservoir at full pool elevation.
T 47 N, R 7 E.,
Secs. 11, 13, 14, 19–23, 26, 27, 30, 31, 34–36, lying within Clear Lake reservoir at full pool elevation.
T 47 N, R 6 E.,
Secs. 24 and 25, lying within Clear Lake reservoir at full pool elevation.

Willamette Meridian

T 41 S, R 16 E.,
Secs. 13, 14, and 22–24, North Fork Willow Creek.
T 41 S, R 17 E.,
Secs. 17 and 18, North Fork Willow Creek.

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(2) Tule Lake, Siskiyou and Modoc Counties, California (Mt. Diablo Meridian), and Klamath County, Oregon (Willamette Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels, effective date May 17, 1982, or December 18, 1984, whichever is applicable. The specific panel map number is shown in parentheses.

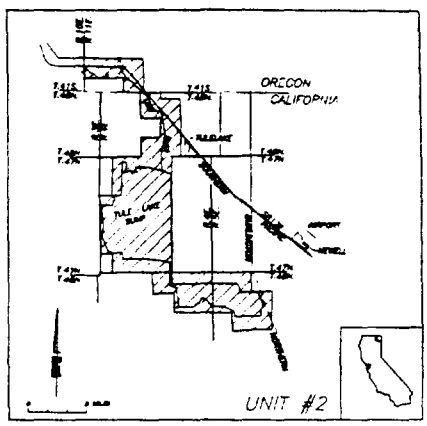
Mt. Diablo Meridian

T 46 N, R 5 E.,
Secs. 5–9, 16, 17 (060192–0200 B).
T 46 N, R 4 E.,
Secs. 1–3, 11, 12 (060362–0500 B).
T 47 N, R 4 E.,
Secs. 3–5, 8–10, 15–22, 27–30, 32–34 (060362–0500 B and 060362–0250 B).
T 48 N, R 4 E.,
Secs. 16, 21, 22, 27, 33, 34 (060362–0250 B).

Willamette Meridian

T 41 S, R 11 E.,
Secs. 7–9, 16 (410109–1400 B); including only those portions of sec. 7 downstream of Anderson-Rose Dam, and those portions of listed sections inside the top of the Lost River dike.

BILLING CODE 4310–55–P



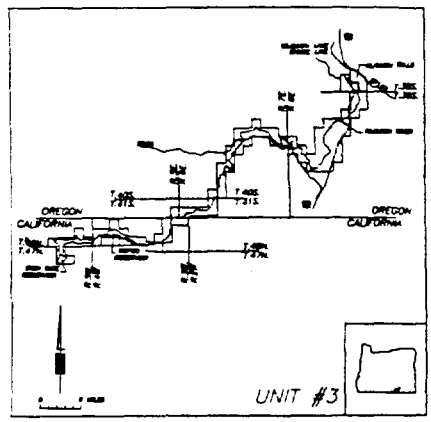
BILLING CODE 4310–55–C

(3) Klamath River, Klamath County, Oregon (Willamette Meridian), and Siskiyou County, California (Mt. Diablo Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels with effective dates of June 5, 1985; December 18, 1984; or May 17, 1982, whichever is applicable; or, in the absence of an applicable FIRM panel, within 300 feet of said body of water. The specific panel map number is shown in parentheses.

Willamette Meridian

T 38 S, R 9 E.,
Secs. 30–32 (410112–0005 B); and lying within Upper Klamath Lake reservoir at full pool elevation.
T 39 S, R 9 E.,
Secs. 4, 5, 8, 9, 17–19, 30 (6410112–009 B and 6410112–1205 B).
T 40 S, R 8 E.,
Secs. 1–3, 5, 6, 8–12, 14–16 (410109–1195 B and 410109–1350 B).
T 39 S, R 8 E.,
Secs. 23–27, 31, 34–36 (410109–1195 B and 410109–1215 B).
T 39 S, R 7 E.,
Secs. 21, 26–32, 35, 36 (410109–1195 B and 410109–1200 B).

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(4) Upper Klamath Lake, Klamath County, Oregon (Willamette Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels, effective date May 17, 1982, or December 18, 1984, whichever is applicable; or, in the absence of an applicable FIRM panel, within 300 feet of said body of water. The specific panel map number is shown in parentheses.

T 38 S, R 8 E.,
Secs. 1, 3, 4, 6, 10–14, 23, 25 lying within Upper Klamath Lake reservoir at full pool elevation.
T 38 S, R 7 E.,
Sec. 1 lying within Upper Klamath Lake reservoir at full pool elevation.
T 37 S, R 8 E.,
Secs. 1, 6–8, 12, 13, 17–19, 24–26, 28, 29, 31–33, 35–37, lying within Upper Klamath Lake reservoir at full pool elevation.
T 37 S, R 9 E.,
Sec. 6 lying within Upper Klamath Lake reservoir at full pool elevation, and within the waters of Hagelstein Park.
T 37 S, R 7 E.,
Secs. 1–3, 24, 25, 36 (410109–1050 B); or lying within Upper Klamath Lake reservoir at full pool elevation.
T 38 S, R 9 E.,
Secs. 18, 19, 30 lying within Upper Klamath Lake reservoir at full pool elevation.
T 36 S, R 7½ E.,

Secs. 2, 3, 11, 12, 18, 19, 21, 23–30, 32–36 (410109–1050 B and 410109–900 B); or lying within Upper Klamath Lake reservoir at full pool elevation.

T 36 S, R 7 E.,
Secs. 7, 8, 15–17, 22, 23, 25, 26, 36 (410109–1050 B and 410109–900 B); or lying within Upper Klamath Lake reservoir at full pool elevation.

T 36 S, R 6 E.,
Secs. 1–4, 8–18, 21, 23, 24, or (410109–870 B, 410109–875 B and 410109–900 B); or lying within Upper Klamath Lake reservoir at full pool elevation.

T 36 S, R 5 E.,
Secs. 11–13, (410109–870 B) Fourmile Creek.

T 35 S, R 6 E.,
Secs. 1, 2, 11–14, 23–26, 35, 36 (410109–725 B, 410109–750 B, 410109–875 B and 410109–900 B).

T 34 S, R 6 E.,
Secs. 1, 2, 11–14, 24–26, 35, 36 (410109–725 B and 410109–750 B).

T 34 S, R 7½ E.,
Secs. 1–4, 6, 9–14, 18–36 (410109–750 B and 410109–745 B); including only those portions of sec. 9 found to the east of the Wood River.

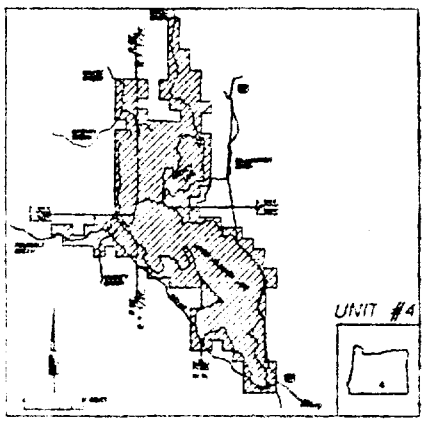
T 35 S, R 7½ E.,
Secs. 2–10, 16–21, 24–30, 33, 34 (410109–745 B, 410109–750 B, 410109–885 B, and 410109–900 B).

T 35 S, R 7 E.,
Secs. 6, 7, 18, 19 (410109–745 B and 410109–885 B); or lying within Upper Klamath Lake reservoir at full pool elevation.

T 34 S, R 7 E.,
Secs. 18 and 31, (410109–745 B) Agency Creek.

T 33 S, R 7 1/2 E.,
Secs. 3, 10, 15, 22, 23, 26, 27, 34–36, including those portions of secs. 3, 10, 15, 22, 27 and 34 (410109–600 B and 410109–735 B); Fort Creek and Crooked Creek.

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(5) Williamson/Sprague, Klamath County, Oregon (Willamette Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels, effective date December 18, 1984. The specific panel map number is shown in parentheses.

T 36 S, R 7 1/2 E.,
Secs. 1, 2, 11, 12 (410109–885 B and 410109–900 B).

T 35 S, R 7 1/2 E.,
Sec. 36 (410109–900 B).

T 35 S, R 7 E.,
Secs. 2–4, 9–11, 15, 16, 19–21, 29–31 (410109–745 B and 410109–885 B); and all portions of Agency Lake.

T 34 S, R 7 E.,
Secs. 25, 35, 36 (410109–745 B).

T 34 S, R 8 E.,
Secs. 14–16, 19–30, 34–36 (410109–745 B, 410109–755 B, and 410109–765 B).

T 35 S, R 8 E.,
Secs. 1, 2, 12 (410109–765 B and 410109–770 B).

T 34 S, R 9 E.,
Secs. 17, 19, 20, 29–32 (410109–760 B, 410109–765 B, and 410109–770 B).

T 35 S, R 9 E.,
Secs. 4–11, 14, 23, 25, 26, 35, 36 (410109–765 B, 410109–770 B, and 410109–925 B).

T 35 S, R 10 E.,
Secs. 19, 29–33 (410109–925 B and 410109–930 B).

T 36 S, R 9 E.,
Secs. 1 and 12 (410109–925 B).

T 36 S, R 10 E.,
Secs. 3–14, 19, 24 (410109–925 B, 410109–930 B, and 410109–940 B).

T 36 S, R 11 E.,
Secs. 1, 7–18, 23–25, 36 (410109–930 B, 410109–935 B, 410109–940 B, and 410109–945 B).

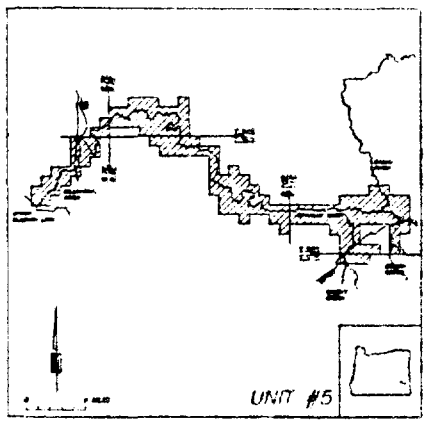
T 37 S, R 11 E.,
Sec. 1 (410109–945 B and 410109–1100 B).

T 37 S, R 12 E.,
Secs. 5 and 6 (410109–945 B, 410109–975 B, and 410109–1100 B).

T 36 S, R 12 E.,
Secs. 1–19, 23, 24, 26, 30–33, 35 (410109–935 B, 410109–945 B, and 410109–975 B).

T 35 S, R 12 E.,
Secs. 33 and 34 (410109–975 B).

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(6) Gerber Reservoir and Watershed, Klamath County, Oregon (Willamette Meridian). Within the following sections, all portions lying within the 100-year floodplain as depicted by the Federal Emergency Management Agency (FEMA) 100-year floodplain Zone A identified on Flood Insurance Rate Map (FIRM) Community Panels, effective date May 17, 1982, or December 18, 1984, whichever is applicable or, in the absence of an applicable FIRM panel, within 300 feet of said body of water. The specific panel map number is shown in parentheses.

T 40 S, R 15 E.,
Sec. 6 (410109–1300 B).

T 39 S, R 15 E.,
Secs. 7, 20, 21, 29–31, (410109–1300 B) Long Branch Creek, Barnes Valley Creek or Pitchlog Creek.

T 39 S, R 14 E.,
Secs. 5–8, 12, 13, 16–25, 27, 28, 30, 33, 34, 36, lying within Gerber Reservoir at full pool elevation; Long Branch Creek, Wildhorse Creek, or Pitchlog Creek.

T 39 S, R 13 E.,
Secs. 1, 2, 12, 13, lying within Gerber Reservoir at full pool elevation; Ben Hall Creek.

T 38 S, R 13 E.,
Secs. 33–36, lying within Gerber Reservoir at full pool elevation; Ben Hall Creek.

T 38 S, R 14 E.,
Secs. 17, 19, 20, 30–32 (410109–1125 B, and 410109–1275 B), lying within Gerber Reservoir at full pool elevation; Barnes Creek.

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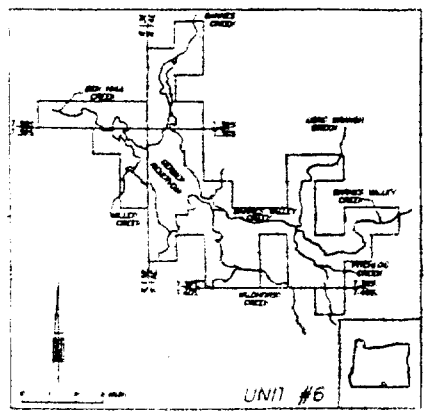

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(7) Known constituent elements include the physical and biological features that support spawning, foraging, cover, refugia and corridors between these areas, and growth and dispersal are essential to the conservation of these species. The primary constituent elements are a sufficient quantity of water of suitable quality (i.e., temperature, dissolved oxygen, flow rate, pH, nutrients, lack of contaminants, turbidity, etc.) to provide conditions required for the particular life stage for each species; physical habitat for use as refugia from stressful water quality conditions or predation, or for use as in spawning, nursery, feeding, or rearing areas, or as corridors between these areas; and a biological environment that provides a food supply and a natural scheme of predation,

parasitism, and competition in the biological environment.

Dated: October 28, 1994.

George T. Frampton,

Assistant Secretary for Fish and Wildlife and Parks.

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